

FINAL REPORT



Contents: Volume 1 of 5
Text, Figures, Summary Tables, and Appendices A - I

Study Title: A 90-Day Repeat-Dose Dermal Toxicity
Study in Conjunction with a Micronucleus
Assay Utilizing Extract, Light Paraffinic
Distillate Solvent in Sprague Dawley Rats

Laboratory Project ID: WIL-402022

Author: [REDACTED]

Test Guidelines: OPPTS Guideline 870.3250
40 CFR 798.2250 and 798.5395
OECD Guidelines 411 and 474

Study Completion Date: 8 August 2012

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COMPLIANCE STATEMENT

The following is a detailed description of all differences between the practices used in this study, designated WIL-402022, and those required by the United States EPA GLP Standards (40 CFR Part 792), 18 September 1989, and the OECD Principles of GLP [C(97) 186/Final], 26 November 1997:

- The Sponsor conducted test substance characterization according to non-GLP standards and provided the characterization report to WIL Research (presented in Appendix B).
- The stability of the bulk test substance was not provided; however, it is the professional judgment of the Sponsor that the formulations are considered stable under the conditions of the study, because the test substance is intended for use at high temperatures. The expiration date for the test substance is unknown.

These exceptions had no effect on the integrity or quality of the study.

The protocol was designed to be in general accordance with the U.S. EPA Health Effects Test Guidelines OPPTS 870.3250, the 40 CFR 798.2250 and 798.5395, and the OECD Guidelines for Testing of Chemicals, Health Effects Test Guidelines, Section 411, 12 May 1981 and Section 474, 21 July 1997.


Staff Toxicologist, General Toxicology
Study Director

08 Aug 2012
Date

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1. SUMMARY

1.1. OBJECTIVE

The objectives of this study were to evaluate the toxicity potential of repeated dermal exposure of extract, light paraffinic distillate solvent for 90 days and to determine the effects on male and female rats, to verify/expand the existing data pertaining to polycyclic aromatic compounds (PAC) and the prediction of toxicity following exposure to high-boiling substances based on their PAC content, and to assess the potential of extract, light paraffinic distillate solvent to induce micronuclei in polychromatic erythrocytes (PCEs) and normochromatic erythrocytes (NCEs) in rat bone marrow following the 90-day repeated-dose treatment. This assay evaluated compounds for *in vivo* clastogenic activity and/or disruption of the mitotic apparatus.

1.2. STUDY DESIGN

Extract, light paraffinic distillate solvent (CAS no. 64742-05-8) in the vehicle (acetone) was administered via dermal application (non-occluded) to the dorsoscapular area (covering approximately 10% of the body surface area) to 3 groups (Groups 3-5) of Crl:CD(SD) rats for a minimum of 90 days. The test substance was applied for approximately 6 hours per day, 5 days per week, followed by a 2-day nondosing period. Half of each sex received a 3-day nondosing period prior to the last week of dosing due to the staggered scheduled necropsy. Dosage levels were 5, 50, and 150 mg/kg/day for Groups 3, 4, and 5, respectively. A concurrent vehicle control group (Group 2) received the vehicle on a comparable regimen. The dose volume was 1.5 mL/kg for Groups 2-5. A concurrent sham control group (Group 1) was subjected to the same procedures (*i.e.*, shaving, collaring, sham dosing with glass rod, and removal of residual test substance) as the test substance-treated groups; however, no vehicle or test substance was applied to these animals. A positive control group (Group 6) received a single oral (gavage) dose of 60 mg/kg cyclophosphamide (CPS) at a dose volume of 10 mL/kg on study day 89, approximately 24 hours prior to the scheduled euthanasia. Groups 1-5 each

consisted of 10 animals/sex and Group 6 consisted of 6 animals/sex. The scheduled necropsy occurred on study day 89 or 90.

All rats were observed twice daily for mortality and moribundity. Clinical examinations were performed on all animals in Groups 1-5 daily during the dosing period. Dermal observations were performed on all animals once during the pretest period and on all Group 1-5 animals at the end of each 5-day dosing period. Detailed physical examinations were performed on all animals approximately weekly throughout the study, beginning during the pretest period. Individual body weights and food consumption were recorded for all animals approximately weekly throughout the study, beginning during the pretest period. Ophthalmic examinations were performed during study weeks -1 and 12 (Groups 1-5 only). Clinical pathology parameters (hematology, coagulation, and serum chemistry) were analyzed for all animals in Groups 1-5 at the scheduled necropsy (study week 12). Bone marrow collection for micronucleus evaluation was performed for the first 5 animals/sex in Groups 1-6 at the scheduled necropsy on study day 89 or 90. Complete necropsies were conducted on all animals in Groups 1-5; selected organs were weighed and selected tissues were examined microscopically. Animals in Group 6 were discarded without further examination following bone marrow collection. Bone marrow smears were prepared and the coded slides were counted for polychromatic, normochromatic, and micronucleated polychromatic erythrocytes following the final bone marrow sample collection on study day 90.

1.3. RESULTS

One 150 mg/kg/day group male was found dead on study day 40; however, the relationship to test substance application is uncertain as a complete necropsy and histologic examination did not reveal a cause of death. Clinical observations on study day 39 consisted of body and extremities pale, extremities cool to the touch, and dermal atonia.

All other animals survived to the scheduled necropsy. There were no test substance-related clinical observations, dermal observations, or effects on food consumption. There were no test substance-related ophthalmic, macroscopic, or microscopic findings.

Test substance-related lower cumulative body weight gains were noted in the 150 mg/kg/day group females and resulted in slightly lower (8.1%) body weights when compared to the vehicle control group at study week 12'.

Residual test substance was occasionally noted within the dose sites for the 50 and/or 150 mg/kg/day group males and females, with a higher incidence among the 150 mg/kg/day group animals. There was no test substance-related dermal irritation.

Test substance-related lower red blood cell (RBC) counts, hemoglobin, hematocrit, white blood cell (WBC) counts, lymphocyte counts, eosinophil counts, and platelet counts and higher red cell distribution widths (RDW) and hemoglobin distribution widths (HDW) were noted in the 50 and/or 150 mg/kg/day group. In addition, reticulocyte counts (absolute counts and percentages) were higher in the 150 mg/kg/day group males and the mean reticulocyte percentage was higher in the 150 mg/kg/day group females. Lower eosinophil counts were also noted in the 5 mg/kg/day group females.

Test substance-related higher cholesterol, sorbitol dehydrogenase (SDH), and blood urea nitrogen (BUN), and lower alanine aminotransferase (ALT) and triglycerides values were noted in the 50 and/or 150 mg/kg/day groups.

Test substance-related absolute and/or relative organ weight changes were noted for the spleen, liver, thymus, pituitary, heart, and thyroid/parathyroids in the 50 and/or 150 mg/kg/day groups.

Extract, light paraffinic distillate solvent produced an increase in the mean percentage of micronucleated polychromatic erythrocytes (%MN-PCEs) at 150 mg/kg/day in males. An increase in the mean %MN-PCEs was also observed at 50 mg/kg/day in females;

however, a dose response was not observed. Therefore, extract, light paraffinic distillate solvent met the criteria for a positive response in male rats at 150 mg/kg/day and an equivocal response in female rats at 50 mg/kg/day for the induction of bone marrow micronuclei in polychromatic erythrocytes under the conditions of this assay. However, there were no meaningful differences in bone marrow cytology.

1.4. CONCLUSIONS

Based on the results of this study, dermal application of extract, light paraffinic distillate solvent over an area of approximately 10% of the shaved body surface area to Crl:CD(SD) rats for approximately 6 hours per day, 5 days per week, for a minimum of 90 days at dosage levels of 5, 50, and 150 mg/kg/day resulted in no overt toxicity. A no-observed-effect level (NOEL) could not be established due to the lower eosinophil counts noted in the 5, 50, and 150 mg/kg/day groups; however, the values were within the WIL Research historical control reference range (version 3.1).

In addition dermal application of extract, light paraffinic distillate solvent resulted in a positive response for induction of bone marrow micronuclei at 150 mg/kg/day for males and an equivocal response at 50 mg/kg/day for females. However, there were no meaningful differences in bone marrow cytology.

2. INTRODUCTION

The objectives of this study were to evaluate the toxicity potential of repeated dermal exposure of extract, light paraffinic distillate solvent for 90 days and to determine the effects on male and female rats, to verify/expand the existing data pertaining to polycyclic aromatic compounds (PAC) and the prediction of toxicity following exposure to high-boiling substances based on their PAC content, and to assess the potential of extract, light paraffinic distillate solvent to induce micronuclei in polychromatic erythrocytes (PCEs) and normochromatic erythrocytes (NCEs) in rat bone marrow following the 90-day repeated-dose treatment. This assay evaluated compounds for *in vivo* clastogenic activity and/or disruption of the mitotic apparatus.

The micronucleus assay is a test for clastogenic agents that interfere with normal mitotic cell division (Heddle *et al.*, 1983). Micronuclei are small chromatin bodies consisting of entire chromosomes and/or acentric chromosome fragments that lag behind at mitotic anaphase. At telophase, these chromosomes and/or fragments are not segregated to either daughter nucleus and form single or multiple micronuclei in the cytoplasm. During the maturation of erythroblasts to erythrocytes, the nucleus is extruded. Micronuclei, if present, persist in the cytoplasm of these anucleate cells. Test substances affecting spindle fiber function or formation, as well as clastogenic agents, can be detected through micronucleus induction (Schmid, 1975). In this study, immature red blood cells or PCEs were analyzed for the presence of micronuclei.

2.1. GENERAL STUDY INFORMATION

This report presents the data from “A 90-Day Repeat-Dose Dermal Toxicity Study in Conjunction with a Micronucleus Assay Utilizing Extract, Light Paraffinic Distillate Solvent in Sprague Dawley Rats.” Due to software spacing constraints, the study title appears as “A 90-Day MN Dermal Study with Paraffinic Distillate in Rats” on the report tables. The study protocol and deviations from the protocol are presented in Appendix A.

A list of abbreviations potentially used in this report is presented in Section 12. (Abbreviations).

For the data collection process, each phase of the study was separated into what were termed WIL computer protocols. The computer protocol reference numbers and types of data collected were identified as follows:

<u>Computer Protocol</u>	<u>Type of Data Collected</u>
WIL-402022	Main study data
WIL-402022P	Pretest data
WIL-402022U	Unscheduled clinical observations, treatments, and nondosing day observations

2.2. KEY STUDY DATES

<u>Date(s)</u>	<u>Event(s)</u>
1 April 2011	Study initiation date (date protocol signed by Study Director)
5 April 2011	Experimental starting date (animal receipt)
14 April 2011	Assignment to study groups
18 April 2011	Experimental start date (initiation of dose administration; study day 0)
16, 17 July 2011	Scheduled necropsy (study week 12)
7 November 2011	Experimental termination/completion date (last bone marrow cytology examination)

WIL-402022
American Petroleum Institute

Extract, Light Paraffinic Distillate Solvent

2.3. CONTRIBUTING SCIENTISTS

Bone Marrow Cytology

[REDACTED],
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Kalamazoo, MI

Ophthalmology
Pretest Period
(Study Week -1)

[REDACTED]
The Ohio State University
Columbus, OH

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(Study Week 12)

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2.4. PARTICIPATING SCIENTISTS

Analyses of Dosing Formulations

[REDACTED]
WIL Research

Histopathology

[REDACTED]
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WIL Research

2.5. PRINCIPAL INVESTIGATOR AND TEST SITE

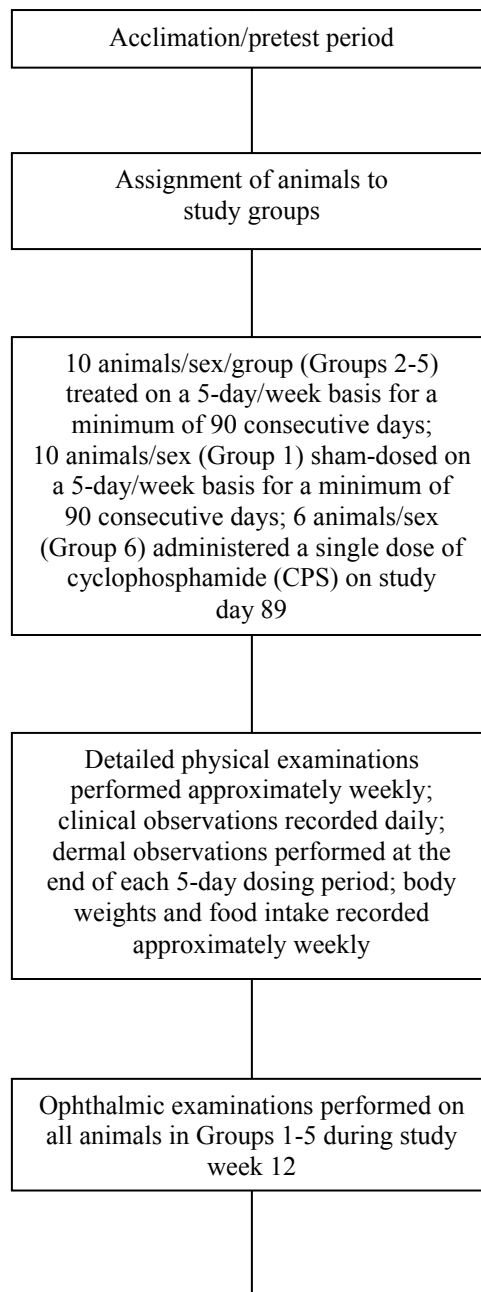
Principal Investigator for
Micronucleus Test

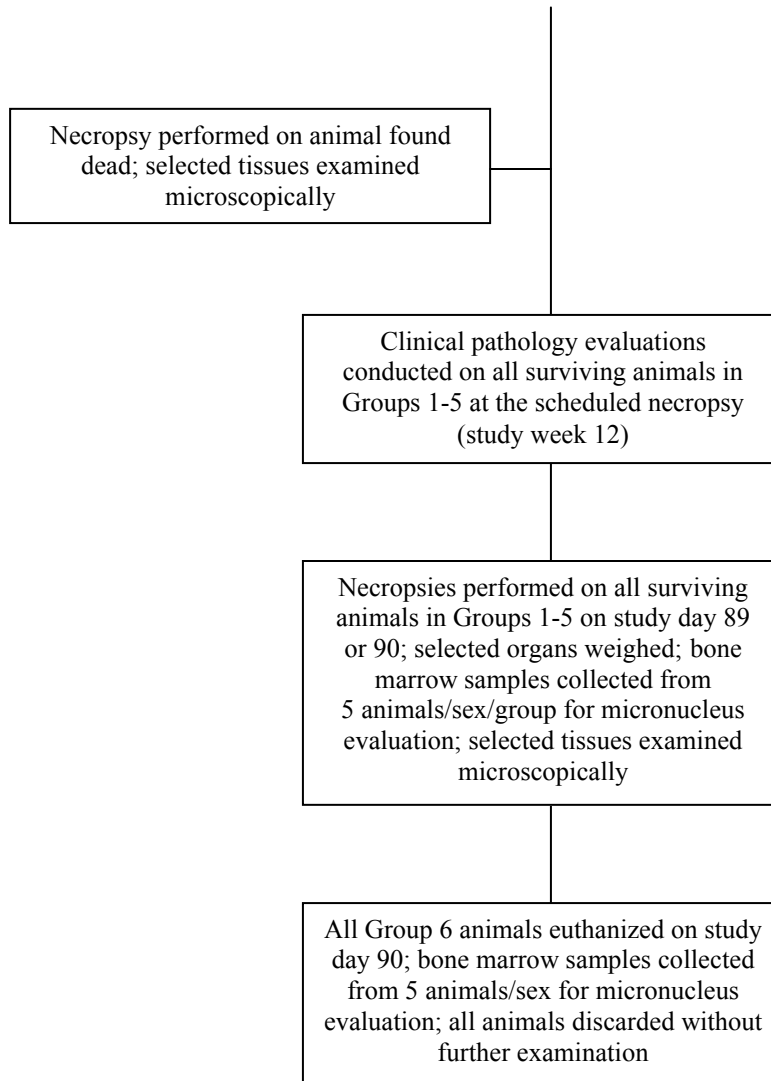
[REDACTED]
WIL Research Skokie

2.6. WIL RESEARCH KEY STUDY PERSONNEL

[REDACTED]	Assistant Director, Analytical Chemistry
[REDACTED]	Operations Manager, Pathology
[REDACTED]	Manager, Quality Assurance
[REDACTED]	(WIL Research Ashland)
[REDACTED]	Senior Operations Manager, Vivarium
[REDACTED]	Manager, Gross Pathology and
	Developmental Toxicology Laboratory
[REDACTED]	Operations Manager, Toxicology
[REDACTED]	Clinical Veterinarian
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[REDACTED]	Vice President, Analytical, Metabolism, &
	<i>In Vitro</i> Toxicology Services
[REDACTED]	Director, Operations
[REDACTED]	Manager, Clinical Pathology
[REDACTED]	Operations Manager, Reporting &
	Technical Support Services

3. STUDY DESIGN





4. EXPERIMENTAL PROCEDURES - MATERIALS AND METHODS

4.1. TEST SUBSTANCE, VEHICLE, AND POSITIVE CONTROL SUBSTANCE

4.1.1. TEST SUBSTANCE

The test substance, extract, light paraffinic distillate solvent, was received from EPL Archives, Inc., Sterling, VA, on behalf of the Sponsor, on 10 November 2010, as follows:

Identification	Physical Description
Extract, light paraffinic distillate solvent (CAS# 64742-05-8; Site# 7, Sample# 23) [WIL log no. 8470A]	Dark brown, viscous liquid

Test substance characterization was provided by the Sponsor and is presented in Appendix B. The test substance was stored at room temperature, protected from light, and was considered stable under these conditions. A reserve sample of the test substance was collected and stored in the WIL Research Archives.

4.1.2. VEHICLE

The vehicle used in preparation of the test substance formulations and for application to the vehicle control group was acetone (lot nos. ZH0823, ZP3044, and ZX0140; exp. dates: 31 July 2012, 19 February 2012, and 11 November 2012, respectively; manufactured by Spectrum Chemical Manufacturing Corporation, New Brunswick, NJ).

4.1.3. POSITIVE CONTROL SUBSTANCE

The positive control substance, cyclophosphamide monohydrate (CPS), was received from Sigma-Aldrich, Inc., St. Louis, MO, on 29 November 2010, as follows:

Identification	Physical Description
Cyclophosphamide monohydrate Lot no. 079K1569 Exp. date: 1 July 2012 [WIL ID no.10019F]	White powder

Documentation regarding the purity and stability of the positive control substance is on file with the supplier and WIL Research. A Certificate of Analysis for the positive control substance was provided by the supplier and is presented in Appendix B. The purity of the positive control substance was 100.5%. The positive control substance was stored refrigerated (approximately 2°C to 8°C) and was considered stable under this condition. A reserve sample of the positive control substance was collected and stored in the WIL Research Archives.

4.1.4. PREPARATION

For the vehicle control group (Group 2), a sufficient amount of acetone was dispensed approximately weekly; aliquots were prepared for daily dispensation and stored at room temperature, protected from light.

Dosing formulations were prepared at the test substance concentrations indicated in the following table:

Group Number	Treatment	Dosage Level (mg/kg/day)	Dose Concentration ^a (mg/mL)
1	Sham Control	NA	NA
2	Vehicle	0	0
3	Test Substance ^b	5	3.3
4	Test Substance ^b	50	33.3
5	Test Substance ^b	150	100.0
6	Positive Control (CPS)	60 ^c	6 ^c

NA = Not applicable

^a = The dosing formulations were not adjusted for purity.

^b = The test substance for this study was extract, light paraffinic distillate solvent.

^c = Dosage level and dose concentration listed applicable to the CPS dose level and CPS concentration for Group 6.

The test substance formulations were weight/volume (test substance/vehicle) mixtures. The test substance formulations were prepared approximately weekly as single formulations for each dosage level, divided into aliquots for daily dispensation, and stored at room temperature, protected from light. The test substance formulations were stirred continuously throughout the preparation and sampling procedures.

The positive control substance formulation was prepared on the day of dosing (study day 89) as a weight/volume (CPS/deionized water) mixture. The formulation was stirred until homogenous and was kept on wet ice after preparation and throughout dosing.

4.1.5. SAMPLING AND ANALYSES

Prior to the initiation of dose application, analyses to demonstrate homogeneity and resuspension homogeneity as well as 8- and 10-day room temperature stability for the range of concentrations used on this study were conducted by the Analytical Chemistry

Department at WIL Research and detailed in a separate report (Freer, 2011, WIL-402026).

Two sets of duplicate samples for concentration and homogeneity determinations were collected from the top, middle, and bottom strata of the 0, 3.3, 33.3, and 100.0 mg/mL dosing formulations prepared for use during study week 0, and from the middle stratum of these same dosing formulations prepared for use during study weeks 6 and 12. One duplicate set was analyzed and the remaining duplicate set was stored at room temperature as reserve samples. All analyses were conducted by the WIL Research Analytical Chemistry Department using a validated gas chromatography method using flame ionization detection. Details about the methodology and results of these analyses are presented in Appendix C, and the results are summarized in Section 6.1.

4.2. TEST SYSTEM, ANIMAL RECEIPT, AND ACCLIMATION/PRETEST PERIOD

Crl:CD(SD) rats were used as the test system for this study. This species and strain of animal is recognized as appropriate for subchronic and chronic toxicity studies. The Sprague Dawley rat was utilized because it is a widely used strain for which historical control data are available. There is currently no validated *in vitro* assay available to reliably test for the induction of micronuclei in polychromatic erythrocytes in animals; therefore, it is necessary to use an *in vivo* assay. The Sprague Dawley rat was chosen as the test system for the micronucleus assay because there is a large amount of historical biological data available for this species and strain. Its sensitivity to drug- or chemical-induced toxicity has been shown to be sufficient for detecting the potential toxicity of compounds. The number of animals selected for this study (see Section 4.7.) was the minimum required to yield statistically and scientifically meaningful and adequately predictive data, and is consistent with agency expectations (*e.g.*, OECD 474 and 411 guidelines).

Crl:CD(SD) rats (65 males and 65 females) were received in good health from Charles River Laboratories, Inc., Raleigh, NC, on 5 April 2011. The animals were approximately

45 days old at receipt. Each animal was examined by a qualified technician on the day of receipt and weighed 3 days later. Each animal was uniquely identified by a Monel[®] metal ear tag displaying the permanent identification number. All animals were housed for a 13-day acclimation/pretest period. During this period, each animal was observed twice daily for mortality and changes in general appearance or behavior.

Pretest data collection began on 8 April 2011. Individual body weights and food consumption were recorded and detailed physical examinations were performed periodically during the pretest period. Ophthalmic examination data were also recorded for pretest animals prior to randomization. Pretest clinical observations are presented in Appendix D.

Animals were acclimated to wearing Elizabethan collars on an incremental basis, starting with approximately 1 hour and ending with approximately 24 hours of acclimation, for approximately 1 week prior to the initiation of dose application as outlined below:

Study Day	Approximate Acclimation Period (Hours)
-9	1
-8	2
-7	4
-6	8
-5	24

4.3. ANIMAL HOUSING

All animals were housed individually in clean, stainless steel, wire-mesh cages suspended above cage-board. Animals were maintained in accordance with the *Guide for the Care and Use of Laboratory Animals* (National Research Council, 1996). The animal facilities at WIL Research are accredited by AAALAC International. Enrichment devices were provided to all animals as appropriate throughout the study for environmental enrichment and to aid in maintaining the animals' oral health, and were sanitized weekly.

4.4. DIET, DRINKING WATER, AND MAINTENANCE

The basal diet used in this study, PMI Nutrition International, LLC, Certified Rodent LabDiet® 5002 (pellet), is a certified feed with appropriate analyses performed by the manufacturer and provided to WIL Research. Reverse osmosis-treated (on-site) drinking water, delivered by an automatic watering system, and the basal diet were provided *ad libitum* throughout the study, except during the period of fasting prior to clinical pathology blood collection when food, but not water, was withheld. Municipal water supplying the facility was analyzed for contaminants according to SOPs. The results of the diet and water analyses are maintained in the study records. No contaminants were present in animal feed or water at concentrations sufficient to interfere with the objectives of this study.

4.5. ENVIRONMENTAL CONDITIONS

All animals were housed throughout the acclimation period and during the study in an environmentally controlled room. The room temperature and humidity controls were set to maintain environmental conditions of $71 \pm 5^{\circ}\text{F}$ ($22 \pm 3^{\circ}\text{C}$) and $50 \pm 20\%$, respectively. Room temperature and relative humidity data were monitored continuously and were scheduled for automatic collection on an hourly basis. These data are summarized in Appendix E. Actual mean daily temperature ranged from 70.5°F to 70.9°F (21.4°C to 21.6°C) and mean daily relative humidity ranged from 39.9% to 49.6% during the study. Fluorescent lighting provided illumination for a 12-hour light (0600 hours to 1800 hours)/12-hour dark photoperiod. The light status (on or off) was recorded once every 15 minutes. The 12-hour light/12-hour dark photoperiod was interrupted as necessary to allow for the performance of protocol-specified activities. Air handling units were set to provide a minimum of 10 fresh air changes per hour.

4.6. ASSIGNMENT OF ANIMALS TO TREATMENT GROUPS

On 14 April 2011 (4 days prior to the initiation of dose application), all available rats were weighed and examined in detail for physical abnormalities. These data were collected using WTDMS™ and reviewed by the Study Director. The animals judged

suitable for assignment to the study were selected for use in a computerized randomization procedure based on body weight stratification in a block design. A printout containing the animal numbers and individual group assignments was generated, and the animals were then arranged into groups according to the printout. Individual body weights at randomization were within $\pm 20\%$ of the mean for each sex. Animals not assigned to study were transferred to the WIL Research stock colony.

Groups 1-5 each consisted of 10 males and 10 females. Group 6 consisted of 6 males and 6 females. The animals were approximately 8 weeks old at the initiation of dose application. Individual body weights ranged from 218 g to 269 g for males and from 156 g to 197 g for females at randomization.

4.7. ORGANIZATION OF TEST GROUPS, DOSAGE LEVELS, AND TREATMENT REGIMEN

Prior to the initiation of dose administration, and throughout the study as necessary, the hair was clipped from the back (down each side to the ventral surface) and flanks of each animal in Groups 1-5 using an electric clipper; a different set of clippers was used for the sham and vehicle control groups and the test substance-treated groups to avoid potential cross-contamination.

The vehicle or test substance was applied evenly to the clipped, unabraded area of skin and spread evenly using a glass rod (to ensure contact with an area of approximately 10% of the body surface area) once daily on a 5-day/week basis for a minimum of 90 consecutive days. No vehicle was applied to the sham control group. All animals (Groups 1-5) were fitted with Elizabethan collars during the dosing period. At the end of each dosing day, after an approximate 6-hour exposure period, all animals in Groups 1-5 were gently wiped with a paper towel to remove unabsorbed test substance. At the end of each 5-day dosing period, residual test substance was gently removed (as much as possible without inducing irritation of the skin) from all animals using a warm water and mild soap solution (1% Ivory liquid soap in tap water) followed by a deionized water rinse and drying of the animals with a clean paper towel.

The application sites were marked with a permanent marker for animals in Groups 1-5 and re-marked as necessary throughout the study to allow proper identification of the treated and untreated skin. The area of test substance application was measured and recorded weekly for a representative animal (close to mean body weight) of each sex in each group. The actual surface area of coverage was calculated for each representative as follows:

$$\text{Total body surface area (cm}^2\text{)} = K \cdot \text{body weight (grams)}^{(2/3)}$$

Where:

K = 9 for rats (Freireich *et al.*, 1966)

The mean area of coverage was 10% for males and females in the test substance-treated groups.

The following table presents the approximate percentages of body surface area covered by the test substance for each group/week/sex.

Percent Coverage (%)											
Group Dosage Level (mg/kg/day)	Males					Females					
	1 NA	2 0	3 5	4 50	5 150	1 NA	2 0	3 5	4 50	5 150	
Study Week 0	9.9	10	10	10	10	10.1	10	10.1	10	10.1	
Study Week 1	9.9	10	10	10	10	10	9.9	10.1	10.1	10.1	
Study Week 2	10	9.9	10	10	10	10	9.9	9.8	9.6	10	
Study Week 3	10	9.9	10.1	9.9	9.9	10	10	9.7	10	9.9	
Study Week 4	10.1	10.1	10	10	10	10.1	10	10.4	10	10.2	
Study Week 5	10.1	9.8	9.9	10.1	10.1	10.2	10	10.3	10.1	10	
Study Week 6	10	9.8	10	10	10	10	10.1	10.2	10.1	10	
Study Week 7	9.9	10.3	10	10	10	10.1	10	9.7	9.3	10	
Study Week 8	10.1	10.3	10	10	9.9	10.1	10	10.1	10.1	10	
Study Week 9	10	9.7	10.1	10	10	10.1	9.9	10	9.9	10.1	
Study Week 10	10	9.7	10.1	10	10	10	9.9	9.8	10	10	
Study Week 11	10.1	9.7	9.9	10.1	10	10.1	10	9.8	10	10	
Study Week 12	10.1	9.4	9.9	10	9.8	10.1	10.2	10.1	10.4	10	
Mean Coverage	10.0	9.9	10.0	10.0	10.0	10.1	10.0	10.0	10.0	10.0	
Standard Deviation	0.1	0.3	0.1	0.0	0.1	0.1	0.1	0.2	0.3	0.1	

NA = Not applicable

The dose volume for the test substance-treated groups was 1.5 mL/kg, adjusted as mL/kg per the most recent body weight. The first day of dosing was study day 0, the first week

of dosing was study week 0. Due to the staggered scheduled necropsy, half of each sex received a 3-day nondosing period prior to the last week of dosing.

The following table presents the study group assignment:

Group Number	Treatment	Dosage Level (mg/kg/day)	Dose Volume (mL/kg)	Number of Animals ^a	
				Males	Females
1	Sham Control	NA	NA	10	10
2	Vehicle	0	1.5	10	10
3	Test Substance ^b	5	1.5	10	10
4	Test Substance ^b	50	1.5	10	10
5	Test Substance ^b	150	1.5	10	10
6	Positive Control (CPS) ^c	60	10	6	6

^a = The first 5 surviving animals/sex/group were utilized for bone marrow collection.

^b = The test substance for this study was extract, light paraffinic distillate solvent.

^c = A single dose of CPS was administered via oral gavage to the positive control group on study day 89; animals were euthanized approximately 24 hours following dose administration (study day 90); 5 animals/sex were utilized for bone marrow collection.

NA = Not applicable

Dosage levels were selected based upon results from a previous 14-day range-finding dermal toxicity study (Morris, Draft, WIL-402018). The selected route of administration for this study was dermal for Groups 1-5 because the study objective was to determine the potential toxicity of the test substance when administered by the dermal route, the anticipated route of human exposure.

5. PARAMETERS EVALUATED

5.1. SURVIVAL

All animals were observed twice daily, once in the morning and once in the afternoon, for mortality and moribundity. The animal found dead was examined macroscopically as soon as possible to ensure that tissues were not lost due to autolysis.

5.2. CLINICAL OBSERVATIONS

Clinical examinations were performed on all animals in Groups 1-5 prior to dose application and at approximately 1 to 2 hours following dose application. On nondosing days, the animals were observed once daily. The absence or presence of findings was recorded for individual animals at the scheduled intervals. Detailed physical examinations were conducted on all animals in Groups 1-6 at least once during the pretest period, approximately weekly during the study, and prior to the scheduled necropsy. Any observations noted outside of the above-specified post-dosing intervals were also recorded. In addition, a separate computer protocol was used to record any observations not associated with the post-dosing intervals. These unscheduled clinical observations and treatments are presented in Appendix F.

5.3. DERMAL OBSERVATIONS

Dermal observations were performed on all animals once during the pretest period and on all animals in Groups 1-5 at the end of each 5-day dosing period at approximately 1 to 2 hours following the removal of any residual test substance. The application sites were scored for erythema and edema in accordance with the methods of Draize (Draize, 1965) using the 4-step grading system presented in Appendix G. All dermal findings were recorded.

5.4. BODY WEIGHTS

Individual body weights were recorded approximately weekly beginning during the pretest period and for the duration of the study. During study week 12, body weights were recorded twice. The second weekly body weights are identified in the text and on

the report tables by a prime (') symbol. Body weights were collected with animals wearing Elizabethan collars throughout the study. Mean body weights and mean body weight changes were calculated for the corresponding intervals. Final body weights (fasted) were recorded on the day of the scheduled necropsy.

5.5. FOOD CONSUMPTION

Individual food consumption was recorded approximately weekly beginning during the pretest period and for the duration of the study. Food intake was calculated as g/animal/day for the corresponding body weight intervals. During study week 12, food consumption was recorded twice. The second weekly food consumption is identified on the report tables by a prime (') symbol. When food consumption could not be measured for a given interval (due to spillage, weighing error, obvious erroneous value, *etc.*), the appropriate interval was footnoted as "NA" on the individual tables.

5.6. CLINICAL PATHOLOGY

Blood samples for clinical pathology evaluations (hematology, coagulation, and serum chemistry) were collected from all surviving animals in Groups 1-5 at the scheduled necropsy (study week 12). The animals were fasted overnight prior to blood collection. Blood was collected at the time of necropsy from the vena cava of animals euthanized by inhalation of isoflurane. Blood was collected into tubes containing potassium EDTA (hematology), sodium citrate (coagulation), or no anticoagulant (serum chemistry). Clinical pathology methods, procedures, and references are presented in Appendix H. Interpretation of the clinical pathology data is presented in Appendix I. The following parameters were evaluated:

5.6.1. HEMATOLOGY AND COAGULATION

Total leukocyte count (WBC)	Differential leukocyte count -
Erythrocyte count (RBC)	Percent and absolute
Hemoglobin (HGB)	-Neutrophil (NEU)
Hematocrit (HCT)	-Lymphocyte (LYMPH)
Mean corpuscular volume (MCV)	-Monocyte (MONO)
Mean corpuscular hemoglobin	-Eosinophil (EOS)
(MCH)	-Basophil (BASO)
Mean corpuscular hemoglobin	-Large unstained cell (LUC)
concentration (MCHC)	Red cell distribution width
Platelet count (PLATELET)	(RDW)
Prothrombin time (PT)	Hemoglobin distribution width
Activated partial thromboplastin time	(HDW)
(APTT)	Platelet estimate ^a
Reticulocyte count	Red cell morphology
Percent (RETIC)	(RBC Morphology) ^a
Absolute (RETIC ABSOLUTE)	

() = Designates tabular abbreviation

^a = Presented on individual tables if a manual differential was performed, and the manual data were accepted and reported instead of the automated differential data

5.6.2. BONE MARROW CYTOLOGY

Bone marrow smears were evaluated from all animals at the scheduled necropsy. Bone marrow smear evaluation was based on a classification into 3 cell lineages (granulocytic [myeloid], erythroid, and lymphocytic) and myeloid:erythroid (M:E) ratios were determined. The results of these evaluations are presented in Appendix J, and are summarized in Section 6.7.2.

5.6.3. SERUM CHEMISTRY

Albumin	Gamma glutamyltransferase (GGT)
Total protein	Glucose
Globulin [by calculation]	Total cholesterol (Cholesterol)
Albumin/globulin ratio (A/G Ratio)	Calcium
[by calculation]	Chloride
Total bilirubin (Total Bili)	Phosphorus
Urea nitrogen	Potassium
Creatinine	Sodium
Alkaline phosphatase (ALP)	Triglycerides (Triglyceride)
Alanine aminotransferase (ALT)	Sorbitol dehydrogenase (SDH)
Aspartate aminotransferase (AST)	

() = Designates tabular abbreviation

5.7. OPHTHALMIC EXAMINATIONS

Ocular examinations were conducted on all animals prior to randomization (11 April 2011; study week -1) and on Group 1-5 animals near the end of the treatment period (15 July 2011; study week 12). All ocular examinations were conducted using an indirect ophthalmoscope and slit lamp biomicroscope preceded by pupillary dilation with an appropriate mydriatic agent. The ophthalmic examination statements are presented in Appendix K.

5.8. ANATOMIC PATHOLOGY

5.8.1. MACROSCOPIC EXAMINATION

A complete necropsy was conducted on all animals in Groups 1-5. Animals were anesthetized by isoflurane inhalation and euthanized by exsanguination. The necropsies included, but were not limited to, examination of the external surface, all orifices, and the cranial, thoracic, abdominal, and pelvic cavities, including viscera. Group 6 animals were euthanized via carbon dioxide inhalation and discarded without examination following bone marrow collection (Section 5.9.). For Group 1-5 animals, clinical findings that were confirmed macroscopically were designated CEO on the individual macroscopic data tables. The following tissues and organs were collected and placed in 10% neutral-buffered formalin (except as noted):

Adrenals (2)	Lymph nodes
Aorta	Axillary (2)
Bone with marrow	Mandibular (2)
Femur with joint ^a	Mesenteric
Bone marrow smear	Ovaries with oviducts (2) ^e
(from sternum) ^b	Pancreas
Brain	Peripheral nerve (sciatic)
Cerebrum level 1	Pituitary
Cerebrum level 2	Prostate
Cerebellum with medulla/pons	Salivary glands (mandibular [2])
Cervix	Seminal vesicles (2)
Epididymides (2) ^c	Skeletal muscle (rectus femoris)
Eyes with optic nerve (2) ^d	Skin (with mammary gland) ^f
Gastrointestinal tract	Skin
Esophagus	Sham, Vehicle, and Treated
Stomach	(3 sections)
Duodenum	Untreated (posterior to treated skin)
Jejunum	Spinal cord (cervical, thoracic, lumbar)
Ileum	Spleen
Cecum	Testes (2) ^e
Colon	Thymus
Rectum	Thyroid (with parathyroids, if
Heart	present [2]) ^e
Kidneys (2)	Trachea
Lacrimal gland (exorbital [2])	Urinary bladder
Liver (sections of 2 lobes)	Uterus
Lungs (including bronchi, fixed	Vagina
by inflation with fixative)	Gross lesions (when possible)

^a = Bone marrow for histopathology was collected from the left femur and bone marrow for the micronucleus assay was collected from the right femur.

^b = Bone marrow smears were obtained at scheduled necropsy, but not placed in formalin; slides were examined.

^c = Fixed in Bouin's solution

^d = Fixed in Davidson's solution

^e = Oviducts and parathyroids examined if in plane of section.

^f = For females; a corresponding section of skin was collected from the same anatomical area for males.

5.8.2. ORGAN WEIGHTS

The following organs were weighed from all animals in Groups 1-5 at the scheduled necropsy:

Adrenals	Pituitary
Brain	Prostate
Epididymides	Spleen
Heart	Testes
Kidneys	Thymus
Liver	Thyroid with parathyroids*
Ovaries with oviducts	Uterus

Paired organs were weighed together. Designated organs (*) were weighed after fixation. Organ to final body weight and organ to brain weight ratios were calculated.

5.8.3. SLIDE PREPARATION AND MICROSCOPIC EXAMINATION

After fixation, protocol-specified tissues were trimmed according to WIL Research's SOPs and the protocol. Trimmed tissues were processed into paraffin blocks, sectioned at 4 to 8 microns, mounted on glass microscope slides, and stained with hematoxylin and eosin. Three male animals, 1 from each of the following groups: sham control group, vehicle control group, and 5 mg/kg/day group, had skin lesions that were stained with Brown & Hopps tissue Gram stains and examined microscopically.

Microscopic examination was performed on all tissues listed in Section 5.8.1. from all animals found dead or at the scheduled necropsy with the exception of the mammary glands (females), spinal cords, muscles, eyes with optic nerves, and exorbital lacrimal glands. Missing tissues were identified as not found at necropsy, lost at necropsy, lost during processing, or other designations as appropriate. Tissues may appear on the report tables as not examined due to the tissue not being in the plane of section, not present at trimming, *etc.* The pathology report is presented in Appendix I.

5.9. MICRONUCLEUS EVALUATION

Bone marrow was collected from 5 surviving animals in each sex/group (Groups 1-6) at the time of euthanasia from the right femur of animals euthanized by inhalation of isoflurane or carbon dioxide. Bone marrow was aspirated or flushed 2 to 3 times from the right femur into a centrifuge tube using a syringe containing heat inactivated fetal bovine serum (HI FBS). The bone marrow was centrifuged and all but approximately 0.25 mL (or a volume approximately twice that of the cell pellet) of HI FBS was decanted, and the pellet was resuspended in the remaining HI FBS. Bone marrow smears were prepared by placing approximately 1 drop of cell suspension onto a minimum of 2 appropriately labeled, clean microscope slides. Each slide was coded so that the treatment group would not be revealed during subsequent analysis. The slides were air dried, fixed in 100% methanol for approximately 20 minutes, and allowed to air dry a second time. The slides were stored refrigerated until shipped at ambient temperature to WIL Research, Skokie, IL.

Prior to analysis, the coded slides were stained with acridine orange (A/O) staining solution (Hayashi *et al.*, 1983) and placed in numerical order using the animal numbers. Three separate evaluations were made for each slide: 1) a total of 1000 erythrocytes (both polychromatic erythrocytes [PCEs] and normochromatic erythrocytes [NCEs]) per animal were counted and the PCE:total erythrocytes [TE] ratio was determined; 2) the number of micronucleated PCEs from a total of 2000 PCEs was scored per animal; and 3) the number of micronucleated NCEs from a total of 2000 NCEs was scored per animal.

The vehicle control values were reported to be within WIL Research historical control reference range values (Appendix L) and were less than 0.4% micronucleated PCEs or NCEs. A detailed description of the methods and the results of these evaluations are presented in Appendix M.

5.10. DATA ACQUISITION AND ANALYSIS

5.10.1. ACQUISITION AND REPORTING

Program/System	Description
Archive Management System (AMS)	In-house developed application for storage, maintenance, and retrieval of information for archived materials (<i>e.g.</i> , lab books, study data, wet tissues, slides, <i>etc.</i>).
Formulations Dose Dispensing Management System (FDDMS)	In-house developed system used to assign unique barcodes to formulation containers and individual containers used for dispensing dosing formulations.
InSight [®] Publisher	Electronic publishing system (output is Adobe Acrobat, PDF).
Master Schedule	Maintains the master schedule for the company.
Metasys DDC Electronic Environmental Control System	Controls and monitors animal room environmental conditions.
Microsoft [®] Office 2007	Used in conjunction with the publishing software to generate study reports.
Provantis Dispense [™]	Comprehensive system (Instem LSS Limited) to manage test materials, including receipt, formulation instructions, and accountability.
WIL Metasys	In-house developed system used to record and report animal room environmental conditions.
WIL Toxicology Data Management System [™] (WTDMS [™])	In-house developed system used for collection and reporting of in-life and <i>postmortem</i> data.
Note: Version numbers of WTDMS [™] programs used for the study are presented on the report data tables (reporting programs); version numbers and release dates are otherwise maintained in the study records and/or facility records.	

5.10.2. STATISTICAL ANALYSIS

Each mean was presented with the standard deviation (S.D.), standard error (S.E.), and the number of animals (N) used to calculate the mean. Due to the use of significant figures and the different rounding conventions inherent in the types of software used, the means and standard deviations on the summary and individual tables may differ slightly. Therefore, the use of reported individual values to calculate subsequent parameters or means will, in some instances, yield minor variations from those listed in the report data tables.

5.10.2.1. STATISTICS CONDUCTED BY WIL RESEARCH ASHLAND

All statistical tests were performed using WTDMS™ unless otherwise noted. Analyses were conducted using two-tailed tests (except as noted otherwise) for minimum significance levels of 1% and 5%, comparing each test substance-treated group (Groups 3-5) to the vehicle control group (Group 2) by sex.

Body weight, body weight change, food consumption, clinical pathology, and organ weight data were subjected to a parametric one way ANOVA (Snedecor and Cochran, 1980) to determine intergroup differences. If the ANOVA revealed statistically significant ($p < 0.05$) intergroup variance, Dunnett's test (Dunnett, 1964) was used to compare the test substance treated groups (Groups 3-5) to the vehicle control group (Group 2). The vehicle control group (Group 2) data were evaluated using the Student's t-Test (Sokal and Rohlf, 1981) and compared to the sham control group (Group 1). GGT values under range were assigned a value of 0.1 (half the lower limit of quantitation) for statistical analysis and reporting. GGT data were subjected to the Kruskal-Wallis nonparametric ANOVA test (Kruskal and Wallis, 1952) to determine intergroup differences. If the ANOVA revealed significance ($p < 0.05$), Dunn's test (Dunn, 1964) was used to compare the test substance-treated groups (Groups 3-5) to the vehicle control group (Group 2) and the vehicle control group (Group 2) to the sham control group (Group 1).

The positive control group (Group 6) data were evaluated using the Student's t-Test (Sokal and Rohlf, 1981) and compared to the vehicle control group (Group 2). The vehicle control group (Group 2) data was also evaluated using the Student's t-Test (Sokal and Rohlf, 1981) and compared to the sham control group (Group 1).

5.10.2.2. STATISTICS CONDUCTED BY WIL RESEARCH SKOKIE
(MICRONUCLEUS TEST)

The percentages of micronucleated cells in PCEs, the percentage of micronucleated cells in NCEs, and in the ratio of PCEs to TEs for the test substance-treated (Groups 3-5) and vehicle control group (Group 2) were subjected to a parametric one way ANOVA (Snedecor and Cochran, 1980) to determine intergroup differences. If the ANOVA revealed statistically significant ($p < 0.05$) intergroup variance, Dunnett's test (Dunnett, 1964) was used to compare the test substance-treated groups (Groups 3-5) to the vehicle control group (Group 2). In addition, the positive control group (Group 6) and vehicle control group (Group 2) and the sham control group (Group 1) and vehicle control group (Group 2) were each compared using a separate parametric one-way ANOVA. Statistical significance was assessed at a 95% confidence level ($p < 0.05$).

6. RESULTS

6.1. ANALYSES OF DOSING FORMULATIONS

Analyses of Dosing Formulations Report: Appendix C

The analyzed dosing formulations were found to contain 101% to 108% of the test substance which was within the WIL Research SOP range of target concentrations (85% to 115%) and were homogeneous. Based on these results, the protocol-specified doses of test substance were applied to the animals. The test substance was not detected in the vehicle formulation that was applied to the vehicle control group (Group 2).

Text Table 1. Results of Homogeneity/Concentration Assessment of the 15 April 2011 Formulations

	Group 2 (0 mg/mL)	Group 3 (3.3 mg/mL)	Group 4 (33.3 mg/mL)	Group 5 (100.0 mg/mL)
Mean Concentration (mg/mL)	ND	3.39	34.3	103
RSD (%)	NA	1.6	1.2	0.33
Mean % of Target	NA	103	103	103

ND = Not detected; no test substance chromatographic peak detected with S/N > 10

NA = Not applicable

Text Table 2. Results of Concentration Analyses

	Mean Concentration, mg/mL (% of Target)			
	Group 2 (0 mg/mL)	Group 3 (3.3 mg/mL)	Group 4 (33.3 mg/mL)	Group 5 (100.0 mg/mL)
Date of Preparation				
26 May 2011	ND	3.49 (106)	35.3 (106)	108 (108)
7 July 2011	ND	3.48 (105)	35.2 (106)	105 (105)

ND = Not detected; no test substance chromatographic peak detected with S/N > 10

6.2. SURVIVAL

Summary Data: Table S1, Table S14, Table S17, Table S18

Individual Data: Table A1, Table A14, Table A15

Male no. 99526 in the 150 mg/kg/day group was found dead on study day 40. A complete necropsy and histologic examination did not reveal a cause of death. Clinical

observations on study day 39 consisted of body and extremities pale, extremities cool to touch, and dermal atonia.

All other animals survived to the scheduled necropsy.

6.3. CLINICAL OBSERVATIONS

Summary Data: Table S2, Table S3, Table S4

Individual Data: Table A2, Table A3, Table A4; Appendix F

There were no test substance-related clinical observations. Clinical observations of swollen and/or reddened ears were occasionally noted within the first half of the study in the 150 mg/kg/day group females. In addition, a 50 mg/kg/day group female was noted with swollen ears on study day 83 and a 150 mg/kg/day group male was noted with reddened ears on study day 84. These observations were most likely not test substance-related due to the low frequency and the absence of a time-related response. Clinical observations of feces smaller than normal were noted in a 50 mg/kg/day group male and two 150 mg/kg/day group males on study day 17 or 79 and correlated with slightly lower individual food consumption.

All other clinical findings in the test substance-treated groups were noted with similar incidence in the vehicle control group, were limited to single animals, were not noted in a dose-related manner, and/or were common findings for laboratory rats of this age and strain.

6.4. DERMAL OBSERVATIONS

Summary Data: Table S5

Individual Data: Table A5

Scoring Criteria for Dermal Reactions: Appendix G

Residual test substance was occasionally noted within the dose sites for the 150 mg/kg/day group males and 50 and 150 mg/kg/day group females, with a higher incidence among the 150 mg/kg/day group animals.

There was no test substance-related dermal irritation. A low incidence of very slight erythema was noted in the 5 and 150 mg/kg/day group males and in the sham control, vehicle control, 5, 50, and 150 mg/kg/day group females with greater prevalence in the 5 and 50 mg/kg/day group females; however, considering the absence of a dose-related response and the inconsistency of the finding between genders, very slight erythema was not considered to be test substance-related. Desquamation was noted in all test substance-treated groups but was more prevalent in the 50 and 150 mg/kg/day group females. However, due to the lack of similar incidence among males, the lack of other dermal findings (erythema and edema), and the lack of a dose-related response, the desquamation was not considered test substance-related. These observations may be related to the nature of the vehicle (acetone) and/or washing procedures.

6.5. BODY WEIGHTS

Summary Data: Table S6, Table S7, Table S8; Figure 1, Figure 2

Individual Data: Table A6, Table A7, Table A8

Test substance-related statistically significantly lower mean cumulative body weight gains were noted in the 150 mg/kg/day group females from study weeks 0 to 8, 0 to 9, 0 to 10, 0 to 11, 0 to 12, and 0 to 12'. As a result, mean body weights were 8.1% lower compared to the vehicle control group at study week 12'.

There were no other test substance-related effects on body weights. Statistically significantly lower mean body weight gains were noted in the 50 mg/kg/day group females from study week 4 to 5. However, these differences in body weight gain were likely due to biological variability and were not considered related to test substance application due to the lack of a dose-response trend.

6.6. FOOD CONSUMPTION

Summary Data: Table S9

Individual Data: Table A9

Food consumption was unaffected by test substance application. Occasional statistically significantly lower mean food consumption values were noted in the 50 and 150 mg/kg/day group females; however, due to the magnitude of change and the lack of a dose-response trend, the lower values were not considered test substance-related.

6.7. CLINICAL PATHOLOGY

6.7.1. HEMATOLOGY AND COAGULATION

Summary Data: Table S10

Individual Data: Table A10

Pathology Report: Appendix I

Test substance-related lower red blood cell (RBC) counts, hemoglobin, hematocrit, white blood cell (WBC) counts, lymphocyte counts, eosinophil counts, and platelet counts were noted in the 150 mg/kg/day group. Lower hemoglobin, eosinophil counts, and platelet counts were also noted in the 50 mg/kg/day group, and lower mean eosinophil counts (absolute and percentage) were noted in the 5 mg/kg/day female group. Test substance related higher red cell distribution widths (RDW) and hemoglobin distribution widths (HDW) were noted in the 50 and 150 mg/kg/day groups. Reticulocyte counts (absolute counts and percentages) were statistically significantly higher in the 150 mg/kg/day group males ($p < 0.01$, Dunnett's test) and the mean reticulocyte percentage was higher in the 150 mg/kg/day group females ($p < 0.05$, Dunnett's test).

The following table presents the test substance-related effects on hematology and coagulation parameters:

**Text Table 3: Test Substance-Related Hematology and Coagulation Changes
(Means and % Difference from the Vehicle Control Group)**

Parameter	Vehicle Control		5 mg/kg/day		50 mg/kg/day		150 mg/kg/day	
	Male	Female	Male	Female	Male	Female	Male	Female
White blood cell count (thousands/ μ L)	9.15	8.85	-	-	-	-	-	6.46* (-27.0%)
Red blood cell count (millions/ μ L)	9.08	8.56	-	-	-	-	7.44** (-18.1%)	-
Hemoglobin (g/dL)	15.6	15.3	-	-	14.4* (-7.7%)	-	12.6** (-19.2%)	14.1* (-7.8%)
Hematocrit (%)	47.8	45.6	-	-	-	-	39.1** (-18.2%)	-
Platelet count (thousands/ μ L)	1003	1163	-	-	877 (-12.6%)	846** (-27.3%)	888 (-11.5%)	774** (-33.4%)
Absolute reticulocyte count (thousands/ μ L)	161.3	155.0	-	-	-	-	342.6** (+112.4%)	188.2 (+21.4%)
Reticulocytes (%)	1.8	1.8	-	-	-	-	4.7** (+161.1%)	2.3* (+27.8%)
Absolute lymphocyte counts (thousands/ μ L)	7.23	7.06	-	-	-	-	6.89 (-4.7%)	5.32 (-24.6%)
Absolute eosinophil counts (thousands/ μ L)	0.10	0.10	-	0.07** (-30.0%)	0.03** (-70.0%)	0.04** (-60.0%)	0.02** (-80.0%)	0.02** (-80.0%)
Eosinophils (%)	1.1	1.2	0.7 (-36.4%)	0.8* (-33.3%)	0.4** (-63.6%)	0.5** (-58.3%)	0.3** (-72.7%)	0.3** (-75%)
Red cell distribution width (%)	12.0	11.1	-	-	-	12.0** (+8.1%)	16.6** (+38.3%)	13.3** (+19.8%)
Hemoglobin distribution width (%)	2.23	1.97	-	-	2.53** (+13.5%)	2.31** (+17.3%)	3.01** (+35.0%)	2.49** (+26.4%)

- = No test substance-related changes.

* = Significantly different from vehicle control group at $p < 0.05$.

** = Significantly different from vehicle control group at $p < 0.01$.

There were no other test substance-related effects on hematology or coagulation parameters. However, some statistically significant differences were observed when the control and test substance-treated groups were compared. Higher monocyte counts were noted in the male sham control group versus the male vehicle control group; this difference was not considered biologically or toxicologically meaningful but reflected variation between groups as the test substance-treated groups were not statistically significantly different from the vehicle control group. The mean percentage of large unstained cells was higher in the 150 mg/kg/day group females, but the absolute numbers were not changed indicating that this was a spurious finding due to the decreased white blood cell count for this group. Mean activated partial thromboplastin time (APTT) measured in the male 150 mg/kg/day group was significantly lower than the control

group value but is not biologically relevant as lower APTT time would indicate improved clotting time.

6.7.2. BONE MARROW CYTOLOGY

Bone Marrow Cytology Report: Appendix J

There were no meaningful differences in cellular morphology or granulocytic or erythroid maturation in any of the examined groups.

The proportion of total erythroid precursors was slightly to minimally higher and the ME ratios were correspondingly slightly to minimally lower in males administered 50 mg/kg/day of test substance, and in males and females administered 150 mg/kg/day of test substance compared to the sham and vehicle controls. The proportions of total granulocytic precursors were slightly lower in the 50 and 150 mg/kg/day males compared to sham and vehicle controls.

The slightly higher proportion of total erythroid cells in the bone marrow may correspond to the higher percent and absolute reticulocyte counts in the peripheral blood in the 150 mg/kg/day males and minimally higher percent reticulocyte counts in the 150 mg/kg/day females.

Cytological observations included the presence of pleomorphic bacteria, increased lysis, cell swelling and/or fat, decreased cellularity, and excess diluent. Although these observations were more prevalent in females in general, they were noted in control and test substance-treated groups and were considered most likely to be due to technical artifacts and not test substance administration. Overall cellularity and megakaryocyte density are more reliably assessed from histopathology sections. There were no alterations in bone marrow noted in the microscopic pathology evaluation, which is consistent with the likelihood that decreased cellularity in some bone marrow cytology slides was due to overdilution and technical artifacts. Several slides could not be numerically evaluated due to the inadequate number of intact nucleated cells.

6.7.3. SERUM CHEMISTRY

Summary Data: Table S11

Individual Data: Table A11

Pathology Report: Appendix I

Test substance-related higher cholesterol and sorbitol dehydrogenase (SDH) values were noted in the 150 mg/kg/day group, and higher urea nitrogen (BUN) values were noted in the 50 and 150 mg/kg/day groups. Test substance-related lower alanine aminotransferase (ALT) and triglycerides values were noted in the 150 mg/kg/day group.

Higher values for cholesterol (150 mg/kg/day group males and females; $p > 0.01$, Dunnett's test), BUN (150 mg/kg/day group females and 50 mg/kg/day group females; $p < 0.01$ and $p < 0.05$, respectively, Dunnett's test), and SDH (150 mg/kg/day group males; $p < 0.05$, Dunnett's test) were noted. Lower values for ALT and triglycerides in the 150 mg/kg/day group females ($p < 0.05$, Dunnett's test) were also noted.

The following table presents the test substance-related effects on serum chemistry parameters:

**Text Table 4: Test Substance-Related Serum Chemistry Changes
(Means and % Difference from the Vehicle Control Group)**

Parameter	Vehicle Control		50 mg/kg/day		150 mg/kg/day	
	Male	Female	Male	Female	Male	Female
Urea nitrogen (mg/dL)	14.2	14.2	-	16.4* (+15.5%)	-	17.4** (+22.5%)
Alanine aminotransferase (U/L)	48	70	-	-	-	37* (-47.1%)
Cholesterol (mg/dL)	45	71	-	-	86** (+91.1%)	104** (+46.5%)
Triglyceride (mg/dL)	20	30	-	-	-	20 (-33.3%)
SDH (U/L)	12	15	-	-	61* (+408.3%)	-

- = No test substance-related changes.

* = Significantly different from vehicle control group at $p < 0.05$.

** = Significantly different from vehicle control group at $p < 0.01$.

There were no other test substance-related effects on serum chemistry parameters. However, statistically significant lower total bilirubin values were observed when the vehicle control and test substance treated groups were compared. This was not a dose related response; however, as it was only observed in the 50 mg/kg/day group females and was not lower in the higher dose group.

6.8. OPHTHALMIC EXAMINATIONS

Summary Data: Table S12, Table S13

Individual Data: Table A12, Table A13

Ophthalmic Examination Report: Appendix K

No ophthalmic lesions indicative of toxicity were observed in any of the test substance-treated groups. All findings observed were typical in prevalence and appearance for laboratory rats of this age and strain.

6.9. ANATOMIC PATHOLOGY

6.9.1. MACROSCOPIC EXAMINATION

Summary Data: Table S15

Individual Data: Table A16

Pathology Report: Appendix I

There were no test substance-related macroscopic findings at the scheduled necropsy. All macroscopic findings noted were considered to be spontaneous and/or incidental in nature and unrelated to test substance administration.

6.9.2. ORGAN WEIGHTS

Summary Data: Table S16

Individual Data: Table A17, Table A18, Table A19

Pathology Report: Appendix I

Test substance-related absolute and/or relative organ weight changes were noted for the spleen, liver, thymus, pituitary, heart, and thyroid/parathyroids in the 50 and/or 150 mg/kg/day groups.

Higher thyroid/parathyroid weights relative to brain weights were noted in the 150 mg/kg/day group males. In addition, higher heart weight relative to body weight was noted in the 150 mg/kg/day group males. Higher liver weights (absolute and relative to body and brain weights) were noted in the 50 and 150 mg/kg/day group males and females and higher spleen weights (absolute and relative to body and brain weights) were noted in the 50 and 150 mg/kg/day group males.

Lower pituitary weights (absolute and relative to brain weights) were noted in the 150 mg/kg/day group females and lower thymus weights (absolute and relative to body and brain weights) were noted in the 50 mg/kg/day group females and the 150 mg/kg/day group males and females.

There were no other test substance-related effects on organ weights. However, statistically significantly higher mean adrenal gland weight (absolute and relative to brain weight) were observed when the vehicle control and test substance-treated groups were compared. The sham control group males were also noted with statistically significantly higher mean adrenal gland weight (absolute and relative to brain weight) when compared to the vehicle control group, indicating the lack of a test substance-related effect.

6.9.3. MICROSCOPIC EXAMINATION

Summary Data: Table S19

Individual Data: Table A16

Pathology Report: Appendix I

No test substance-related microscopic findings were noted in any of the groups examined histologically.

The most frequent lesions noted were minimal to mild chronic progressive nephropathy (CPN) and hepatic mononuclear infiltrate. Incidence of CPN was higher in the 50 and 150 mg/kg/day group males, but when compared to the WIL Research historical control database for Crl:CD(SD) rats 19-21 weeks of age (version 3.1), the incidence was not substantially above historical incidence and was judged to not be test substance-related. Increased incidence of minimal to mild mononuclear cell infiltrate was detected in the 50 mg/kg/day group females, but failed to show a dose-response relationship in the 150 mg/kg/day group. Three animals, 1 male each from the sham control group (no. 99496), vehicle control group (no. 99467), and 5 mg/kg/day group (no. 99495), exhibited gross lesions of scabbing of the skin which histologically presented as ulceration with serocellular crusts. Affected skin sections from these 3 animals were stained with Brown & Hopps tissue Gram stains and examined for evidence of bacteria. Male nos. 99496 and 99495 showed Gram-positive cocci on the surfaces of the ulcers. Male no. 99467 was negative for bacteria. The superficial bacteria observed with the tissue Gram stain are consistent with secondary contamination of wounds suggesting the skin lesions resulted from trauma and were not the result of bacterial infection.

Remaining histologic changes were considered to be incidental findings or related to some aspect of experimental manipulation other than application of the test substance. There was no test substance-related alteration in the prevalence, severity, or histologic character of those incidental tissue alterations.

6.10. MICRONUCLEUS EVALUATION

Historical Control Data for Micronucleus Evaluation: Appendix L

Micronucleus Assay Report: Appendix M

Extract, light paraffinic distillate solvent produced a statistically significant increase in the mean percentage of micronucleated polychromatic erythrocytes (%MN-PCEs) at the highest dose level, 150 mg/kg/day, in male rats, compared to the vehicle control group. A statistically significant increase in the mean %MN-PCEs was also observed at the middle dose level, 50 mg/kg/day, in female rats, compared to the vehicle control group; however, a dose response was not observed as the highest dose level, 150 mg/kg/day, did not exhibit a statistically significant increase in %MN-PCEs. Thus, the results in female rats met the criteria for an equivocal response.

Extract, light paraffinic distillate solvent did not produce a statistically significant increase in the mean percentage of micronucleated normochromatic erythrocytes (%MN-NCEs) compared to the vehicle control group. In addition, extract, light paraffinic distillate solvent did not produce a statistically significant change in the mean ratio of polychromatic to total erythrocytes (PCE:TE ratio) relative to the vehicle control group. The group mean values for both %MN-PCEs and PCE:TE ratios for the vehicle and positive control groups were within the values previously obtained by Midwest BioResearch (Report MBR11-265).

Extract, light paraffinic distillate solvent met the criteria for a positive response in male rats at 150 mg/kg/day and an equivocal response in female rats at 50 mg/kg/day for the induction of bone marrow micronuclei in polychromatic erythrocytes under the conditions of this assay.

7. DISCUSSION AND CONCLUSIONS

7.1. DISCUSSION

The objectives of this study were to evaluate the toxicity potential of repeated dermal exposure of extract, light paraffinic distillate solvent for 90 days and to determine the effects on male and female rats, to verify/expand the existing data pertaining to polycyclic aromatic compounds (PAC) and the prediction of toxicity following exposure to high-boiling substances based on their PAC content, and to assess the potential of extract, light paraffinic distillate solvent to induce micronuclei in polychromatic erythrocytes (PCEs) and normochromatic erythrocytes (NCEs) in rat bone marrow following the 90-day repeated-dose treatment. This assay evaluated compounds for *in vivo* clastogenic activity and/or disruption of the mitotic apparatus.

A complete necropsy and histologic examination of a 150 mg/kg/day group male found dead on study day 40 did not reveal a cause of death and, thus, the relationship to test substance application is uncertain.

Relationships were suspected between clinical pathology, gross necropsy, organ weight, and histopathology observations, as presented in Text Table 5. These proposed relationships were based on subjective interpretation rather than a statistical analysis of correlation. These relationships; however, did not have a histologically evident correlate that can be pointed to as causative.

Text Table 5. Correlations of Selected Observations

Necropsy	Organ Weight	Clinical Pathology	Histopathology
-	↓ Thymus weight	↓ lymphocyte count	-

- = no correlate

The multiple changes noted in the hematogram and leukogram were investigated by cytologic evaluation of the bone marrow slides collected at necropsy. The complete results of that examination are found in the bone marrow cytology report (see Appendix J). That evaluation showed: "...no meaningful differences in cellular morphology or granulocytic or erythroid maturation in any of the examined groups. The

proportion of total erythroid precursors was slightly to minimally higher and the ME ratios were correspondingly slightly to minimally lower in males administered 50 mg/kg/day of test article, and in males and females administered 150 mg/kg/day of test article compared to the sham and vehicle controls. The proportions of total granulocytic precursors were slightly lower in the 50 and 150 mg/kg/day males compared to sham and vehicle controls. The slightly higher proportion of total erythroid cells in the bone marrow may correspond to the higher percent and absolute reticulocyte counts in the peripheral blood in the 150 mg/kg/day males and minimally higher percent reticulocyte counts in the 150 mg/kg/day females.” Statistically significant lower RBC, WBC, and eosinophil counts with no concomitant change in bone marrow cellularity suggest loss of blood cells post-maturation.

Changes in hematology that were considered adverse included lower RBC counts, hemoglobin, hematocrit, WBC counts, lymphocyte counts, eosinophil counts, and platelet counts, and higher RDW and HDW. Serum chemistry changes that were considered adverse included higher cholesterol, SDH, and BUN values and lower ALT and triglycerides values. Higher liver and spleen weights (absolute and relative to body and brain weights) and lower pituitary (absolute and relative to brain weight) and thymus weights (absolute and relative to body and brain weights) were considered adverse changes, but it is unclear if the higher absolute weights observed for the heart relative to final body weight and thyroid/parathyroids relative to brain weight were adverse or nonadverse as there was no corresponding increase in absolute weights for either organ or higher weights relative to brain weight for the heart or relative to final body weight for the thyroid/parathyroids.

7.2. CONCLUSIONS

Based on the results of this study, dermal application of extract, light paraffinic distillate solvent over an area of approximately 10% of the shaved body surface area to Crl:CD(SD) rats for approximately 6 hours per day, 5 days per week, for a minimum of 90 days at dosage levels of 5, 50, and 150 mg/kg/day resulted in no overt toxicity. A

no-observed-effect level (NOEL) could not be established due to the lower eosinophil counts noted in the 5, 50, and 150 mg/kg/day groups; however, the values were within the WIL Research historical control reference range (version 3.1).

In addition dermal application of extract, light paraffinic distillate solvent resulted in a positive response for induction of bone marrow micronuclei at 150 mg/kg/day for males and an equivocal response at 50 mg/kg/day for females. However, there were no meaningful differences in bone marrow cytology.

8. REPORT REVIEW AND APPROVAL

Report Authored and Approved By:

[Redacted Signature]

Staff Toxicologist, General Toxicology
Study Director

08 Aug 2012
Date

Report Prepared By:

[Redacted Signature]

Associate Study Analyst

8 Aug 2012
Date

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Senior Toxicologist, General Toxicology

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Senior Study Analyst

08 Aug 2012
Date

9. QUALITY ASSURANCE STATEMENT

<u>Date(s) of Inspection(s)</u>	<u>Phase Inspected</u>	<u>Date(s) Findings Reported to Study Director</u>	<u>Date(s) Findings Reported to Management</u>
18-Apr-2011	Test Substance Administration	18-Apr-2011	27-May-2011
29-Apr-2011	Removal of Residual Test Substance	29-Apr-2011	27-May-2011
16-Jul-2011	Necropsy	16-Jul-2011	26-Aug-2011
16-Jul-2011	Clinical Pathology Blood Collection and Analysis	16-Jul-2011	26-Aug-2011
21-Jul-2011	Trimming of Tissues	22-Jul-2011	26-Aug-2011
22-Jul-2011			
25-Jul-2011			
26-Jul-2011	Study Records (I-1)	27-Jul-2011	26-Aug-2011
27-Jul-2011			
25-Jul-2011	Study Records (I-2)	27-Jul-2011	26-Aug-2011
26-Jul-2011			
27-Jul-2011	Study Records (I-3)	27-Jul-2011	26-Aug-2011
26-Jul-2011			
27-Jul-2011	Study Records (I-4)	27-Jul-2011	26-Aug-2011
26-Jul-2011			
27-Jul-2011	Study Records (C-1)	27-Jul-2011	26-Aug-2011
27-Jul-2011	Study Records (N-1)	27-Jul-2011	26-Aug-2011
28-Jul-2011	Study Records (RX-1)	28-Jul-2011	26-Aug-2011
03-Aug-2011	Hematology and Organ Weight Tables	03-Aug-2011	26-Sep-2011
22-Sep-2011	Study Records (A-1)	27-Sep-2011	25-Oct-2011
23-Sep-2011			
26-Sep-2011			
27-Sep-2011	Analytical Chemistry Report	27-Sep-2011	25-Oct-2011
28-Sep-2011	Study Records (H-1)	28-Sep-2011	25-Oct-2011
28-Sep-2011	Study Records (Pathology Data)	28-Sep-2011	25-Oct-2011
28-Sep-2011	Pathology Report	28-Sep-2011	25-Oct-2011
07-Oct-2011	Draft Report (without Analyses of Dosing Formulations and Pathology Report)	10-Oct-2011	28-Nov-2011
10-Oct-2011			

<u>Date(s) of Inspection(s)</u>	<u>Phase Inspected</u>	<u>Date(s) Findings Reported to Study Director</u>	<u>Date(s) Findings Reported to Management</u>
17-Oct-2011	Audited Analytical Chemistry Report	17-Oct-2011	28-Nov-2011
17-Oct-2011	Audited Draft Report	17-Oct-2011	28-Nov-2011
02-Apr-2012	Protocol Amendment 5	02-Apr-2012	02-Apr-2012
28-Jun-2012, 29-Jun-2012	Bone Marrow Cytology Data	29-Jun-2012	29-Jun-2012
29-Jun-2012	Bone Marrow Cytology Report	29-Jun-2012	29-Jun-2012
02-Aug-2012	Final Bone Marrow Cytology Report	02-Aug-2012	02-Aug-2012
02-Aug-2012	Final Pathology Report	02-Aug-2012	02-Aug-2012
06-Aug-2012	Final Report	06-Aug-2012	06-Aug-2012

This study was inspected in accordance with the United States EPA GLP Standards (40 CFR Part 792), the OECD Principles of GLP, the WIL Research SOPs, and the Sponsor's protocol and protocol amendments, with the following exception. The data located in Appendix B (Test Substance Characterization and Certificate of Analysis) was the responsibility of the Supplier. Review of the protocol and protocol amendments as well as a yearly internal facility inspection are conducted by the WIL Quality Assurance Department. A status report is submitted to management monthly. Quality Assurance information for the portion(s) of the study conducted at WIL Research Skokie are presented in Appendix M (Micronucleus Assay Report).

This report accurately reflects the data generated during the study. The methods and procedures used in the study were those specified in the protocol, its amendments, and the WIL Research SOPs.



Quality Assurance Representative

8 Aug 2012
Date

10. REFERENCES

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11. DATA RETENTION

The Sponsor has title to all documentation records, raw data, slides, specimens, or other work product generated during the performance of the study. Any remaining dosing formulation or clinical pathology samples will be discarded upon issuance of the final report; all remaining work product generated by WIL Research, including raw paper data and specimens, are retained in the WIL Research Archives as specified in the study protocol. All remaining work product generated by WIL Research Skokie, including raw paper data and slides, were shipped to WIL Research Ashland upon finalization of the Micronucleus Assay subreport. Data generated by the Sponsor will be archived by the Sponsor.

A reserve sample of the test substance, pertinent electronic storage media, and the original final report are retained in the WIL Research Archives in compliance with regulatory requirements.

12. ABBREVIATIONS

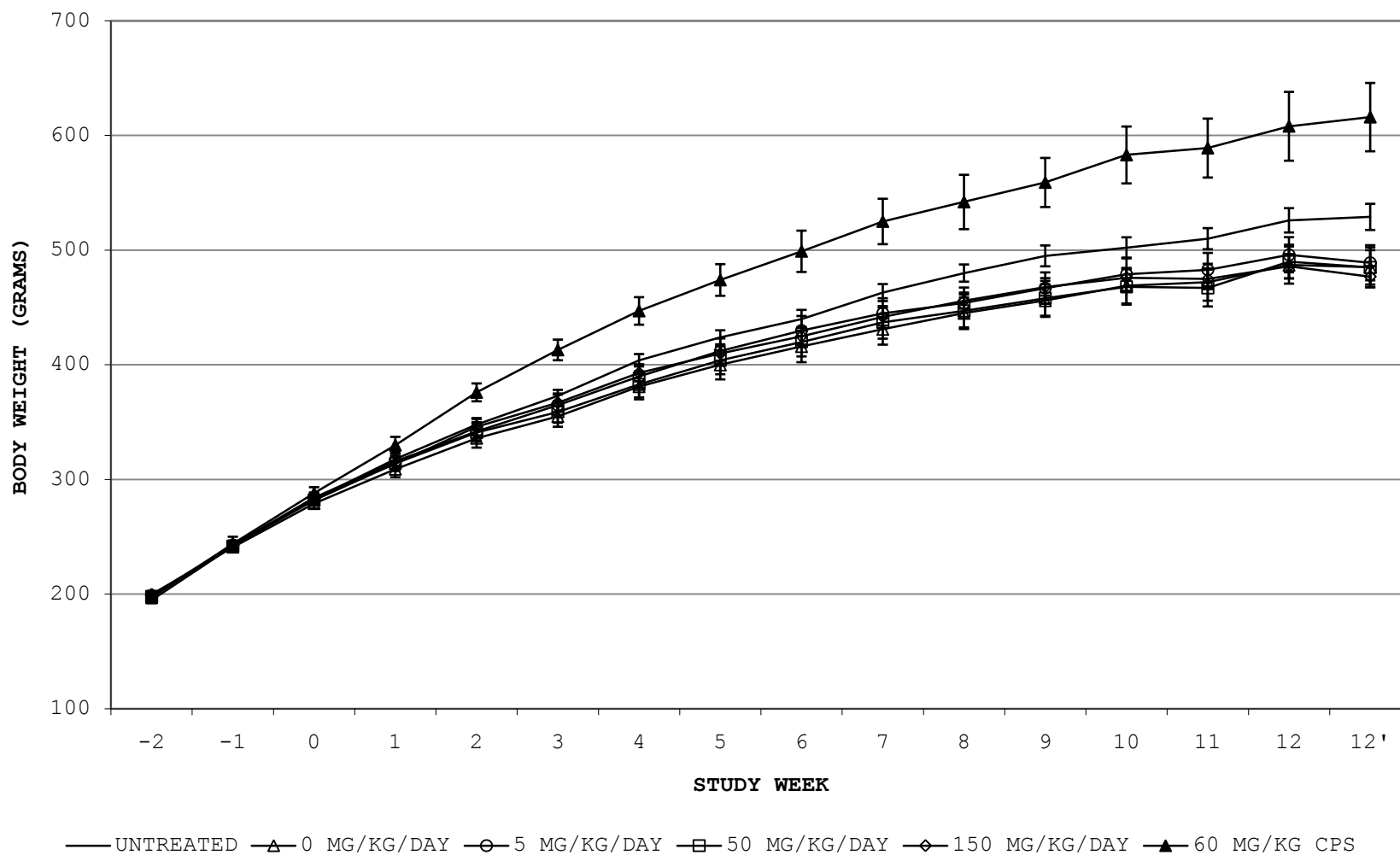
The following abbreviations may apply to this report:

μ	-	micro
AAALAC	-	Association for Assessment and Accreditation of Laboratory Animal Care
ANOVA	-	analysis of variance
A/O	-	acridine orange
cm	-	centimeter
CEO	-	correlates with externally observed
CPS	-	cyclophosphamide monohydrate
dL	-	deciliter
<i>e.g.</i>	-	<i>exempli gratia</i>
EPA	-	Environmental Protection Agency
<i>etc.</i>	-	<i>et cetera</i>
EDTA	-	ethylenediaminetetraacetic acid
exp.	-	expiration
FIFRA	-	Federal Insecticide, Fungicide and Rodenticide Act
g	-	gram
GLP	-	Good Laboratory Practices
HI FBS	-	heat-inactivated fetal bovine serum
hr	-	hour(s)
kg	-	kilogram
L	-	liter
M	-	molar
mg	-	milligram
mL	-	milliliter
mm	-	millimeter
ms	-	milliseconds
mM	-	millimolar
MN-PCEs	-	micronucleated polychromatic erythrocytes
NA	-	not applicable
NCE	-	normochromatic erythrocyte
no.	-	number
OECD	-	Organisation for Economic Cooperation and Development
OPPTS	-	Office of Prevention, Pesticides and Toxic Substances
PAC	-	polycyclic aromatic compound
PCE	-	polychromatic erythrocyte
RSD	-	Relative standard deviation
SOP	-	standard operating procedure
WTDMST TM	-	WIL Toxicology Data Management System
wt(s).	-	weight(s)

FIGURES 1 - 2

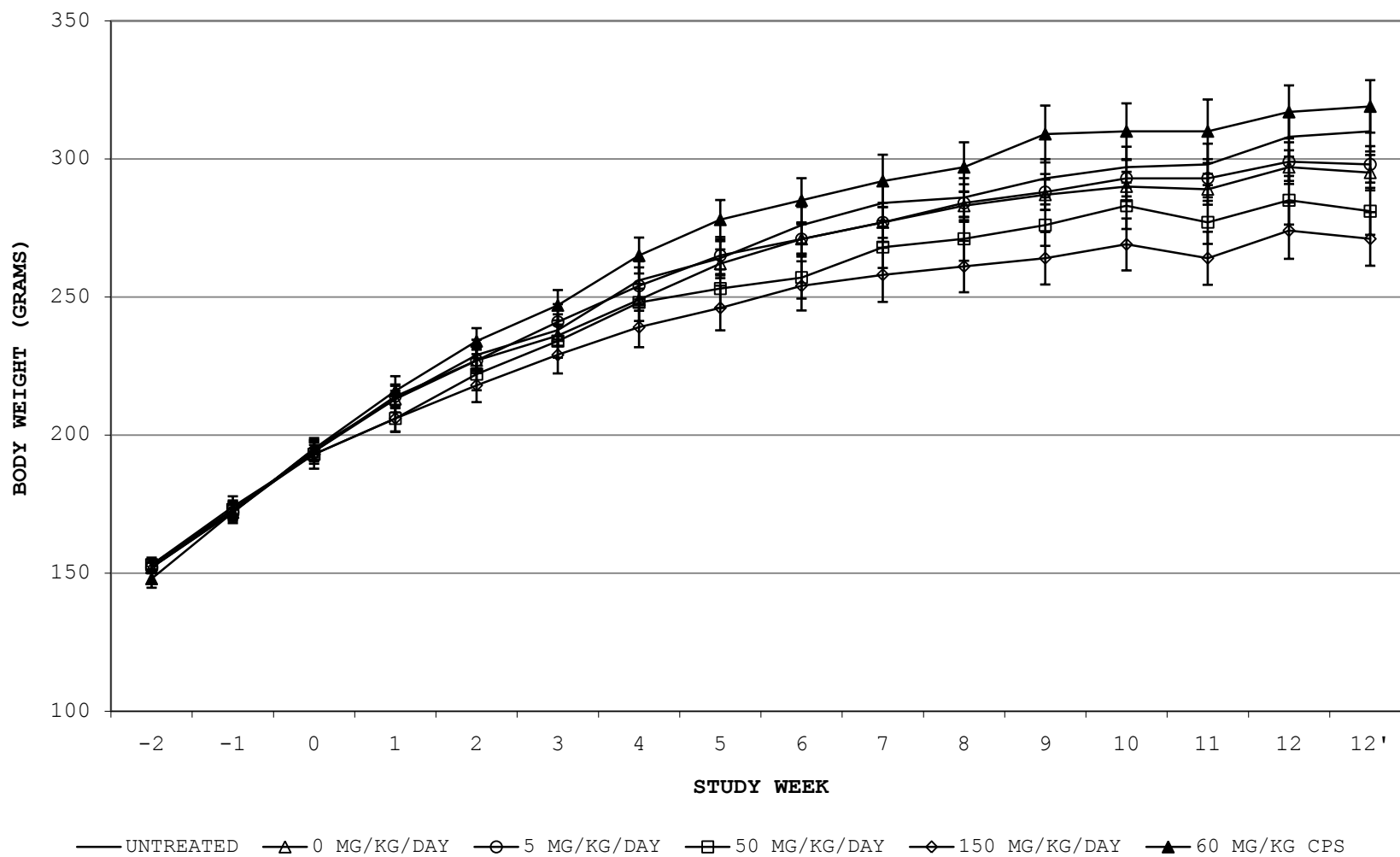
PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

FIGURE 1 (MALES)
SUMMARY OF BODY WEIGHTS [G]
PRESENTED AS MEAN \pm SE



PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

FIGURE 2 (FEMALES)
SUMMARY OF BODY WEIGHTS [G]
PRESENTED AS MEAN \pm SE



TABLES S1 - S19

PROJECT NO.:WIL-402022
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TABLE S1
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF SURVIVAL AND DISPOSITION

PAGE 1

MALES																			
GROUP : 1					2					3					4				
WEEK	LIVE	FD	EE	SE	LIVE	FD	EE	SE		LIVE	FD	EE	SE		LIVE	FD	EE	SE	
0	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
1	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
2	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
3	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
4	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
5	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
6	10	0	0	0	10	0	0	0		10	0	0	0		9	1	0	0	
7	10	0	0	0	10	0	0	0		10	0	0	0		9	0	0	0	
8	10	0	0	0	10	0	0	0		10	0	0	0		9	0	0	0	
9	10	0	0	0	10	0	0	0		10	0	0	0		9	0	0	0	
10	10	0	0	0	10	0	0	0		10	0	0	0		9	0	0	0	
11	10	0	0	0	10	0	0	0		10	0	0	0		9	0	0	0	
12	0	0	0	10	0	0	0	10		0	0	0	10		0	0	0	9	
WEEK = WEEK OF STUDY FD = FOUND DEAD EE = EUTHANIZED IN EXTREMIS SE = SCHEDULED EUTHANASIA																			
1-	UNTREATED				2-	0 MG/KG/DAY				3-	5 MG/KG/DAY				4-	50 MG/KG/DAY			
															5-	150 MG/KG/DAY			
															6-	60 MG/KG CPS			

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S1
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF SURVIVAL AND DISPOSITION

PAGE 2

FEMALES																			
GROUP : 1					2					3					4				
5					6														
WEEK	LIVE	FD	EE	SE	LIVE	FD	EE	SE		LIVE	FD	EE	SE		LIVE	FD	EE	SE	
0	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
1	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
2	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
3	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
4	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
5	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
6	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
7	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
8	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
9	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
10	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
11	10	0	0	0	10	0	0	0		10	0	0	0		10	0	0	0	
12	0	0	0	10	0	0	0	10		0	0	0	10		0	0	0	10	
WEEK = WEEK OF STUDY FD = FOUND DEAD EE = EUTHANIZED IN EXTREMIS SE = SCHEDULED EUTHANASIA																			
1-	UNTREATED				2-	0 MG/KG/DAY				3-	5 MG/KG/DAY				4-	50 MG/KG/DAY			
																150 MG/KG/DAY			
																60 MG/KG CPS			

PSURVv4.10
09/04/2011

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF CLINICAL FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 1

----- M A L E -----						
TABLE RANGE: GROUP:	1	2	3	4	5	6

NORMAL						
-NO SIGNIFICANT CLINICAL OBSERVATIONS	101/10	84/10	101/10	99/10	102/10	74/ 6
DISPOSITION						
-FOUND DEAD	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0
-PRIMARY NECROPSY (DAY 89)	5/ 5	5/ 5	5/ 5	5/ 5	5/ 5	0/ 0
-PRIMARY NECROPSY (DAY 90)	5/ 5	5/ 5	5/ 5	5/ 5	4/ 4	6/ 6
BODY/INTEGUMENT						
-HAIR LOSS FORELIMB(S)	2/ 1	0/ 0	7/ 2	12/ 3	11/ 3	7/ 2
-HAIR LOSS FACIAL AREA	1/ 1	1/ 1	0/ 0	0/ 0	0/ 0	0/ 0
-HAIR LOSS HINDLIMB(S)	1/ 1	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
-HAIR LOSS DORSAL NECK	19/ 8	27/ 9	10/ 4	14/ 5	3/ 3	0/ 0
-HAIR LOSS VENTRAL NECK	32/10	42/10	26/ 8	34/10	18/ 8	0/ 0
-HAIR LOSS VENTRAL TRUNK	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0
EYES/EARS/NOSE						
-OPACITY RIGHT EYE	2/ 1	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
-DRIED RED MATERIAL AROUND NOSE	2/ 2	1/ 1	0/ 0	0/ 0	2/ 1	2/ 2
-DRIED RED MATERIAL AROUND LEFT EYE	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0
EXCRETA						
-WET YELLOW MATERIAL UROGENITAL AREA	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	3/ 3

1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS	

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF CLINICAL FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 2

----- M A L E -----						
TABLE RANGE: GROUP:	1	2	3	4	5	6

EXCRETA						
-WET YELLOW MATERIAL VENTRAL TRUNK	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	3/ 3
-WET YELLOW MATERIAL ANOGENITAL AREA	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	3/ 3
-DRIED YELLOW MATERIAL UROGENIAL AREA	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0
BODY/INTEG II						
-SCABBING FACIAL AREA	0/ 0	3/ 1	0/ 0	0/ 0	0/ 0	0/ 0
-SCABBING DORSAL NECK	1/ 1	6/ 4	4/ 2	0/ 0	1/ 1	0/ 0
-SCABBING RIGHT LATERAL NECK	0/ 0	1/ 1	1/ 1	0/ 0	0/ 0	0/ 0
-SCABBING VENTRAL NECK	7/ 5	7/ 6	7/ 5	4/ 2	0/ 0	0/ 0
-SCABBING LEFT LATERAL NECK	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0

1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS	

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF CLINICAL FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 3

----- F E M A L E -----

TABLE RANGE: GROUP:	1	2	3	4	5	6
DAY 000 TO DAY 090						
NORMAL						
-NO SIGNIFICANT CLINICAL OBSERVATIONS	120/10	122/10	132/10	131/10	117/10	73/ 6
DISPOSITION						
-PRIMARY NECROPSY (DAY 89)	5/ 5	5/ 5	5/ 5	5/ 5	5/ 5	0/ 0
-PRIMARY NECROPSY (DAY 90)	5/ 5	5/ 5	5/ 5	5/ 5	5/ 5	6/ 6
BODY/INTEGUMENT						
-HAIR LOSS FORELIMB(S)	7/ 2	11/ 3	1/ 1	1/ 1	13/ 4	9/ 2
-HAIR LOSS FACIAL AREA	3/ 3	0/ 0	0/ 0	1/ 1	2/ 1	0/ 0
-HAIR LOSS DORSAL HEAD	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0
-HAIR LOSS DORSAL NECK	4/ 2	0/ 0	1/ 1	1/ 1	3/ 1	0/ 0
-HAIR LOSS VENTRAL NECK	4/ 2	2/ 2	3/ 2	4/ 3	7/ 4	0/ 0
-HAIR LOSS DORSAL TRUNK	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1
-HAIR LOSS VENTRAL TRUNK	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1
EYES/EARS/NOSE						
-DRIED RED MATERIAL AROUND NOSE	1/ 1	3/ 3	1/ 1	2/ 2	3/ 3	1/ 1
-DRIED RED MATERIAL AROUND RIGHT EYE	2/ 2	1/ 1	0/ 0	0/ 0	1/ 1	0/ 0
-DRIED RED MATERIAL AROUND LEFT EYE	1/ 1	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
EXCRETA						
-DRIED YELLOW MATERIAL UROGENIAL AREA	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0
1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS	

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF CLINICAL FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 4

----- F E M A L E -----

TABLE RANGE:		DAY 000 TO DAY 090					
GROUP:		1	2	3	4	5	6

BODY/INTEG II							
-SCABBING FACIAL AREA		1/ 1	1/ 1	0/ 0	1/ 1	0/ 0	0/ 0
-SCABBING DORSAL NECK		1/ 1	0/ 0	2/ 2	0/ 0	0/ 0	0/ 0
-SCABBING RIGHT LATERAL NECK		0/ 0	1/ 1	1/ 1	0/ 0	0/ 0	0/ 0
-SCABBING FORELIMB(S)		0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1
-SCABBING VENTRAL TRUNK		1/ 1	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0

1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS		

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF POST-DOSE FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 1

----- M A L E -----												
TABLE RANGE:			DAY 0 TO DAY 89									
GROUP:			1	2	3	4	5	6				

NORMAL												
PRIOR TO DOSING												
-NO SIGNIFICANT CLINICAL OBSERVATIONS			649/10	648/10	649/10	647/10	613/10	0/0				
1-2 HOUR POST-DOSING												
-NO SIGNIFICANT CLINICAL OBSERVATIONS			646/10	645/10	644/10	646/10	607/10	0/0				
BODY/INTEGUMENT												
UNSCHED OBS (>120 MINS)												
-DERMAL ATONIA			0/0	0/0	0/0	0/0	1/1	0/0				
CARDIO-PULMONARY												
UNSCHED OBS (>120 MINS)												
-EXTREMITIES PALE			0/0	0/0	0/0	0/0	1/1	0/0				
-EXTREMITIES COOL TO TOUCH			0/0	0/0	0/0	0/0	1/1	0/0				
-BODY PALE			0/0	0/0	0/0	0/0	1/1	0/0				
EXCRETA												
PRIOR TO DOSING												
-FECES SMALLER THAN NORMAL			0/0	0/0	0/0	1/1	2/2	0/0				
1-2 HOUR POST-DOSING												
-SOFT FECES			0/0	0/0	0/0	0/0	2/1	0/0				
SPECIAL												
PRIOR TO DOSING												
-SWOLLEN FACIAL AREA			1/1	2/2	1/1	2/2	0/0	0/0				

1-	UNTREATED	2-	0 MG/KG/DAY	3-	5 MG/KG/DAY	4-	50 MG/KG/DAY	5-	150 MG/KG/DAY	6-	60 MG/KG	CPS

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF POST-DOSE FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 2

----- M A L E -----									

TABLE RANGE:		DAY 0 TO DAY 89							
GROUP:		1	2	3	4	5	6		

1-2 HOUR POST-DOSING		1/1		1/1		3/2		1/1	
-SWOLLEN FACIAL AREA						0/0		0/0	

1-	UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG	CPS		

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF POST-DOSE FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 3

----- F E M A L E -----

TABLE RANGE:		DAY 0 TO DAY 89					
GROUP:		1	2	3	4	5	6
NORMAL							
PRIOR TO DOSING							
-NO SIGNIFICANT CLINICAL OBSERVATIONS		650/10	650/10	650/10	650/10	645/10	0/0
1-2 HOUR POST-DOSING							
-NO SIGNIFICANT CLINICAL OBSERVATIONS		644/10	643/10	648/10	646/10	642/10	0/0
SPECIAL							
PRIOR TO DOSING							
-REDDENED LEFT EAR		0/0	0/0	0/0	0/0	5/2	0/0
-REDDENED RIGHT EAR		0/0	0/0	0/0	0/0	5/2	0/0
-SWOLLEN LEFT EAR		0/0	0/0	0/0	0/0	1/1	0/0
-SWOLLEN RIGHT EAR		0/0	0/0	0/0	0/0	1/1	0/0
1-2 HOUR POST-DOSING							
-REDDENED LEFT EAR		0/0	0/0	0/0	0/0	5/2	0/0
-REDDENED RIGHT EAR		0/0	0/0	0/0	0/0	5/2	0/0
1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG	CPS	

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10/13/2011

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE S4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF CLINICAL FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 1

----- M A L E -----						
TABLE RANGE: GROUP:	1	2	3	4	5	6

NORMAL						
-NO SIGNIFICANT CLINICAL OBSERVATIONS	250/10	247/10	252/10	252/10	222/10	0/ 0
EYES/EARS/NOSE						
-DRIED RED MATERIAL AROUND LEFT EYE	2/ 1	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
-DRIED RED MATERIAL AROUND RIGHT EYE	0/ 0	2/ 1	1/ 1	0/ 0	0/ 0	0/ 0
-DRIED RED MATERIAL AROUND NOSE	3/ 2	6/ 2	2/ 2	3/ 2	10/ 5	0/ 0
SPECIAL						
-REDDENED LEFT EAR	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0
-REDDENED RIGHT EAR	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0
BODY/INTEG III						
-DRIED YELLOW MATERIAL UROGENITAL AREA	0/ 0	0/ 0	0/ 0	0/ 0	8/ 5	0/ 0

1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS	

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE S4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF CLINICAL FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 2

----- F E M A L E -----

TABLE RANGE: GROUP:	1	2	3	4	5	6
NORMAL						
-NO SIGNIFICANT CLINICAL OBSERVATIONS	248/10	245/10	247/10	244/10	241/10	0/ 0
EYES/EARS/NOSE						
-DRIED RED MATERIAL AROUND LEFT EYE	2/ 1	1/ 1	1/ 1	2/ 2	2/ 1	0/ 0
-DRIED RED MATERIAL AROUND RIGHT EYE	2/ 1	2/ 1	0/ 0	3/ 2	2/ 1	0/ 0
-DRIED RED MATERIAL AROUND NOSE	5/ 3	8/ 4	7/ 5	9/ 6	9/ 8	0/ 0
SPECIAL						
-SWOLLEN LEFT EAR	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0
-SWOLLEN RIGHT EAR	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0
-REDDENED LEFT EAR	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0
-REDDENED RIGHT EAR	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0
BODY/INTEG IIII						
-DRIED YELLOW MATERIAL UROGENITAL AREA	0/ 0	0/ 0	0/ 0	0/ 0	2/ 1	0/ 0
-DRIED RED MATERIAL FORELIMB(S)	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0

1- UNTREATED 2- 0 MG/KG/DAY 3- 5 MG/KG/DAY 4- 50 MG/KG/DAY 5- 150 MG/KG/DAY 6- 60 MG/KG CPS

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----- M A L E -----						

TABLE RANGE:	DAY 004 TO DAY 089					
GROUP:	1	2	3	4	5	6

DERMAL OBS						
-SCORED, NOT REMARKABLE	130/10	130/10	128/10	129/10	100/10	0/ 0
-NO ERYTHEMA	0/ 0	0/ 0	1/ 1	1/ 1	16/ 8	0/ 0
-ERYTHEMA - VERY SLIGHT	0/ 0	0/ 0	1/ 1	0/ 0	7/ 4	0/ 0
-NO EDEMA	0/ 0	0/ 0	2/ 2	1/ 1	23/ 8	0/ 0
-DESQUAMATION	0/ 0	0/ 0	1/ 1	1/ 1	1/ 1	0/ 0
-RESIDUAL TEST SUBSTANCE WITHIN DOSE SITE	0/ 0	0/ 0	0/ 0	0/ 0	15/ 7	0/ 0

1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS	

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S5
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF DERMAL OBSERVATIONS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 2

----- F E M A L E -----

TABLE RANGE:		DAY 004 TO DAY 089					
GROUP:		1	2	3	4	5	6

DERMAL OBS							
-SCORED, NOT REMARKABLE		129/10	128/10	123/10	95/10	86/10	0/ 0
-NO ERYTHEMA		0/ 0	1/ 1	1/ 1	32/10	43/10	0/ 0
-ERYTHEMA - VERY SLIGHT		1/ 1	1/ 1	6/ 3	3/ 2	1/ 1	0/ 0
-NO EDEMA		1/ 1	2/ 2	7/ 3	35/10	44/10	0/ 0
-DESQUAMATION		0/ 0	1/ 1	0/ 0	31/10	35/10	0/ 0
-RESIDUAL TEST SUBSTANCE WITHIN DOSE SITE		0/ 0	0/ 0	0/ 0	3/ 3	14/ 8	0/ 0
-PINPOINT SCABBING		0/ 0	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0

1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS		

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF BODY WEIGHTS [G]

PAGE 1

		MALES						
GROUP:		UNTREATED	0 MG/KG/DAY	5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS	
WEEK	-2	MEAN	195.	200.	199.	198.	199.	197.
		S.D.	8.2	8.7	6.8	4.6	9.7	11.6
		S.E.	2.6	2.7	2.1	1.4	3.1	4.7
		N	10	10	10	10	10	6
	-1	MEAN	242.	241.	243.	242.	242.	244.
		S.D.	11.3	12.2	11.3	9.9	10.6	15.0
		S.E.	3.6	3.9	3.6	3.1	3.4	6.1
		N	10	10	10	10	10	6
	0	MEAN	283.	279.	284.	282.	284.	288.
		S.D.	13.7	13.6	14.6	13.2	13.5	12.9
		S.E.	4.3	4.3	4.6	4.2	4.3	5.3
		N	10	10	10	10	10	6
	1	MEAN	318.	309.	316.	314.	314.	330.
		S.D.	18.6	22.1	20.6	20.5	20.2	17.7
		S.E.	5.9	7.0	6.5	6.5	6.4	7.2
		N	10	10	10	10	10	6
	2	MEAN	348.	336.	342.	341.	346.	376.f
		S.D.	15.1	25.9	25.3	25.2	24.1	19.1
		S.E.	4.8	8.2	8.0	8.0	7.6	7.8
		N	10	10	10	10	10	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

f = Significantly different from control group 2 at 0.01 using Student's t-Test

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF BODY WEIGHTS [G]

PAGE 2

		MALES						
GROUP:		UNTREATED	0 MG/KG/DAY	5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS	
WEEK	3	MEAN	373.	355.	365.	359.	367.	413.f
		S.D.	16.5	28.4	28.5	30.0	25.2	22.2
		S.E.	5.2	9.0	9.0	9.5	8.0	9.0
		N	10	10	10	10	10	6
	4	MEAN	404.	381.	390.	383.	393.	447.f
		S.D.	17.0	35.2	32.7	36.2	23.3	29.5
		S.E.	5.4	11.1	10.3	11.4	7.4	12.0
		N	10	10	10	10	10	6
	5	MEAN	424.	400.	412.	404.	410.	474.f
		S.D.	19.4	40.2	34.7	38.4	20.2	33.9
		S.E.	6.1	12.7	11.0	12.2	6.4	13.8
		N	10	10	10	10	10	6
	6	MEAN	440.	416.	430.	420.	425.	499.f
		S.D.	25.1	43.5	39.9	40.1	22.3	44.1
		S.E.	7.9	13.7	12.6	12.7	7.4	18.0
		N	10	10	10	10	9	6
	7	MEAN	463.	431.	445.	437.	442.	525.f
		S.D.	23.3	42.4	41.4	44.9	23.3	48.5
		S.E.	7.4	13.4	13.1	14.2	7.8	19.8
		N	10	10	10	10	9	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

f = Significantly different from control group 2 at 0.01 using Student's t-Test

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF BODY WEIGHTS [G]

PAGE 3

		MALES						
GROUP:		UNTREATED	0 MG/KG/DAY	5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS	
WEEK								
8	MEAN	480.	445.c	454.	447.	456.	542.f	
	S.D.	23.7	43.5	42.5	45.7	20.9	58.0	
	S.E.	7.5	13.8	13.4	14.4	7.0	23.7	
	N	10	10	10	10	9	6	
9	MEAN	495.	456.c	467.	458.	468.	559.f	
	S.D.	28.8	44.8	43.0	47.9	22.7	52.5	
	S.E.	9.1	14.2	13.6	15.2	7.6	21.4	
	N	10	10	10	10	9	6	
10	MEAN	502.	469.	479.	468.	476.	583.f	
	S.D.	29.0	48.9	45.9	49.1	22.8	60.7	
	S.E.	9.2	15.5	14.5	15.5	7.6	24.8	
	N	10	10	10	10	9	6	
11	MEAN	510.	472.	483.	467.	475.	589.f	
	S.D.	29.0	50.9	46.1	51.0	27.1	62.9	
	S.E.	9.2	16.1	14.6	16.1	9.0	25.7	
	N	10	10	10	10	9	6	
12	MEAN	526.	487.	496.	490.	486.	608.f	
	S.D.	33.5	51.3	48.2	46.6	31.7	73.5	
	S.E.	10.6	16.2	15.3	14.7	10.6	30.0	
	N	10	10	10	10	9	6	

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

c = Significantly different from control group 1 at 0.05 using Student's t-Test

f = Significantly different from control group 2 at 0.01 using Student's t-Test

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF BODY WEIGHTS [G]

PAGE 4

GROUP:		UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK 12'	MEAN	529.	485.	489.	485.	477.	616.f
	S.D.	35.9	55.4	48.4	47.4	27.4	72.9
	S.E.	11.4	17.5	15.3	15.0	9.1	29.8
	N	10	10	10	10	9	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.
f = Significantly different from control group 2 at 0.01 using Student's t-Test

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF BODY WEIGHTS [G]

PAGE 5

GROUP:		UNTREATED	0 MG/KG/DAY	FEMALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK	-2	MEAN	152.	152.	152.	153.	148.
		S.D.	5.6	6.6	5.3	8.3	8.0
		S.E.	1.8	2.1	1.7	2.6	3.3
		N	10	10	10	10	6
	-1	MEAN	173.	172.	172.	173.	172.
		S.D.	8.6	8.2	9.8	10.6	9.6
		S.E.	2.7	2.6	3.1	3.3	3.9
		N	10	10	10	10	6
	0	MEAN	194.	195.	194.	193.	195.
		S.D.	10.5	9.8	11.0	10.7	9.7
		S.E.	3.3	3.1	3.5	3.4	3.9
		N	10	10	10	10	6
	1	MEAN	213.	213.	214.	206.	216.
		S.D.	15.1	9.6	13.6	14.9	12.9
		S.E.	4.8	3.0	4.3	4.7	5.3
		N	10	10	10	10	6
	2	MEAN	229.	227.	227.	222.	234.
		S.D.	17.2	12.3	14.6	18.3	11.5
		S.E.	5.5	3.9	4.6	5.8	4.7
		N	10	10	10	10	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.
None significantly different from control group

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF BODY WEIGHTS [G]

PAGE 6

		FEMALES						
GROUP:		UNTREATED	0 MG/KG/DAY	5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS	
WEEK	3	MEAN	238.	236.	241.	234.	229.	247.
		S.D.	17.9	11.9	20.3	18.8	21.3	13.5
		S.E.	5.7	3.8	6.4	6.0	6.7	5.5
		N	10	10	10	10	10	6
	4	MEAN	256.	249.	254.	248.	239.	265.e
		S.D.	21.7	12.5	21.1	21.2	22.9	16.0
		S.E.	6.9	4.0	6.7	6.7	7.2	6.5
		N	10	10	10	10	10	6
	5	MEAN	264.	262.	265.	253.	246.	278.
		S.D.	19.7	16.6	21.0	22.3	25.5	17.5
		S.E.	6.2	5.2	6.7	7.0	8.1	7.1
		N	10	10	10	10	10	6
	6	MEAN	276.	271.	271.	257.	254.	285.
		S.D.	20.9	16.8	18.1	24.0	28.1	19.6
		S.E.	6.6	5.3	5.7	7.6	8.9	8.0
		N	10	10	10	10	10	6
	7	MEAN	284.	277.	277.	268.	258.	292.
		S.D.	20.3	17.8	22.5	23.6	31.1	23.3
		S.E.	6.4	5.6	7.1	7.5	9.8	9.5
		N	10	10	10	10	10	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

e = Significantly different from control group 2 at 0.05 using Student's t-Test

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF BODY WEIGHTS [G]

PAGE 7

		FEMALES						
GROUP:		UNTREATED	0 MG/KG/DAY	5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS	
WEEK	8	MEAN	286.	283.	284.	271.	261.	297.
		S.D.	22.1	16.5	21.5	25.0	29.3	22.0
		S.E.	7.0	5.2	6.8	7.9	9.3	9.0
		N	10	10	10	10	10	6
	9	MEAN	293.	287.	288.	276.	264.	309.
		S.D.	21.9	17.5	20.4	23.7	30.0	25.3
		S.E.	6.9	5.5	6.5	7.5	9.5	10.3
		N	10	10	10	10	10	6
	10	MEAN	297.	290.	293.	283.	269.	310.
		S.D.	23.3	16.8	20.7	26.4	29.7	24.8
		S.E.	7.4	5.3	6.6	8.4	9.4	10.1
		N	10	10	10	10	10	6
	11	MEAN	298.	289.	293.	277.	264.	310.
		S.D.	23.8	17.8	21.9	24.8	30.3	28.2
		S.E.	7.5	5.6	6.9	7.8	9.6	11.5
		N	10	10	10	10	10	6
	12	MEAN	308.	297.	299.	285.	274.	317.
		S.D.	22.7	19.4	22.2	27.8	32.3	23.4
		S.E.	7.2	6.1	7.0	8.8	10.2	9.6
		N	10	10	10	10	10	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.
None significantly different from control group

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF BODY WEIGHTS [G]

PAGE 8

GROUP:		UNTREATED	0 MG/KG/DAY	FEMALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK 12'	MEAN	310.	295.	298.	281.	271.	319.e
	S.D.	23.0	20.3	20.8	27.0	30.8	23.4
	S.E.	7.3	6.4	6.6	8.5	9.7	9.5
	N	10	10	10	10	10	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

e = Significantly different from control group 2 at 0.05 using Student's t-Test

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF BODY WEIGHT CHANGES [G]

PAGE 1

GROUP:		UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK	-2 TO -1						
	MEAN	47.	41.	44.	45.	43.	47.
	S.D.	7.7	7.2	8.1	7.5	7.4	8.0
	S.E.	2.4	2.3	2.6	2.4	2.3	3.3
	N	10	10	10	10	10	6
	-1 TO 0						
	MEAN	40.	38.	41.	40.	43.	44.
	S.D.	4.8	5.9	6.9	7.6	5.2	6.2
	S.E.	1.5	1.9	2.2	2.4	1.7	2.5
	N	10	10	10	10	10	6
	0 TO 1						
	MEAN	36.	30.	32.	32.	30.	42.e
	S.D.	8.0	10.7	8.0	8.7	10.7	7.4
	S.E.	2.5	3.4	2.5	2.7	3.4	3.0
	N	10	10	10	10	10	6
	1 TO 2						
	MEAN	29.	27.	26.	26.	32.	46.f
	S.D.	6.1	4.9	5.8	7.8	8.7	9.1
	S.E.	1.9	1.5	1.8	2.5	2.8	3.7
	N	10	10	10	10	10	6
	2 TO 3						
	MEAN	25.	19.c	23.	18.	21.	37.f
	S.D.	4.5	7.4	5.0	6.7	5.3	4.7
	S.E.	1.4	2.3	1.6	2.1	1.7	1.9
	N	10	10	10	10	10	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

c = Significantly different from control group 1 at 0.05 using Student's t-Test

e = Significantly different from control group 2 at 0.05 using Student's t-Test

f = Significantly different from control group 2 at 0.01 using Student's t-Test

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF BODY WEIGHT CHANGES [G]

PAGE 2

GROUP:		UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK	3 TO 4						
	MEAN	31.	26.	25.	24.	26.	35.
	S.D.	8.8	9.6	6.7	6.7	6.3	8.8
	S.E.	2.8	3.0	2.1	2.1	2.0	3.6
	N	10	10	10	10	10	6
	4 TO 5						
	MEAN	20.	19.	22.	22.	17.	27.e
	S.D.	4.8	6.1	5.3	6.2	9.9	6.2
	S.E.	1.5	1.9	1.7	2.0	3.1	2.5
	N	10	10	10	10	10	6
	5 TO 6						
	MEAN	16.	16.	18.	16.	16.	25.
	S.D.	8.9	6.6	7.0	4.1	4.1	12.2
	S.E.	2.8	2.1	2.2	1.3	1.4	5.0
	N	10	10	10	10	9	6
	6 TO 7						
	MEAN	23.	16.	16.	17.	17.	26.e
	S.D.	10.9	8.0	6.7	6.6	3.9	6.3
	S.E.	3.4	2.5	2.1	2.1	1.3	2.6
	N	10	10	10	10	9	6
	7 TO 8						
	MEAN	17.	14.	9.	10.	14.	17.
	S.D.	7.8	3.8	5.8	4.1	7.2	10.4
	S.E.	2.5	1.2	1.8	1.3	2.4	4.2
	N	10	10	10	10	9	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

e = Significantly different from control group 2 at 0.05 using Student's t-Test

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF BODY WEIGHT CHANGES [G]

PAGE 3

GROUP:		UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS	
WEEK	8 TO 9	MEAN	15.	11.	13.	11.	12.	17.
		S.D.	6.0	6.2	6.3	6.9	5.8	10.5
		S.E.	1.9	2.0	2.0	2.2	1.9	4.3
		N	10	10	10	10	9	6
	9 TO 10	MEAN	7.	13. ^c	12.	10.	8.	24. ^e
		S.D.	4.5	5.9	7.6	4.4	9.0	12.5
		S.E.	1.4	1.9	2.4	1.4	3.0	5.1
		N	10	10	10	10	9	6
	10 TO 11	MEAN	8.	3.	4.	-1.	0.	6.
		S.D.	6.0	6.0	6.9	6.4	6.2	3.9
		S.E.	1.9	1.9	2.2	2.0	2.1	1.6
		N	10	10	10	10	9	6
	11 TO 12	MEAN	16.	15.	13.	23.	11.	19.
		S.D.	7.5	3.5	4.5	7.2	13.1	11.3
		S.E.	2.4	1.1	1.4	2.3	4.4	4.6
		N	10	10	10	10	9	6
	12 TO 12'	MEAN	3.	-2.	-7.	-5.	-9.	9. ^e
		S.D.	7.8	9.7	8.5	7.1	11.8	1.0
		S.E.	2.5	3.1	2.7	2.2	3.9	0.4
		N	10	10	10	10	9	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

c = Significantly different from control group 1 at 0.05 using Student's t-Test

e = Significantly different from control group 2 at 0.05 using Student's t-Test

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF BODY WEIGHT CHANGES [G]

PAGE 4

GROUP:		UNTREATED	0 MG/KG/DAY	FEMALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK	-2 TO -1						
	MEAN	21.	20.	20.	20.	21.	24.
	S.D.	4.9	6.7	5.4	4.9	8.3	2.5
	S.E.	1.6	2.1	1.7	1.5	2.6	1.0
	N	10	10	10	10	10	6
	-1 TO 0						
	MEAN	21.	24.	22.	20.	19.	23.
	S.D.	4.5	3.7	5.7	2.3	5.3	2.9
	S.E.	1.4	1.2	1.8	0.7	1.7	1.2
	N	10	10	10	10	10	6
	0 TO 1						
	MEAN	19.	18.	20.	13.	13.	22.
	S.D.	6.9	5.2	7.2	6.4	4.3	4.4
	S.E.	2.2	1.6	2.3	2.0	1.4	1.8
	N	10	10	10	10	10	6
	1 TO 2						
	MEAN	16.	14.	13.	16.	12.	17.
	S.D.	5.8	5.0	4.2	5.2	5.1	6.2
	S.E.	1.8	1.6	1.3	1.7	1.6	2.5
	N	10	10	10	10	10	6
	2 TO 3						
	MEAN	9.	9.	14.	12.	11.	13.
	S.D.	4.4	3.1	7.0	4.2	4.7	5.4
	S.E.	1.4	1.0	2.2	1.3	1.5	2.2
	N	10	10	10	10	10	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.
None significantly different from control group

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF BODY WEIGHT CHANGES [G]

PAGE 5

GROUP:			UNTREATED	0 MG/KG/DAY	FEMALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK	3 TO	4						
		MEAN	17.	14.	13.	14.	10.	18.
		S.D.	6.7	4.3	6.2	6.5	4.7	5.6
		S.E.	2.1	1.4	2.0	2.0	1.5	2.3
		N	10	10	10	10	10	6
	4 TO	5						
		MEAN	8.	12.	11.	6.b	7.	13.
		S.D.	5.6	5.1	6.1	3.3	4.1	5.2
		S.E.	1.8	1.6	1.9	1.0	1.3	2.1
		N	10	10	10	10	10	6
	5 TO	6						
		MEAN	12.	9.	6.	4.	8.	8.
		S.D.	6.4	4.3	4.9	4.1	4.7	5.0
		S.E.	2.0	1.4	1.5	1.3	1.5	2.0
		N	10	10	10	10	10	6
	6 TO	7						
		MEAN	8.	6.	7.	10.	4.	7.
		S.D.	8.8	4.4	5.7	5.5	4.9	5.1
		S.E.	2.8	1.4	1.8	1.7	1.5	2.1
		N	10	10	10	10	10	6
	7 TO	8						
		MEAN	2.	6.	7.	4.	3.	5.
		S.D.	8.0	4.3	5.7	4.5	5.1	3.4
		S.E.	2.5	1.4	1.8	1.4	1.6	1.4
		N	10	10	10	10	10	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

b = Significantly different from control group 2 at 0.01 using Dunnett's test

TABLE S7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF BODY WEIGHT CHANGES [G]

GROUP:		UNTREATED	0 MG/KG/DAY	FEMALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS	
WEEK	8 TO 9	MEAN S.D. S.E. N	7. 6.1 1.9 10	4. 5.1 1.6 10	4. 5.2 1.7 10	4. 3.4 1.1 10	4. 4.0 1.3 10	12.f 5.3 2.2 6
	9 TO 10	MEAN S.D. S.E. N	4. 8.0 2.5 10	4. 5.5 1.7 10	4. 6.3 2.0 10	7. 5.1 1.6 10	5. 3.1 1.0 10	1. 3.6 1.5 6
	10 TO 11	MEAN S.D. S.E. N	0. 2.5 0.8 10	-1. 4.6 1.5 10	1. 5.1 1.6 10	-6. 3.3 1.1 10	-5. 3.3 1.0 10	0. 5.7 2.3 6
	11 TO 12	MEAN S.D. S.E. N	11. 5.4 1.7 10	8. 5.9 1.9 10	6. 6.1 1.9 10	9. 4.7 1.5 10	10. 7.3 2.3 10	7. 9.7 4.0 6
	12 TO 12'	MEAN S.D. S.E. N	2. 5.5 1.7 10	-3. 5.3 1.7 10	-1. 5.2 1.7 10	-4. 6.5 2.1 10	-3. 8.6 2.7 10	2. 4.6 1.9 6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.
f = Significantly different from control group 2 at 0.01 using Student's t-Test

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 1

GROUP:		UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK	0 TO						
	1						
	MEAN	36.	30.	32.	32.	30.	42.e
	S.D.	8.0	10.7	8.0	8.7	10.7	7.4
	S.E.	2.5	3.4	2.5	2.7	3.4	3.0
	N	10	10	10	10	10	6
	0 TO 2						
	MEAN	65.	57.	58.	59.	62.	88.f
	S.D.	7.3	14.4	11.9	13.9	16.3	13.7
	S.E.	2.3	4.6	3.8	4.4	5.2	5.6
	N	10	10	10	10	10	6
	0 TO 3						
	MEAN	90.	76.c	81.	77.	83.	125.f
	S.D.	9.9	18.8	15.2	19.1	18.0	17.1
	S.E.	3.1	6.0	4.8	6.0	5.7	7.0
	N	10	10	10	10	10	6
	0 TO 4						
	MEAN	121.	102.	106.	101.	109.	160.f
	S.D.	12.5	26.8	18.7	25.0	17.3	24.2
	S.E.	4.0	8.5	5.9	7.9	5.5	9.9
	N	10	10	10	10	10	6
	0 TO 5						
	MEAN	141.	121.	128.	122.	126.	186.f
	S.D.	13.4	31.8	20.8	27.2	14.8	29.2
	S.E.	4.2	10.0	6.6	8.6	4.7	11.9
	N	10	10	10	10	10	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

c = Significantly different from control group 1 at 0.05 using Student's t-Test

e = Significantly different from control group 2 at 0.05 using Student's t-Test

f = Significantly different from control group 2 at 0.01 using Student's t-Test

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 2

GROUP:		UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK	0 TO						
	6						
	MEAN	157.	137.	146.	138.	141.	212.f
	S.D.	21.0	35.5	26.2	29.1	16.2	40.0
	S.E.	6.7	11.2	8.3	9.2	5.4	16.3
	N	10	10	10	10	9	6
	0 TO 7						
	MEAN	180.	152.c	161.	155.	158.	238.f
	S.D.	20.5	35.2	27.4	33.8	16.4	44.0
	S.E.	6.5	11.1	8.7	10.7	5.5	18.0
	N	10	10	10	10	9	6
	0 TO 8						
	MEAN	197.	166.c	170.	165.	171.	255.f
	S.D.	21.1	35.9	28.6	34.3	13.1	53.8
	S.E.	6.7	11.3	9.1	10.9	4.4	22.0
	N	10	10	10	10	9	6
	0 TO 9						
	MEAN	212.	177.c	183.	176.	184.	271.f
	S.D.	25.7	37.2	29.5	36.0	16.0	48.8
	S.E.	8.1	11.8	9.3	11.4	5.3	19.9
	N	10	10	10	10	9	6
	0 TO 10						
	MEAN	219.	190.	195.	186.	191.	296.f
	S.D.	26.2	41.2	32.5	37.4	18.9	56.2
	S.E.	8.3	13.0	10.3	11.8	6.3	23.0
	N	10	10	10	10	9	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

c = Significantly different from control group 1 at 0.05 using Student's t-Test

f = Significantly different from control group 2 at 0.01 using Student's t-Test

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 3

GROUP:		UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK	0 TO 11						
	MEAN	227.	193.	199.	185.	191.	301.f
	S.D.	28.2	43.0	32.3	39.5	22.4	58.0
	S.E.	8.9	13.6	10.2	12.5	7.5	23.7
	N	10	10	10	10	9	6
	0 TO 12						
	MEAN	243.	208.	212.	208.	202.	320.f
	S.D.	30.7	43.6	34.5	35.3	29.7	68.2
	S.E.	9.7	13.8	10.9	11.2	9.9	27.8
	N	10	10	10	10	9	6
	0 TO 12'						
	MEAN	246.	206.c	206.	203.	193.	329.f
	S.D.	32.4	47.5	34.6	36.4	29.9	67.6
	S.E.	10.3	15.0	11.0	11.5	10.0	27.6
	N	10	10	10	10	9	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

c = Significantly different from control group 1 at 0.05 using Student's t-Test
f = Significantly different from control group 2 at 0.01 using Student's t-Test

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 4

GROUP:		UNTREATED	0 MG/KG/DAY	FEMALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK	0 TO						
	1						
	MEAN	19.	18.	20.	13.	13.	22.
	S.D.	6.9	5.2	7.2	6.4	4.3	4.4
	S.E.	2.2	1.6	2.3	2.0	1.4	1.8
	N	10	10	10	10	10	6
	0 TO 2						
	MEAN	35.	32.	33.	29.	24.	39.
	S.D.	10.6	9.0	10.3	10.0	7.7	5.9
	S.E.	3.3	2.9	3.2	3.2	2.4	2.4
	N	10	10	10	10	10	6
	0 TO 3						
	MEAN	44.	41.	47.	41.	36.	52.e
	S.D.	11.1	9.1	14.0	9.9	10.3	10.5
	S.E.	3.5	2.9	4.4	3.1	3.3	4.3
	N	10	10	10	10	10	6
	0 TO 4						
	MEAN	61.	54.	60.	55.	46.	70.e
	S.D.	15.4	9.4	14.2	12.7	12.1	13.0
	S.E.	4.9	3.0	4.5	4.0	3.8	5.3
	N	10	10	10	10	10	6
	0 TO 5						
	MEAN	69.	67.	71.	60.	53.	83.e
	S.D.	13.3	13.8	13.1	13.8	15.2	11.4
	S.E.	4.2	4.4	4.1	4.4	4.8	4.7
	N	10	10	10	10	10	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.
e = Significantly different from control group 2 at 0.05 using Student's t-Test

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 5

GROUP:		UNTREATED	0 MG/KG/DAY	FEMALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK	0 TO						
	6						
	MEAN	81.	76.	77.	64.	61.	90.
	S.D.	15.4	13.3	10.8	16.4	17.4	14.8
	S.E.	4.9	4.2	3.4	5.2	5.5	6.0
	N	10	10	10	10	10	6
	0 TO 7						
	MEAN	90.	81.	84.	75.	65.	98.
	S.D.	14.8	14.1	14.0	16.5	20.6	19.2
	S.E.	4.7	4.5	4.4	5.2	6.5	7.8
	N	10	10	10	10	10	6
	0 TO 8						
	MEAN	92.	88.	91.	78.	68.a	102.
	S.D.	16.1	13.2	11.6	18.1	20.1	17.1
	S.E.	5.1	4.2	3.7	5.7	6.3	7.0
	N	10	10	10	10	10	6
	0 TO 9						
	MEAN	99.	92.	95.	83.	71.a	114.e
	S.D.	17.5	15.6	11.8	16.6	20.3	20.1
	S.E.	5.5	4.9	3.7	5.3	6.4	8.2
	N	10	10	10	10	10	6
	0 TO 10						
	MEAN	103.	95.	99.	90.	76.a	115.e
	S.D.	18.3	14.6	12.1	20.4	20.8	19.4
	S.E.	5.8	4.6	3.8	6.4	6.6	7.9
	N	10	10	10	10	10	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

a = Significantly different from control group 2 at 0.05 using Dunnett's test

e = Significantly different from control group 2 at 0.05 using Student's t-Test

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 6

GROUP:		UNTREATED	0 MG/KG/DAY	FEMALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK	0 TO 11						
	MEAN	103.	94.	99.	84.	71.a	115.e
	S.D.	19.0	16.3	13.9	18.7	21.1	23.0
	S.E.	6.0	5.1	4.4	5.9	6.7	9.4
	N	10	10	10	10	10	6
	0 TO 12						
	MEAN	114.	102.	105.	92.	80.a	123.
	S.D.	16.9	17.8	13.2	21.8	23.0	21.4
	S.E.	5.3	5.6	4.2	6.9	7.3	8.7
	N	10	10	10	10	10	6
	0 TO 12'						
	MEAN	116.	99.	105.	88.	78.a	124.e
	S.D.	17.8	18.0	11.0	20.5	21.4	20.2
	S.E.	5.6	5.7	3.5	6.5	6.8	8.3
	N	10	10	10	10	10	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

a = Significantly different from control group 2 at 0.05 using Dunnett's test
e = Significantly different from control group 2 at 0.05 using Student's t-Test

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 1

GROUP:		UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK	-2 TO -1						
	MEAN	27.	27.	27.	27.	27.	28.
	S.D.	2.1	1.4	2.6	2.6	1.8	2.0
	S.E.	0.7	0.4	0.8	0.8	0.6	0.8
	N	10	10	10	10	10	6
	0 TO 1						
	MEAN	34.	32.	33.	31.	33.	31.
	S.D.	2.9	2.5	2.8	3.4	1.9	2.7
	S.E.	0.9	0.8	0.9	1.1	0.6	1.1
	N	10	10	10	10	10	6
	1 TO 2						
	MEAN	31.	31.	31.	29.	28.	31.
	S.D.	1.6	4.0	3.3	2.7	2.2	2.6
	S.E.	0.5	1.3	1.0	0.8	0.7	1.1
	N	10	10	10	10	10	6
	2 TO 3						
	MEAN	34.	34.	35.	33.	33.	33.
	S.D.	1.8	2.5	3.1	2.7	2.0	2.9
	S.E.	0.6	0.8	1.0	0.9	0.6	1.2
	N	10	10	10	10	10	6
	3 TO 4						
	MEAN	36.	33.c	34.	32.	35.	33.
	S.D.	2.1	2.4	2.8	2.9	1.4	4.2
	S.E.	0.6	0.7	0.9	0.9	0.5	1.7
	N	10	10	10	10	10	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

c = Significantly different from control group 1 at 0.05 using Student's t-Test

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 2

GROUP:		UNTREATED	0 MG/KG/DAY	MALES			60 MG/KG CPS
				5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	
WEEK	4 TO 5						
	MEAN	35.	34.	36.	34.	35.	34.
	S.D.	2.4	2.9	3.9	2.7	2.2	3.4
	S.E.	0.8	0.9	1.2	0.9	0.7	1.4
	N	10	10	10	10	10	6
	5 TO 6						
	MEAN	38.	36.	37.	34.	36.	36.
	S.D.	2.8	2.7	4.1	3.4	2.4	4.0
	S.E.	0.9	0.8	1.3	1.1	0.8	1.6
	N	10	10	10	10	9	6
	6 TO 7						
	MEAN	35.	35.	36.	34.	34.	34.
	S.D.	2.3	2.6	3.5	3.8	2.2	4.7
	S.E.	0.7	0.8	1.1	1.2	0.7	1.9
	N	10	10	10	10	9	6
	7 TO 8						
	MEAN	36.	34.	35.	33.	33.	33.
	S.D.	1.8	2.9	3.9	2.3	6.3	4.6
	S.E.	0.6	0.9	1.2	0.7	2.1	1.9
	N	10	10	10	10	9	6
	8 TO 9						
	MEAN	35.	35.	35.	33.	36.	35.
	S.D.	2.0	2.4	3.5	3.8	2.0	4.2
	S.E.	0.6	0.8	1.1	1.2	0.7	1.7
	N	10	10	10	10	9	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.
None significantly different from control group

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 3

GROUP:			UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK	9 TO	10						
		MEAN	34.	35.	34.	33.	35.	34.
		S.D.	2.2	2.6	3.7	3.5	3.9	4.5
		S.E.	0.7	0.8	1.2	1.1	1.3	1.8
		N	10	10	10	10	9	6
	10 TO	11						
		MEAN	36.	35.	36.	34.	38.	34.
		S.D.	2.0	3.9	3.3	3.6	4.1	4.5
		S.E.	0.6	1.2	1.1	1.1	1.4	1.9
		N	10	10	10	10	9	6
	11 TO	12						
		MEAN	36.	36.	35.	34.	35.	35.
		S.D.	3.5	2.7	3.5	4.1	3.9	3.3
		S.E.	1.1	0.8	1.1	1.3	1.3	1.3
		N	10	10	10	10	9	6
	12 TO	12'						
		MEAN	34.	33.	32.	31.	32.	31.
		S.D.	5.9	4.0	3.4	3.4	5.9	4.4
		S.E.	1.9	1.3	1.1	1.1	2.0	1.8
		N	10	10	10	10	9	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.
None significantly different from control group

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 4

GROUP:		UNTREATED	0 MG/KG/DAY	FEMALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK	-2 TO -1						
	MEAN	21.	23.	21.	21.	20.	21.
	S.D.	1.3	2.5	1.4	1.4	2.0	1.2
	S.E.	0.4	0.8	0.4	0.4	0.6	0.5
	N	10	10	10	10	10	6
	0 TO 1						
	MEAN	27.	25.	27.	26.	26.	26.
	S.D.	1.8	2.7	2.1	2.5	2.6	1.2
	S.E.	0.6	0.9	0.7	0.8	0.8	0.5
	N	10	10	10	10	10	6
	1 TO 2						
	MEAN	25.	25.	25.	22.b	22.b	24.
	S.D.	1.6	2.3	1.7	1.1	1.9	1.4
	S.E.	0.5	0.7	0.5	0.3	0.6	0.6
	N	10	10	10	10	9	6
	2 TO 3						
	MEAN	28.	27.	28.	27.	25.	25.
	S.D.	2.0	2.3	2.1	1.4	2.5	1.2
	S.E.	0.6	0.7	0.7	0.4	0.8	0.5
	N	10	10	10	10	10	6
	3 TO 4						
	MEAN	26.	27.	27.	26.	25.	26.
	S.D.	1.9	2.4	2.3	2.4	2.1	1.0
	S.E.	0.6	0.7	0.7	0.8	0.7	0.4
	N	10	10	10	10	10	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

b = Significantly different from control group 2 at 0.01 using Dunnett's test

TABLE S9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF FOOD CONSUMPTION [G/ANIMAL/DAY]

GROUP:		UNTREATED	0 MG/KG/DAY	FEMALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK	4 TO 5	MEAN	27.	28.	29.	26.	27.
		S.D.	2.2	3.3	3.4	1.9	2.2
		S.E.	0.7	1.0	1.1	0.6	0.9
		N	10	10	10	10	6
	5 TO 6	MEAN	28.	29.	29.	26.	26.
		S.D.	2.7	8.6	1.9	2.1	1.8
		S.E.	0.9	2.7	0.6	0.6	0.7
		N	10	10	10	10	6
	6 TO 7	MEAN	25.	27.	26.	24.	24.e
		S.D.	1.8	2.9	3.1	2.7	2.2
		S.E.	0.6	0.9	1.0	0.9	0.9
		N	10	10	10	10	6
	7 TO 8	MEAN	26.	27.	24.a	23.a	23.e
		S.D.	2.0	3.1	2.7	2.1	1.9
		S.E.	0.6	1.0	0.9	0.7	0.8
		N	10	10	10	10	6
	8 TO 9	MEAN	25.	27.	25.	25.	25.
		S.D.	2.6	1.9	2.3	1.4	3.5
		S.E.	0.8	0.6	0.7	0.4	1.4
		N	10	10	10	10	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.

a = Significantly different from control group 2 at 0.05 using Dunnett's test
e = Significantly different from control group 2 at 0.05 using Student's t-Test

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 6

GROUP:		UNTREATED	0 MG/KG/DAY	FEMALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
WEEK	9 TO 10						
	MEAN	26.	26.	27.	26.	25.	24.
	S.D.	3.0	2.7	2.4	2.1	3.9	2.7
	S.E.	1.0	0.9	0.7	0.7	1.2	1.1
	N	10	10	10	10	10	6
	10 TO 11						
	MEAN	25.	26.	27.	26.	25.	25.
	S.D.	2.2	2.0	2.3	1.8	2.3	1.6
	S.E.	0.7	0.6	0.7	0.6	0.7	0.7
	N	10	10	10	10	10	6
	11 TO 12						
	MEAN	27.	25.	27.	25.	24.	25.
	S.D.	2.0	3.3	2.4	2.4	4.7	4.2
	S.E.	0.6	1.0	0.8	0.8	1.5	1.7
	N	10	10	10	10	10	6
	12 TO 12'						
	MEAN	22.	22.	23.	20.	23.	20.
	S.D.	3.4	1.8	3.1	2.7	3.7	3.6
	S.E.	1.1	0.6	1.0	0.8	1.2	1.5
	N	10	10	10	10	10	6

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2;
control group 2 was compared to group 6.
None significantly different from control group

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07/09/2012
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NA = NOT APPLICABLE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF HEMATOLOGY VALUES

PAGE 2

ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	MALES			150 MG/KG/DAY	60 MG/KG CPS
				5 MG/KG/DAY	50 MG/KG/DAY			
MCV (fL)								
WEEK 12	MEAN	52.8	52.6	51.9	50.9	52.7		NA
	S.D.	2.32	2.42	1.63	1.21	2.51		
	S.E.	0.73	0.77	0.51	0.38	0.89		
	N	10	10	10	10	8		
MCH (pg)								
WEEK 12	MEAN	17.1	17.2	17.0	16.7	16.9		NA
	S.D.	0.38	0.56	0.41	0.23	0.62		
	S.E.	0.12	0.18	0.13	0.07	0.22		
	N	10	10	10	10	8		
MCHC (g/dL)								
WEEK 12	MEAN	32.4	32.7	32.9	32.8	32.2		NA
	S.D.	1.23	0.79	0.86	0.49	0.86		
	S.E.	0.39	0.25	0.27	0.16	0.30		
	N	10	10	10	10	8		
PLATELET (thous/uL)								
WEEK 12	MEAN	1028.	1003.	1035.	877.	888.		NA
	S.D.	173.3	102.1	146.8	198.2	168.9		
	S.E.	54.8	32.3	46.4	62.7	59.7		
	N	10	10	10	10	8		

thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2.
None significantly different from control group
NA = NOT APPLICABLE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF HEMATOLOGY VALUES

PAGE 3

ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS

PT (seconds)							
WEEK 12	MEAN	18.2	18.4	18.2	18.0	17.5	NA
	S.D.	1.20	0.73	0.73	1.04	0.65	
	S.E.	0.38	0.23	0.23	0.33	0.23	
	N	10	10	10	10	8	

APTT (seconds)							
WEEK 12	MEAN	19.3	20.1	19.5	19.8	16.0b	NA
	S.D.	2.63	1.91	1.12	2.76	3.53	
	S.E.	0.83	0.60	0.35	0.87	1.25	
	N	10	10	10	10	8	

RETIC (%)							
WEEK 12	MEAN	2.0	1.8	1.8	2.7	4.7b	NA
	S.D.	0.41	0.20	0.42	0.65	2.18	
	S.E.	0.13	0.06	0.13	0.20	0.77	
	N	10	10	10	10	8	

RETIC ABSOLUTE (thous/uL)							
WEEK 12	MEAN	179.9	161.3	163.6	225.5	342.6b	NA
	S.D.	39.80	16.77	38.39	42.48	116.14	
	S.E.	12.58	5.30	12.14	13.43	41.06	
	N	10	10	10	10	8	

thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER

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b = Significantly different from control group 2 at 0.01 using Dunnett's test

NA = NOT APPLICABLE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF HEMATOLOGY VALUES

PAGE 4

ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
NEU (%)							
WEEK 12	MEAN	18.3	16.9	17.5	18.0	17.8	NA
	S.D.	5.50	5.19	4.07	4.44	4.20	
	S.E.	1.74	1.64	1.29	1.41	1.49	
	N	10	10	10	10	8	
LYMPH (%)							
WEEK 12	MEAN	76.8	78.8	78.3	77.9	78.3	NA
	S.D.	5.85	5.53	4.30	4.72	4.65	
	S.E.	1.85	1.75	1.36	1.49	1.65	
	N	10	10	10	10	8	
MONO (%)							
WEEK 12	MEAN	2.6	2.1	2.4	2.5	2.5	NA
	S.D.	0.82	0.69	0.66	0.82	1.02	
	S.E.	0.26	0.22	0.21	0.26	0.36	
	N	10	10	10	10	8	
EOS (%)							
WEEK 12	MEAN	0.9	1.1	0.7	0.4b	0.3b	NA
	S.D.	0.58	0.66	0.35	0.26	0.18	
	S.E.	0.18	0.21	0.11	0.08	0.06	
	N	10	10	10	10	8	

thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF HEMATOLOGY VALUES

PAGE 5

ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
BASO (%)							
WEEK 12	MEAN	0.5	0.5	0.5	0.5	0.4	NA
	S.D.	0.18	0.17	0.16	0.14	0.15	
	S.E.	0.06	0.05	0.05	0.05	0.05	
	N	10	10	10	10	8	
LUC (%)							
WEEK 12	MEAN	0.8	0.6	0.7	0.8	0.9	NA
	S.D.	0.44	0.33	0.35	0.29	0.32	
	S.E.	0.14	0.10	0.11	0.09	0.11	
	N	10	10	10	10	8	
NEU ABSOLUTE (thous/uL)							
WEEK 12	MEAN	2.17	1.52	1.90	1.79	1.53	NA
	S.D.	1.104	0.476	0.362	0.725	0.361	
	S.E.	0.349	0.151	0.115	0.229	0.128	
	N	10	10	10	10	8	
LYMPH ABSOLUTE (thous/uL)							
WEEK 12	MEAN	9.04	7.23	8.73	7.76	6.89	NA
	S.D.	2.659	2.210	1.864	2.264	1.604	
	S.E.	0.841	0.699	0.589	0.716	0.567	
	N	10	10	10	10	8	

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For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2.
None significantly different from control group
NA = NOT APPLICABLE

ANALYSIS		GROUP:	UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG	CPS
MONO ABSOLUTE (thous/uL)									
WEEK 12	MEAN	0.31	0.20 ^c	0.26	0.24	0.21		NA	
	S.D.	0.146	0.087	0.064	0.086	0.077			
	S.E.	0.046	0.028	0.020	0.027	0.027			
	N	10	10	10	10	8			
EOS ABSOLUTE (thous/uL)									
WEEK 12	MEAN	0.11	0.10	0.08	0.03 ^b	0.02 ^b		NA	
	S.D.	0.063	0.063	0.040	0.023	0.014			
	S.E.	0.020	0.020	0.013	0.007	0.005			
	N	10	10	10	10	8			
BASO ABSOLUTE (thous/uL)									
WEEK 12	MEAN	0.06	0.05	0.06	0.04	0.04		NA	
	S.D.	0.025	0.019	0.024	0.017	0.016			
	S.E.	0.008	0.006	0.008	0.005	0.006			
	N	10	10	10	10	8			
LUC ABSOLUTE (thous/uL)									
WEEK 12	MEAN	0.11	0.06	0.08	0.08	0.07		NA	
	S.D.	0.075	0.040	0.040	0.040	0.021			
	S.E.	0.024	0.013	0.013	0.013	0.007			
	N	10	10	10	10	8			

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For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2.

b = Significantly different from control group 2 at 0.01 using Dunnett's test

c = Significantly different from control group 1 at 0.05 using Student's t-Test

NA = NOT APPLICABLE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF HEMATOLOGY VALUES

PAGE 7

ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
RDW (%)							
WEEK 12	MEAN	11.9	12.0	12.0	13.2	16.6b	NA
	S.D.	0.34	0.47	0.51	0.97	2.63	
	S.E.	0.11	0.15	0.16	0.31	0.93	
	N	10	10	10	10	8	
HDW (g/dL)							
WEEK 12	MEAN	2.16	2.23	2.23	2.53b	3.01b	NA
	S.D.	0.160	0.147	0.163	0.199	0.253	
	S.E.	0.051	0.047	0.052	0.063	0.089	
	N	10	10	10	10	8	

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TABLE S10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF HEMATOLOGY VALUES

PAGE 8

ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	FEMALES			150 MG/KG/DAY	60 MG/KG CPS
				5 MG/KG/DAY	50 MG/KG/DAY			
WBC (thous/uL)								
WEEK 12	MEAN	8.49	8.85	8.20	8.37	6.46a		NA
	S.D.	2.181	1.836	1.490	1.912	1.832		
	S.E.	0.690	0.612	0.471	0.605	0.579		
	N	10	9	10	10	10		
RBC (mil/uL)								
WEEK 12	MEAN	8.68	8.56	8.47	8.22	8.08		NA
	S.D.	0.560	0.559	0.430	0.421	0.557		
	S.E.	0.177	0.186	0.136	0.133	0.176		
	N	10	9	10	10	10		
HGB (g/dL)								
WEEK 12	MEAN	15.6	15.3	15.3	14.6	14.1a		NA
	S.D.	0.98	1.12	0.88	0.70	1.05		
	S.E.	0.31	0.37	0.28	0.22	0.33		
	N	10	9	10	10	10		
HCT (%)								
WEEK 12	MEAN	47.1	45.6	45.4	43.1	42.5		NA
	S.D.	3.33	3.92	3.15	2.52	3.99		
	S.E.	1.05	1.31	1.00	0.80	1.26		
	N	10	9	10	10	10		

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TABLE S10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF HEMATOLOGY VALUES

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ANALYSIS	GROUP:	UNTREATED	FEMALES				60 MG/KG CPS	
			0 MG/KG/DAY	5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY		

MCV (fL)								
WEEK 12	MEAN	54.2	53.2	53.5	52.4	52.5		NA
	S.D.	1.54	1.60	2.11	1.35	1.77		
	S.E.	0.49	0.53	0.67	0.43	0.56		
	N	10	9	10	10	10		
MCH (pg)								
WEEK 12	MEAN	18.0	17.9	18.0	17.7	17.5		NA
	S.D.	0.41	0.44	0.56	0.35	0.50		
	S.E.	0.13	0.15	0.18	0.11	0.16		
	N	10	9	10	10	10		
MCHC (g/dL)								
WEEK 12	MEAN	33.2	33.6	33.7	33.8	33.2		NA
	S.D.	0.38	0.83	0.71	0.72	0.81		
	S.E.	0.12	0.28	0.22	0.23	0.26		
	N	10	9	10	10	10		
PLATELET (thous/uL)								
WEEK 12	MEAN	1085.	1163.	1177.	846.b	774.b		NA
	S.D.	147.9	157.5	171.0	150.4	147.8		
	S.E.	46.8	52.5	54.1	47.6	46.7		
	N	10	9	10	10	10		

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PROJECT NO.:WIL-402022
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TABLE S10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF HEMATOLOGY VALUES

PAGE 10

FEMALES								
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG	CPS

PT (seconds)								
WEEK 12	MEAN	18.0	17.9	18.0	17.9	17.5		NA
	S.D.	0.49	0.74	0.82	0.93	0.62		
	S.E.	0.16	0.25	0.26	0.30	0.20		
	N	10	9	10	10	10		
APTT (seconds)								
WEEK 12	MEAN	16.4	15.7	17.5	16.9	16.1		NA
	S.D.	1.31	2.37	1.27	1.44	1.41		
	S.E.	0.41	0.79	0.40	0.46	0.44		
	N	10	9	10	10	10		
RETIC (%)								
WEEK 12	MEAN	2.0	1.8	1.9	2.0	2.3a		NA
	S.D.	0.36	0.23	0.34	0.27	0.60		
	S.E.	0.11	0.08	0.11	0.08	0.19		
	N	10	9	10	10	10		
RETIC ABSOLUTE (thous/uL)								
WEEK 12	MEAN	169.0	155.0	157.2	161.9	188.2		NA
	S.D.	36.91	25.26	29.46	23.00	47.64		
	S.E.	11.67	8.42	9.32	7.27	15.07		
	N	10	9	10	10	10		

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TABLE S10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF HEMATOLOGY VALUES

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ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	FEMALES			150 MG/KG/DAY	60 MG/KG CPS
				5 MG/KG/DAY	50 MG/KG/DAY			
NEU (%)								
WEEK 12	MEAN	15.5	15.5	14.7	15.5	13.3		NA
	S.D.	2.86	5.45	6.54	7.91	3.42		
	S.E.	0.91	1.82	2.07	2.50	1.08		
	N	10	9	10	10	10		
LYMPH (%)								
WEEK 12	MEAN	79.5	79.7	80.9	80.0	82.3		NA
	S.D.	3.52	5.93	6.92	8.05	3.81		
	S.E.	1.11	1.98	2.19	2.54	1.20		
	N	10	9	10	10	10		
MONO (%)								
WEEK 12	MEAN	2.4	2.1	2.2	2.4	2.4		NA
	S.D.	0.62	0.45	0.69	0.95	0.71		
	S.E.	0.20	0.15	0.22	0.30	0.22		
	N	10	9	10	10	10		
EOS (%)								
WEEK 12	MEAN	1.1	1.2	0.8a	0.5b	0.3b		NA
	S.D.	0.33	0.52	0.25	0.21	0.09		
	S.E.	0.11	0.17	0.08	0.07	0.03		
	N	10	9	10	10	10		

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b = Significantly different from control group 2 at 0.01 using Dunnett's test

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TABLE S10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF HEMATOLOGY VALUES

PAGE 12

ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	FEMALES			150 MG/KG/DAY	60 MG/KG CPS
				5 MG/KG/DAY	50 MG/KG/DAY			
BASO (%)								
WEEK 12	MEAN	0.6	0.6	0.5	0.5	0.5		NA
	S.D.	0.26	0.29	0.21	0.22	0.21		
	S.E.	0.08	0.10	0.07	0.07	0.07		
	N	10	9	10	10	10		
LUC (%)								
WEEK 12	MEAN	0.9	0.9	0.9	1.2	1.3a		NA
	S.D.	0.32	0.19	0.44	0.29	0.20		
	S.E.	0.10	0.06	0.14	0.09	0.06		
	N	10	9	10	10	10		
NEU ABSOLUTE (thous/uL)								
WEEK 12	MEAN	1.33	1.37	1.21	1.36	0.86		NA
	S.D.	0.453	0.556	0.591	0.968	0.362		
	S.E.	0.143	0.185	0.187	0.306	0.115		
	N	10	9	10	10	10		
LYMPH ABSOLUTE (thous/uL)								
WEEK 12	MEAN	6.74	7.06	6.63	6.64	5.32		NA
	S.D.	1.762	1.530	1.287	1.449	1.505		
	S.E.	0.557	0.510	0.407	0.458	0.476		
	N	10	9	10	10	10		

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NA = NOT APPLICABLE

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TABLE S10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF HEMATOLOGY VALUES

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ANALYSIS	GROUP:	UNTREATED	FEMALES				60 MG/KG CPS
			0 MG/KG/DAY	5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	

MONO ABSOLUTE	(thous/uL)						
WEEK 12	MEAN	0.20	0.18	0.18	0.19	0.15	NA
	S.D.	0.063	0.050	0.066	0.065	0.053	
	S.E.	0.020	0.017	0.021	0.021	0.017	
	N	10	9	10	10	10	
EOS ABSOLUTE	(thous/uL)						
WEEK 12	MEAN	0.10	0.10	0.07b	0.04b	0.02b	NA
	S.D.	0.044	0.038	0.020	0.019	0.010	
	S.E.	0.014	0.013	0.006	0.006	0.003	
	N	10	9	10	10	10	
BASO ABSOLUTE	(thous/uL)						
WEEK 12	MEAN	0.04	0.05	0.04	0.04	0.03	NA
	S.D.	0.017	0.030	0.019	0.026	0.017	
	S.E.	0.005	0.010	0.006	0.008	0.005	
	N	10	9	10	10	10	
LUC ABSOLUTE	(thous/uL)						
WEEK 12	MEAN	0.08	0.08	0.08	0.09	0.08	NA
	S.D.	0.027	0.017	0.040	0.018	0.026	
	S.E.	0.008	0.006	0.013	0.006	0.008	
	N	10	9	10	10	10	

thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER							

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2.

b = Significantly different from control group 2 at 0.01 using Dunnett's test

NA = NOT APPLICABLE

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TABLE S10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF HEMATOLOGY VALUES

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ANALYSIS	GROUP:	FEMALES					
		UNTREATED	0 MG/KG/DAY	5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
RDW (%)							
WEEK 12	MEAN	11.1	11.1	11.1	12.0b	13.3b	NA
	S.D.	0.26	0.38	0.47	0.40	1.01	
	S.E.	0.08	0.13	0.15	0.13	0.32	
	N	10	9	10	10	10	
HDW (g/dL)							
WEEK 12	MEAN	1.96	1.97	2.02	2.31b	2.49b	NA
	S.D.	0.062	0.132	0.098	0.210	0.204	
	S.E.	0.020	0.044	0.031	0.066	0.064	
	N	10	9	10	10	10	

thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER

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NA = NOT APPLICABLE

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S11
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF SERUM CHEMISTRY VALUES

PAGE 1

ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	MALES			150 MG/KG/DAY	60 MG/KG CPS
				5 MG/KG/DAY	50 MG/KG/DAY			

ALBUMIN (g/dL)								
WEEK 12	MEAN	4.1	4.0	4.0	4.1	4.1		NA
	S.D.	0.42	0.28	0.25	0.26	0.41		
	S.E.	0.13	0.09	0.08	0.08	0.14		
	N	10	10	10	10	9		

TOTAL PROTEIN (g/dL)								
WEEK 12	MEAN	6.6	6.5	6.4	6.5	6.5		NA
	S.D.	0.78	0.52	0.39	0.44	0.50		
	S.E.	0.25	0.16	0.12	0.14	0.17		
	N	10	10	10	10	9		

GLOBULIN (g/dL)								
WEEK 12	MEAN	2.5	2.5	2.4	2.5	2.4		NA
	S.D.	0.40	0.30	0.21	0.28	0.21		
	S.E.	0.13	0.09	0.07	0.09	0.07		
	N	10	10	10	10	9		

A/G RATIO								
WEEK 12	MEAN	1.66	1.62	1.69	1.67	1.70		NA
	S.D.	0.213	0.139	0.124	0.185	0.179		
	S.E.	0.067	0.044	0.039	0.058	0.060		
	N	10	10	10	10	9		

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, g/dL = GRAMS/DECILITER, mEq/L = MILLIEQUIVALENTS/LITER								

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2.
None significantly different from control group
NA = NOT APPLICABLE

PROJECT NO.:WIL-402022
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TABLE S11
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF SERUM CHEMISTRY VALUES

PAGE 2

ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	MALES			150 MG/KG/DAY	60 MG/KG CPS
				5 MG/KG/DAY	50 MG/KG/DAY			

TOTAL BILI (mg/dL)								
WEEK 12	MEAN	0.07	0.06	0.06	0.05	0.10		NA
	S.D.	0.019	0.015	0.013	0.010	0.102		
	S.E.	0.006	0.005	0.004	0.003	0.034		
	N	10	10	10	10	9		

UREA NITROGEN (mg/dL)								
WEEK 12	MEAN	14.0	14.2	13.5	15.3	18.6		NA
	S.D.	2.59	2.42	1.43	2.87	7.47		
	S.E.	0.82	0.77	0.45	0.91	2.49		
	N	10	10	10	10	9		

CREATININE (mg/dL)								
WEEK 12	MEAN	0.2	0.2	0.2	0.2	0.2		NA
	S.D.	0.09	0.12	0.08	0.07	0.09		
	S.E.	0.03	0.04	0.03	0.02	0.03		
	N	10	10	10	10	9		

ALP (U/L)								
WEEK 12	MEAN	86.	94.	85.	93.	75.		NA
	S.D.	18.2	26.6	23.3	25.9	6.7		
	S.E.	5.8	8.4	7.4	8.2	2.2		
	N	10	10	10	10	9		

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, g/dL = GRAMS/DECILITER, mEq/L = MILLIEQUIVALENTS/LITER								

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, g/dL = GRAMS/DECILITER, mEq/L = MILLIEQUIVALENTS/LITER

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None significantly different from control group
NA = NOT APPLICABLE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S11
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF SERUM CHEMISTRY VALUES

PAGE 3

ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
ALT (U/L)							
WEEK 12	MEAN	48.	48.	45.	44.	96.	NA
	S.D.	9.7	6.6	8.4	8.8	148.5	
	S.E.	3.1	2.1	2.7	2.8	49.5	
	N	10	10	10	10	9	
AST (U/L)							
WEEK 12	MEAN	104.	98.	101.	100.	169.	NA
	S.D.	19.0	22.1	9.2	19.7	171.6	
	S.E.	6.0	7.0	2.9	6.2	57.2	
	N	10	10	10	10	9	
GGT (U/L)							
WEEK 12	MEAN	0.2	0.2	0.2	0.3	0.7	NA
	S.D.	0.23	0.16	0.15	0.28	0.65	
	S.E.	0.07	0.05	0.05	0.09	0.22	
	N	10	10	10	10	9	
GLUCOSE (mg/dL)							
WEEK 12	MEAN	136.	138.	148.	155.	155.	NA
	S.D.	17.4	18.3	27.3	35.1	36.5	
	S.E.	5.5	5.8	8.6	11.1	12.2	
	N	10	10	10	10	9	

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S11
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF SERUM CHEMISTRY VALUES

PAGE 4

ANALYSIS	GROUP:	UNTREATED	MALES				60 MG/KG CPS	
			0 MG/KG/DAY	5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY		
<hr/>								
CHOLESTEROL (mg/dL)								
WEEK 12	MEAN	45.	45.	41.	64.	86.b		NA
	S.D.	12.5	10.9	11.1	28.9	33.1		
	S.E.	4.0	3.5	3.5	9.1	11.0		
	N	10	10	10	10	9		
<hr/>								
CALCIUM (mg/dL)								
WEEK 12	MEAN	12.3	11.9	11.7	11.9	11.7		NA
	S.D.	1.95	1.09	0.60	0.72	1.03		
	S.E.	0.62	0.34	0.19	0.23	0.34		
	N	10	10	10	10	9		
<hr/>								
CHLORIDE (mEq/L)								
WEEK 12	MEAN	103.	102.	102.	102.	102.		NA
	S.D.	1.2	1.4	1.6	1.7	1.8		
	S.E.	0.4	0.4	0.5	0.5	0.6		
	N	10	10	10	10	9		
<hr/>								
PHOSPHORUS (mg/dL)								
WEEK 12	MEAN	10.2	9.8	8.6	8.4	8.6		NA
	S.D.	3.87	3.45	1.79	1.82	1.47		
	S.E.	1.22	1.09	0.56	0.58	0.49		
	N	10	10	10	10	9		
<hr/>								
mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, g/dL = GRAMS/DECILITER, mEq/L = MILLIEQUIVALENTS/LITER								
<hr/>								

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2.

b = Significantly different from control group 2 at 0.01 using Dunnett's test

NA = NOT APPLICABLE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S11
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF SERUM CHEMISTRY VALUES

PAGE 5

ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
POTASSIUM (mEq/L)							
WEEK 12	MEAN	6.08	5.63	5.04	5.62	5.78	NA
	S.D.	1.290	1.223	0.790	1.406	0.977	
	S.E.	0.408	0.387	0.250	0.445	0.326	
	N	10	10	10	10	9	
SODIUM (mEq/L)							
WEEK 12	MEAN	150.	148.	147.	146.	145.	NA
	S.D.	7.5	4.0	3.1	1.9	2.2	
	S.E.	2.4	1.3	1.0	0.6	0.7	
	N	10	10	10	10	9	
TRIGLYCERIDE (mg/dL)							
WEEK 12	MEAN	25.	20.	21.	26.	27.	NA
	S.D.	7.1	9.1	7.5	13.2	25.6	
	S.E.	2.2	2.9	2.4	4.2	8.5	
	N	10	10	10	10	9	
SDH (U/L)							
WEEK 12	MEAN	14.	12.	11.	14.	61.a	NA
	S.D.	5.6	5.7	4.7	6.4	87.3	
	S.E.	1.8	1.8	1.5	2.0	29.1	
	N	10	10	10	10	9	

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TABLE S11
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF SERUM CHEMISTRY VALUES

PAGE 6

ANALYSIS	GROUP:	UNTREATED	FEMALES				60 MG/KG CPS	
			0 MG/KG/DAY	5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY		

ALBUMIN (g/dL)								
WEEK 12	MEAN	4.9	5.0	4.7	5.1	5.2		NA
	S.D.	0.40	0.58	0.45	0.69	0.39		
	S.E.	0.12	0.18	0.14	0.22	0.12		
	N	10	10	10	10	10		

TOTAL PROTEIN (g/dL)								
WEEK 12	MEAN	7.4	7.3	7.1	7.6	7.7		NA
	S.D.	0.53	0.78	0.55	0.76	0.66		
	S.E.	0.17	0.25	0.18	0.24	0.21		
	N	10	10	10	10	10		

GLOBULIN (g/dL)								
WEEK 12	MEAN	2.5	2.4	2.4	2.5	2.4		NA
	S.D.	0.29	0.34	0.17	0.26	0.33		
	S.E.	0.09	0.11	0.05	0.08	0.10		
	N	10	10	10	10	10		

A/G RATIO								
WEEK 12	MEAN	1.97	2.12	1.92	2.03	2.18		NA
	S.D.	0.282	0.322	0.183	0.347	0.235		
	S.E.	0.089	0.102	0.058	0.110	0.074		
	N	10	10	10	10	10		

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S11
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF SERUM CHEMISTRY VALUES

PAGE 7

ANALYSIS	GROUP:	UNTREATED	FEMALES				60 MG/KG CPS	
			0 MG/KG/DAY	5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY		

TOTAL BILI (mg/dL)								
WEEK 12	MEAN	0.10	0.12	0.09	0.08a	0.10		NA
	S.D.	0.019	0.025	0.025	0.021	0.031		
	S.E.	0.006	0.008	0.008	0.007	0.010		
	N	10	10	10	10	10		
UREA NITROGEN (mg/dL)								
WEEK 12	MEAN	13.6	14.2	13.7	16.4a	17.4b		NA
	S.D.	1.44	1.83	2.05	1.94	2.07		
	S.E.	0.46	0.58	0.65	0.61	0.65		
	N	10	10	10	10	10		
CREATININE (mg/dL)								
WEEK 12	MEAN	0.3	0.3	0.2	0.3	0.3		NA
	S.D.	0.07	0.11	0.07	0.08	0.08		
	S.E.	0.02	0.03	0.02	0.03	0.02		
	N	10	10	10	10	10		
ALP (U/L)								
WEEK 12	MEAN	50.	46.	50.	57.	50.		NA
	S.D.	10.1	10.8	16.7	29.6	8.6		
	S.E.	3.2	3.4	5.3	9.4	2.7		
	N	10	10	10	10	10		

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b = Significantly different from control group 2 at 0.01 using Dunnett's test

NA = NOT APPLICABLE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S11
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF SERUM CHEMISTRY VALUES

PAGE 8

ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	FEMALES			150 MG/KG/DAY	60 MG/KG CPS
				5 MG/KG/DAY	50 MG/KG/DAY			
ALT (U/L)								
WEEK 12	MEAN	63.	70.	45.	41.	37.a		NA
	S.D.	37.4	50.0	7.6	14.2	6.0		
	S.E.	11.8	15.8	2.4	4.5	1.9		
	N	10	10	10	10	10		
AST (U/L)								
WEEK 12	MEAN	115.	150.	94.	104.	105.		NA
	S.D.	47.0	114.3	13.4	21.6	17.6		
	S.E.	14.9	36.1	4.2	6.8	5.6		
	N	10	10	10	10	10		
GGT (U/L)								
WEEK 12	MEAN	0.6	0.9	0.5	1.1	1.1		NA
	S.D.	0.43	0.50	0.34	0.80	0.82		
	S.E.	0.14	0.16	0.11	0.25	0.26		
	N	10	10	10	10	10		
GLUCOSE (mg/dL)								
WEEK 12	MEAN	139.	131.	129.	133.	143.		NA
	S.D.	20.3	19.8	18.6	17.9	12.9		
	S.E.	6.4	6.3	5.9	5.7	4.1		
	N	10	10	10	10	10		

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S11
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF SERUM CHEMISTRY VALUES

PAGE 9

ANALYSIS	GROUP:	UNTREATED	FEMALES				60 MG/KG CPS	
			0 MG/KG/DAY	5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY		
<hr/>								
CHOLESTEROL (mg/dL)								
WEEK 12	MEAN	67.	71.	60.	76.	104.b		NA
	S.D.	14.2	15.0	16.5	18.1	22.2		
	S.E.	4.5	4.7	5.2	5.7	7.0		
	N	10	10	10	10	10		
<hr/>								
CALCIUM (mg/dL)								
WEEK 12	MEAN	12.5	12.9	12.0	12.6	12.7		NA
	S.D.	0.97	1.58	1.02	0.88	1.13		
	S.E.	0.31	0.50	0.32	0.28	0.36		
	N	10	10	10	10	10		
<hr/>								
CHLORIDE (mEq/L)								
WEEK 12	MEAN	102.	102.	102.	103.	102.		NA
	S.D.	1.1	1.9	1.8	2.3	1.6		
	S.E.	0.3	0.6	0.6	0.7	0.5		
	N	10	10	10	10	10		
<hr/>								
PHOSPHORUS (mg/dL)								
WEEK 12	MEAN	8.5	10.4	8.6	8.5	9.2		NA
	S.D.	1.37	3.27	2.12	1.85	2.38		
	S.E.	0.43	1.03	0.67	0.58	0.75		
	N	10	10	10	10	10		
<hr/>								
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<hr/>								

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S11
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF SERUM CHEMISTRY VALUES

PAGE 10

ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	FEMALES			150 MG/KG/DAY	60 MG/KG CPS
				5 MG/KG/DAY	50 MG/KG/DAY			
POTASSIUM (mEq/L)								
WEEK 12	MEAN	6.04	7.50	5.29	6.20	6.27		NA
	S.D.	1.819	2.504	1.294	2.277	2.042		
	S.E.	0.575	0.792	0.409	0.720	0.646		
	N	10	10	10	10	10		
SODIUM (mEq/L)								
WEEK 12	MEAN	146.	146.	145.	146.	147.		NA
	S.D.	2.1	4.9	2.5	2.7	2.5		
	S.E.	0.7	1.6	0.8	0.9	0.8		
	N	10	10	10	10	10		
TRIGLYCERIDE (mg/dL)								
WEEK 12	MEAN	28.	30.	22.	22.	20.		NA
	S.D.	6.4	15.6	5.0	4.8	4.5		
	S.E.	2.0	4.9	1.6	1.5	1.4		
	N	10	10	10	10	10		
SDH (U/L)								
WEEK 12	MEAN	15.	15.	9.	14.	15.		NA
	S.D.	8.9	12.9	3.1	4.9	3.9		
	S.E.	2.8	4.1	1.0	1.6	1.2		
	N	10	10	10	10	10		

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None significantly different from control group
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10/13/2011
R:03/02/2012

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S12 (WEEK -1 PRETEST EXAMINATION)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF OPHTHALMIC EXAMINATION FINDINGS

PAGE 1

GROUP:	M A L E						F E M A L E					
	1	2	3	4	5	6	1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10	6	10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED EXAM 1 (WEEK -1)	10	10	10	10	10	6	10	10	10	10	10	6
-NO OCULAR LESIONS - BILATERAL	10	10	10	9	10	6	9	10	9	8	10	6
-CORNEAL CRYSTALS - BILATERAL	0	0	0	1	0	0	1	0	1	2	0	0
1- UNTREATED	2- 0 MG/KG/DAY						3- 5 MG/KG/DAY					
	4- 50 MG/KG/DAY						5- 150 MG/KG/DAY					
	6- 60 MG/KG CPS											

POPSiv4.03
09/04/2011

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S13 (WEEK 12 EXAMINATION)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF OPHTHALMIC EXAMINATION FINDINGS

PAGE 1

GROUP:													

M A L E													
F E M A L E													

1 2 3 4 5 6 1 2 3 4 5 6													
NUMBER OF ANIMALS IN DOSE GROUP													
NUMBER OF ANIMALS EXAMINED EXAM 2 (WEEK 12)													
-NO OCULAR LESIONS - BILATERAL													
-CORNEAL CRYSTALS - BILATERAL													

1- UNTREATED 2- 0 MG/KG/DAY 3- 5 MG/KG/DAY 4- 50 MG/KG/DAY 5- 150 MG/KG/DAY 6- 60 MG/KG CPS													

POPSiv4.03
09/04/2011

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S14 (UNSCHEDULED DEATH)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF MACROSCOPIC FINDINGS

PAGE 1

FOUND DEAD OR EUTHANIZED MORIBUND OR IN EXTREMIS							

	GROUP:	1	2	M A L E 3	4	5	6

NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED		0	0	0	0	1	0
STOMACH							
-AREA(S), DARK RED		0	0	0	0	1	0
THYMUS							
-AREA(S), DARK RED		0	0	0	0	1	0

1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS		

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09/04/2011
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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S15 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF MACROSCOPIC FINDINGS

PAGE 1

SCHEDULED NECROPSY						
GROUP:	1	2	M A L E	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED	10	10	10	10	9	0
KIDNEYS						
-AREA(S), DEPRESSED	1	1	0	0	0	0
-DILATED PELVIS	0	0	0	0	1	0
LIVER						
-AREA(S), WHITE	0	0	0	1	0	0
LN, MANDIBULAR						
-ENLARGED	1	0	2	0	0	0
PITUITARY						
-PALE	0	0	0	0	2	0
PROSTATE						
-PALE	0	0	0	0	2	0
-AREA(S), YELLOW	0	0	1	0	0	0
SAL. GLAND MAND						
-PALE	1	0	0	0	0	0
SKIN						
-SCABBING	1	1	1	0	0	0
-HAIR LOSS	0	0	1	0	0	0
SPLEEN						
-ROUGH SURFACE	0	0	0	0	1	0
1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS	

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S15 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF MACROSCOPIC FINDINGS

PAGE 2

SCHEDULED NECROPSY						
GROUP:	1	2	M A L E	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED	10	10	10	10	9	0
SPLEEN -- CONTINUED						
-ACCESSORY	1	0	0	0	0	0
THYMUS						
-AREA(S), DARK RED	2	0	0	1	1	0
-DISCOLORATION, DARK RED	1	0	0	0	0	0
-SMALL	0	0	0	0	3	0
NO SIGNIFICANT CHANGES OBSERVED - ALL EXAMINED TISSUES	5	8	8	8	2	0
1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS	

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S15 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF MACROSCOPIC FINDINGS

PAGE 3

SCHEDULED NECROPSY						
GROUP:	1	2	F E M A L E	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED	10	10	10	10	10	0
KIDNEYS						
-AREA(S), DEPRESSED	0	0	1	3	2	0
LIVER						
-AREA(S), WHITE	0	2	0	0	1	0
LN, MANDIBULAR						
-ENLARGED	1	2	0	1	0	0
OVIDUCTS						
-CYST(S)	0	1	0	0	0	0
PITUITARY						
-ENLARGED	1	0	0	0	0	0
SPLEEN						
-CYST(S)	0	1	0	0	1	0
THYMUS						
-AREA(S), DARK RED	0	2	0	2	2	0
-SMALL	0	0	0	1	1	0
THYROID GLANDS						
-SMALL	0	0	0	0	1	0
UTERUS						
-CONTENTS, CLEAR FLUID	1	0	1	2	1	0
NO SIGNIFICANT CHANGES OBSERVED - ALL EXAMINED TISSUES	8	3	9	4	4	0
1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS	

PGRSI2v4.10
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TABLE S16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

GROUP:	UNTREATED	0 MG/KG/DAY	MALES			60 MG/KG CPS
			5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	
<hr/>						
FINAL BODY WT (G)						
MEAN	490.	450.	460.	458.	447.	NA
S.D.	33.7	52.9	45.4	43.8	28.6	
S.E.	10.7	16.7	14.4	13.8	9.5	
N	10	10	10	10	9	
ADRENAL GLANDS (G)						
MEAN	0.0659d	0.0568	0.0628	0.0650a	0.0638	NA
S.D.	0.00713	0.00554	0.00968	0.00553	0.00475	
S.E.	0.00226	0.00175	0.00306	0.00175	0.00158	
N	10	10	10	10	9	
ADRENAL GLANDS (G/100 G FINAL BODY WEIGHT)						
MEAN	0.013	0.013	0.014	0.014	0.014	NA
S.D.	0.0014	0.0020	0.0019	0.0016	0.0016	
S.E.	0.0004	0.0006	0.0006	0.0005	0.0005	
N	10	10	10	10	9	
ADRENAL GLANDS (G/100 G BRAIN)						
MEAN	3.035c	2.710	3.002	3.132a	3.097a	NA
S.D.	0.3492	0.2708	0.4335	0.3129	0.2805	
S.E.	0.1104	0.0856	0.1371	0.0989	0.0935	
N	10	10	10	10	9	
BRAIN (G)						
MEAN	2.18c	2.10	2.09	2.08	2.07	NA
S.D.	0.088	0.078	0.083	0.083	0.071	
S.E.	0.028	0.025	0.026	0.026	0.024	
N	10	10	10	10	9	

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 2 was compared to group 1.
a = Significantly different from control group 2 at 0.05 using Dunnett's test
c = Significantly different from control group 2 at 0.05 using Student's t-Test
d = Significantly different from control group 2 at 0.01 using Student's t-Test
NA = NOT APPLICABLE

TABLE S16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

GROUP:	UNTREATED	0 MG/KG/DAY	MALES			150 MG/KG/DAY	60 MG/KG CPS
			5 MG/KG/DAY	50 MG/KG/DAY			

BRAIN (G/100 G FINAL BODY WEIGHT)							
MEAN	0.446	0.470	0.459	0.458	0.464		NA
S.D.	0.0336	0.0482	0.0414	0.0501	0.0351		
S.E.	0.0106	0.0152	0.0131	0.0159	0.0117		
N	10	10	10	10	9		
EPIDIDYMIDES (G)							
MEAN	1.37	1.30	1.34	1.36	1.29		NA
S.D.	0.149	0.105	0.095	0.130	0.114		
S.E.	0.047	0.033	0.030	0.041	0.038		
N	10	10	10	10	9		
EPIDIDYMIDES (G/100 G FINAL BODY WEIGHT)							
MEAN	0.282	0.291	0.294	0.298	0.289		NA
S.D.	0.0365	0.0360	0.0329	0.0303	0.0313		
S.E.	0.0115	0.0114	0.0104	0.0096	0.0104		
N	10	10	10	10	9		
EPIDIDYMIDES (G/100 G BRAIN)							
MEAN	63.127	61.946	64.152	65.213	62.367		NA
S.D.	6.3470	3.9716	5.1126	5.8979	5.3035		
S.E.	2.0071	1.2559	1.6167	1.8651	1.7678		
N	10	10	10	10	9		
HEART (G)							
MEAN	1.65	1.54	1.58	1.56	1.74		NA
S.D.	0.192	0.154	0.146	0.180	0.264		
S.E.	0.061	0.049	0.046	0.057	0.088		
N	10	10	10	10	9		

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 2 was compared to group 1.
None significantly different from control group
NA = NOT APPLICABLE

TABLE S16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

GROUP:	UNTREATED	0 MG/KG/DAY	MALES			150 MG/KG/DAY	60 MG/KG CPS
			5 MG/KG/DAY	50 MG/KG/DAY			

HEART (G/100 G FINAL BODY WEIGHT)							
MEAN	0.337	0.344	0.345	0.340	0.391a		NA
S.D.	0.0252	0.0302	0.0270	0.0200	0.0716		
S.E.	0.0080	0.0096	0.0085	0.0063	0.0239		
N	10	10	10	10	9		
HEART (G/100 G BRAIN)							
MEAN	76.020	73.531	75.690	75.159	84.437		NA
S.D.	9.0686	7.5512	7.0435	10.2214	13.4509		
S.E.	2.8677	2.3879	2.2274	3.2323	4.4836		
N	10	10	10	10	9		
KIDNEYS (G)							
MEAN	3.23	3.07	3.03	3.26	3.14		NA
S.D.	0.259	0.340	0.340	0.205	0.175		
S.E.	0.082	0.107	0.108	0.065	0.058		
N	10	10	10	10	9		
KIDNEYS (G/100 G FINAL BODY WEIGHT)							
MEAN	0.661	0.687	0.660	0.715	0.704		NA
S.D.	0.0469	0.0710	0.0579	0.0611	0.0326		
S.E.	0.0148	0.0225	0.0183	0.0193	0.0109		
N	10	10	10	10	9		
KIDNEYS (G/100 G BRAIN)							
MEAN	148.801	146.652	144.427	156.716	152.401		NA
S.D.	13.3607	15.5775	13.4062	10.3358	11.0059		
S.E.	4.2250	4.9261	4.2394	3.2685	3.6686		
N	10	10	10	10	9		

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 2 was compared to group 1.
a = Significantly different from control group 2 at 0.05 using Dunnett's test
NA = NOT APPLICABLE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

PAGE 4

GROUP:		UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
LIVER (G)							
	MEAN	12.01	11.51	11.80	14.42b	16.26b	NA
	S.D.	1.204	1.918	1.259	1.313	2.160	
	S.E.	0.381	0.606	0.398	0.415	0.720	
	N	10	10	10	10	9	
LIVER (G/100 G FINAL BODY WEIGHT)							
	MEAN	2.450	2.544	2.568	3.157b	3.622b	NA
	S.D.	0.1454	0.1509	0.1395	0.2208	0.2739	
	S.E.	0.0460	0.0477	0.0441	0.0698	0.0913	
	N	10	10	10	10	9	
LIVER (G/100 G BRAIN)							
	MEAN	551.938	547.995	564.254	694.714b	788.771b	NA
	S.D.	49.5832	82.0045	61.4262	72.8472	113.9206	
	S.E.	15.6796	25.9321	19.4247	23.0363	37.9735	
	N	10	10	10	10	9	
PITUITARY (G)							
	MEAN	0.0146	0.0133	0.0138	0.0143	0.0151	NA
	S.D.	0.00196	0.00228	0.00245	0.00193	0.00117	
	S.E.	0.00062	0.00072	0.00077	0.00061	0.00039	
	N	10	10	10	10	9	
PITUITARY (G/100 G FINAL BODY WEIGHT)							
	MEAN	0.003	0.003	0.003	0.003	0.003	NA
	S.D.	0.0004	0.0006	0.0003	0.0004	0.0002	
	S.E.	0.0001	0.0002	0.0001	0.0001	0.0001	
	N	10	10	10	10	9	

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 2 was compared to group 1.
b = Significantly different from control group 2 at 0.01 using Dunnett's test
NA = NOT APPLICABLE

TABLE S16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

GROUP:		UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
PITUITARY (G/100 G BRAIN)							
	MEAN	0.671	0.635	0.660	0.690	0.732	NA
	S.D.	0.0921	0.1148	0.1030	0.1002	0.0590	
	S.E.	0.0291	0.0363	0.0326	0.0317	0.0197	
	N	10	10	10	10	9	
PROSTATE (G)							
	MEAN	1.09	1.03	1.09	0.98	1.15	NA
	S.D.	0.273	0.168	0.172	0.152	0.169	
	S.E.	0.086	0.053	0.054	0.048	0.056	
	N	10	10	10	10	9	
PROSTATE (G/100 G FINAL BODY WEIGHT)							
	MEAN	0.222	0.233	0.239	0.215	0.259	NA
	S.D.	0.0478	0.0510	0.0389	0.0373	0.0423	
	S.E.	0.0151	0.0161	0.0123	0.0118	0.0141	
	N	10	10	10	10	9	
PROSTATE (G/100 G BRAIN)							
	MEAN	50.354	49.227	52.312	47.126	55.632	NA
	S.D.	12.7583	7.9998	8.3769	7.2230	6.5301	
	S.E.	4.0345	2.5298	2.6490	2.2841	2.1767	
	N	10	10	10	10	9	
SPLEEN (G)							
	MEAN	0.84	0.74	0.79	0.98b	1.08b	NA
	S.D.	0.119	0.151	0.136	0.155	0.194	
	S.E.	0.038	0.048	0.043	0.049	0.065	
	N	10	10	10	10	9	

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 2 was compared to group 1.
b = Significantly different from control group 2 at 0.01 using Dunnett's test
NA = NOT APPLICABLE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

PAGE 6

GROUP:	UNTREATED	0 MG/KG/DAY	MALES			60 MG/KG CPS
			5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	

SPLEEN (G/100 G FINAL BODY WEIGHT)						
MEAN	0.171	0.163	0.172	0.213b	0.242b	NA
S.D.	0.0145	0.0226	0.0193	0.0259	0.0445	
S.E.	0.0046	0.0072	0.0061	0.0082	0.0148	
N	10	10	10	10	9	
SPLEEN (G/100 G BRAIN)						
MEAN	38.775	35.056	37.842	47.182b	52.364b	NA
S.D.	5.7948	6.3230	6.0992	8.5877	10.2948	
S.E.	1.8325	1.9995	1.9287	2.7157	3.4316	
N	10	10	10	10	9	
TESTES (G)						
MEAN	3.69	3.45	3.48	3.72	3.50	NA
S.D.	0.416	0.270	0.320	0.311	0.208	
S.E.	0.132	0.085	0.101	0.098	0.069	
N	10	10	10	10	9	
TESTES (G/100 G FINAL BODY WEIGHT)						
MEAN	0.755	0.772	0.762	0.815	0.784	NA
S.D.	0.0760	0.0779	0.0981	0.0716	0.0383	
S.E.	0.0240	0.0246	0.0310	0.0227	0.0128	
N	10	10	10	10	9	
TESTES (G/100 G BRAIN)						
MEAN	169.724	164.699	166.195	178.712	169.657	NA
S.D.	16.2477	13.4501	15.9323	14.8519	10.3893	
S.E.	5.1380	4.2533	5.0382	4.6966	3.4631	
N	10	10	10	10	9	

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 2 was compared to group 1.
b = Significantly different from control group 2 at 0.01 using Dunnett's test
NA = NOT APPLICABLE

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TABLE S16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

PAGE 7

GROUP:		UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
THYMUS (G)							
	MEAN	0.2742	0.2364	0.2530	0.1914	0.0917b	NA
	S.D.	0.08550	0.05797	0.06755	0.03215	0.01451	
	S.E.	0.02704	0.01833	0.02136	0.01017	0.00484	
	N	10	10	10	10	9	
THYMUS (G/100 G FINAL BODY WEIGHT)							
	MEAN	0.056	0.052	0.055	0.042	0.020b	NA
	S.D.	0.0157	0.0100	0.0135	0.0091	0.0029	
	S.E.	0.0050	0.0032	0.0043	0.0029	0.0010	
	N	10	10	10	10	9	
THYMUS (G/100 G BRAIN)							
	MEAN	12.582	11.262	12.125	9.212	4.456b	NA
	S.D.	3.8248	2.6717	3.3295	1.5860	0.7940	
	S.E.	1.2095	0.8449	1.0529	0.5015	0.2647	
	N	10	10	10	10	9	
THYROID/SPARATHY (G)							
	MEAN	0.0174	0.0142	0.0152	0.0182	0.0184	NA
	S.D.	0.00565	0.00410	0.00333	0.00444	0.00385	
	S.E.	0.00179	0.00130	0.00105	0.00141	0.00128	
	N	10	10	10	10	9	
THYROID/SPARATHY (G/100 G FINAL BODY WEIGHT)							
	MEAN	0.004	0.003	0.003	0.004	0.004	NA
	S.D.	0.0012	0.0008	0.0008	0.0011	0.0009	
	S.E.	0.0004	0.0002	0.0003	0.0003	0.0003	
	N	10	10	10	10	9	

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 2 was compared to group 1.
b = Significantly different from control group 2 at 0.01 using Dunnett's test
NA = NOT APPLICABLE

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TABLE S16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

PAGE 8

GROUP:		UNTREATED	0 MG/KG/DAY	MALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS

THYROIDS/PARATHY	(G/100 G BRAIN)						
MEAN		0.808	0.677	0.725	0.878	0.888a	NA
S.D.		0.2794	0.1856	0.1589	0.2182	0.1780	
S.E.		0.0884	0.0587	0.0503	0.0690	0.0593	
N		10	10	10	10	9	

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 2 was compared to group 1.
a = Significantly different from control group 2 at 0.05 using Dunnett's test
NA = NOT APPLICABLE

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TABLE S16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

PAGE 9

GROUP:	UNTREATED	0 MG/KG/DAY	FEMALES			150 MG/KG/DAY	60 MG/KG CPS
			5 MG/KG/DAY	50 MG/KG/DAY			
FINAL BODY WT (G)							
MEAN	279.	270.	274.	258.	248.		NA
S.D.	21.7	19.2	19.3	26.3	28.9		
S.E.	6.8	6.1	6.1	8.3	9.1		
N	10	10	10	10	10		
ADRENAL GLANDS (G)							
MEAN	0.0665	0.0669	0.0691	0.0724	0.0621		NA
S.D.	0.00880	0.00750	0.01024	0.01146	0.00458		
S.E.	0.00278	0.00237	0.00324	0.00362	0.00145		
N	10	10	10	10	10		
ADRENAL GLANDS (G/100 G FINAL BODY WEIGHT)							
MEAN	0.024	0.025	0.025	0.028	0.025		NA
S.D.	0.0025	0.0025	0.0031	0.0053	0.0034		
S.E.	0.0008	0.0008	0.0010	0.0017	0.0011		
N	10	10	10	10	10		
ADRENAL GLANDS (G/100 G BRAIN)							
MEAN	3.417	3.484	3.602	3.776	3.315		NA
S.D.	0.3994	0.4633	0.5638	0.5803	0.2766		
S.E.	0.1263	0.1465	0.1783	0.1835	0.0875		
N	10	10	10	10	10		
BRAIN (G)							
MEAN	1.94	1.93	1.92	1.92	1.88		NA
S.D.	0.072	0.101	0.050	0.099	0.137		
S.E.	0.023	0.032	0.016	0.031	0.043		
N	10	10	10	10	10		

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 2 was compared to group 1.
None significantly different from control group
NA = NOT APPLICABLE

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TABLE S16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

PAGE 10

GROUP:		UNTREATED	0 MG/KG/DAY	FEMALES		50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
				5 MG/KG/DAY				

BRAIN (G/100 G FINAL BODY WEIGHT)								
	MEAN	0.700	0.716	0.703		0.747	0.761	NA
	S.D.	0.0514	0.0542	0.0486		0.0516	0.0556	
	S.E.	0.0163	0.0171	0.0154		0.0163	0.0176	
	N	10	10	10		10	10	
HEART (G)								
	MEAN	1.11	1.04	1.06		1.04	1.00	NA
	S.D.	0.122	0.060	0.083		0.069	0.142	
	S.E.	0.039	0.019	0.026		0.022	0.045	
	N	10	10	10		10	10	
HEART (G/100 G FINAL BODY WEIGHT)								
	MEAN	0.399	0.388	0.389		0.402	0.401	NA
	S.D.	0.0355	0.0388	0.0305		0.0243	0.0267	
	S.E.	0.0112	0.0123	0.0096		0.0077	0.0084	
	N	10	10	10		10	10	
HEART (G/100 G BRAIN)								
	MEAN	57.141	54.214	55.316		53.954	53.010	NA
	S.D.	5.3830	3.0633	3.6921		2.6725	5.7079	
	S.E.	1.7023	0.9687	1.1675		0.8451	1.8050	
	N	10	10	10		10	10	
KIDNEYS (G)								
	MEAN	1.95	2.02	1.90		1.84	1.84	NA
	S.D.	0.202	0.204	0.171		0.124	0.157	
	S.E.	0.064	0.064	0.054		0.039	0.050	
	N	10	10	10		10	10	

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 2 was compared to group 1.
None significantly different from control group
NA = NOT APPLICABLE

TABLE S16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

GROUP:		UNTREATED	0 MG/KG/DAY	FEMALES		50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
				5 MG/KG/DAY				

KIDNEYS (G/100 G FINAL BODY WEIGHT)								
MEAN		0.701	0.749	0.695		0.715	0.745	NA
S.D.		0.0682	0.0825	0.0578		0.0326	0.0548	
S.E.		0.0216	0.0261	0.0183		0.0103	0.0173	
N		10	10	10		10	10	
KIDNEYS (G/100 G BRAIN)								
MEAN		100.328	104.918	99.069		96.015a	97.936	NA
S.D.		9.6357	10.7205	9.1926		5.6283	3.2184	
S.E.		3.0471	3.3901	2.9070		1.7798	1.0178	
N		10	10	10		10	10	
LIVER (G)								
MEAN		7.61	7.42	7.45		8.62b	9.86b	NA
S.D.		0.766	0.571	0.465		0.526	1.234	
S.E.		0.242	0.181	0.147		0.166	0.390	
N		10	10	10		10	10	
LIVER (G/100 G FINAL BODY WEIGHT)								
MEAN		2.729	2.753	2.720		3.357b	3.977b	NA
S.D.		0.2013	0.2604	0.1558		0.2796	0.3027	
S.E.		0.0637	0.0823	0.0493		0.0884	0.0957	
N		10	10	10		10	10	
LIVER (G/100 G BRAIN)								
MEAN		391.183	385.864	387.591		449.871b	523.983b	NA
S.D.		32.5521	35.7084	22.5547		29.2963	39.6380	
S.E.		10.2939	11.2920	7.1324		9.2643	12.5346	
N		10	10	10		10	10	

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 2 was compared to group 1.
a = Significantly different from control group 2 at 0.05 using Dunnett's test
b = Significantly different from control group 2 at 0.01 using Dunnett's test
NA = NOT APPLICABLE

TABLE S16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

GROUP:		FEMALES					60 MG/KG CPS
		UNTREATED	0 MG/KG/DAY	5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	
<hr/>							
OVARIES/OVIDUCTS (G)							
MEAN	0.1347	0.1252	0.1238	0.1124	0.1278		NA
S.D.	0.01829	0.02058	0.00920	0.01771	0.02434		
S.E.	0.00579	0.00651	0.00291	0.00560	0.00770		
N	10	10	10	10	10		
OVARIES/OVIDUCTS (G/100 G FINAL BODY WEIGHT)							
MEAN	0.048	0.046	0.045	0.043	0.051		NA
S.D.	0.0051	0.0066	0.0041	0.0052	0.0062		
S.E.	0.0016	0.0021	0.0013	0.0016	0.0020		
N	10	10	10	10	10		
OVARIES/OVIDUCTS (G/100 G BRAIN)							
MEAN	6.934	6.533	6.450	5.856	6.780		NA
S.D.	0.8968	1.2603	0.5133	0.8801	0.9829		
S.E.	0.2836	0.3985	0.1623	0.2783	0.3108		
N	10	10	10	10	10		
PITUITARY (G)							
MEAN	0.0189	0.0206	0.0192	0.0185	0.0160a		NA
S.D.	0.00236	0.00332	0.00310	0.00474	0.00273		
S.E.	0.00075	0.00105	0.00098	0.00150	0.00086		
N	10	10	10	10	10		
PITUITARY (G/100 G FINAL BODY WEIGHT)							
MEAN	0.007	0.008	0.007	0.007	0.006		NA
S.D.	0.0005	0.0013	0.0008	0.0021	0.0011		
S.E.	0.0002	0.0004	0.0003	0.0007	0.0004		
N	10	10	10	10	10		
<hr/>							

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 2 was compared to group 1.
a = Significantly different from control group 2 at 0.05 using Dunnett's test
NA = NOT APPLICABLE

TABLE S16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

GROUP:		UNTREATED	0 MG/KG/DAY	FEMALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
PITUITARY (G/100 G BRAIN)							
	MEAN	0.969	1.063	0.999	0.966	0.850a	NA
	S.D.	0.1048	0.1426	0.1392	0.2448	0.1332	
	S.E.	0.0332	0.0451	0.0440	0.0774	0.0421	
	N	10	10	10	10	10	
SPLEEN (G)							
	MEAN	0.54	0.53	0.56	0.57	0.55	NA
	S.D.	0.073	0.046	0.078	0.082	0.111	
	S.E.	0.023	0.014	0.025	0.026	0.035	
	N	10	10	10	10	10	
SPLEEN (G/100 G FINAL BODY WEIGHT)							
	MEAN	0.192	0.196	0.205	0.224	0.221	NA
	S.D.	0.0226	0.0216	0.0253	0.0403	0.0415	
	S.E.	0.0072	0.0068	0.0080	0.0128	0.0131	
	N	10	10	10	10	10	
SPLEEN (G/100 G BRAIN)							
	MEAN	27.600	27.410	29.331	29.922	29.088	NA
	S.D.	4.1783	2.8778	4.1692	4.7789	5.1231	
	S.E.	1.3213	0.9100	1.3184	1.5112	1.6201	
	N	10	10	10	10	10	
THYMUS (G)							
	MEAN	0.2497	0.2423	0.2381	0.1627b	0.1131b	NA
	S.D.	0.03623	0.05649	0.05119	0.05240	0.02385	
	S.E.	0.01146	0.01786	0.01619	0.01657	0.00754	
	N	10	10	10	10	10	

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 2 was compared to group 1.
a = Significantly different from control group 2 at 0.05 using Dunnett's test
b = Significantly different from control group 2 at 0.01 using Dunnett's test
NA = NOT APPLICABLE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

PAGE 14

GROUP:	FEMALES					
	UNTREATED	0 MG/KG/DAY	5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS

THYMUS (G/100 G FINAL BODY WEIGHT)						
MEAN	0.090	0.090	0.087	0.064b	0.046b	NA
S.D.	0.0110	0.0196	0.0194	0.0212	0.0082	
S.E.	0.0035	0.0062	0.0061	0.0067	0.0026	
N	10	10	10	10	10	
THYMUS (G/100 G BRAIN)						
MEAN	12.866	12.553	12.379	8.472b	6.029b	NA
S.D.	1.9697	2.8519	2.5867	2.6198	1.2490	
S.E.	0.6229	0.9018	0.8180	0.8285	0.3950	
N	10	10	10	10	10	
THYROIDS/PARATHY (G)						
MEAN	0.0134	0.0150	0.0134	0.0138	0.0138	NA
S.D.	0.00283	0.00226	0.00294	0.00167	0.00305	
S.E.	0.00089	0.00072	0.00093	0.00053	0.00097	
N	10	10	10	10	10	
THYROIDS/PARATHY (G/100 G FINAL BODY WEIGHT)						
MEAN	0.005	0.006	0.005	0.005	0.006	NA
S.D.	0.0010	0.0007	0.0012	0.0007	0.0010	
S.E.	0.0003	0.0002	0.0004	0.0002	0.0003	
N	10	10	10	10	10	
THYROIDS/PARATHY (G/100 G BRAIN)						
MEAN	0.690	0.778	0.699	0.720	0.731	NA
S.D.	0.1344	0.1317	0.1550	0.0928	0.1457	
S.E.	0.0425	0.0416	0.0490	0.0293	0.0461	
N	10	10	10	10	10	

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 2 was compared to group 1.

b = Significantly different from control group 2 at 0.01 using Dunnett's test

NA = NOT APPLICABLE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

PAGE 15

GROUP:		UNTREATED	0 MG/KG/DAY	FEMALES 5 MG/KG/DAY	50 MG/KG/DAY	150 MG/KG/DAY	60 MG/KG CPS
UTERUS (G)							
	MEAN	0.79	0.59	0.73	0.73	0.59	NA
	S.D.	0.365	0.168	0.300	0.322	0.130	
	S.E.	0.116	0.053	0.095	0.102	0.041	
	N	10	10	10	10	10	
UTERUS (G/100 G FINAL BODY WEIGHT)							
	MEAN	0.284	0.219	0.266	0.290	0.243	NA
	S.D.	0.1379	0.0672	0.1027	0.1430	0.0658	
	S.E.	0.0436	0.0212	0.0325	0.0452	0.0208	
	N	10	10	10	10	10	
UTERUS (G/100 G BRAIN)							
	MEAN	40.639	30.595	38.010	38.265	31.717	NA
	S.D.	19.5959	9.3938	15.4379	17.5443	7.6897	
	S.E.	6.1968	2.9706	4.8819	5.5480	2.4317	
	N	10	10	10	10	10	

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 2 was compared to group 1.
None significantly different from control group
NA = NOT APPLICABLE

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S17 (UNSCHEDULED DEATH)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF CAUSE OF DEATH

PAGE 1

				MALES							
CAUSE OF DEATH				GROUP:	1	2	3	4	5	6	
NUMBER OF ANIMALS IN GROUP					10	10	10	10	10	6	
ANIMALS FOUND DEAD OR EUTHANIZED IN EXTREMIS					0	0	0	0	1	0	
ANIMALS WITH A SINGLE CAUSE OF DEATH					0	0	0	0	1	0	
ANIMALS WITH MULTIPLE CAUSES OF DEATH					0	0	0	0	0	0	
OTHER											
UNDETERMINED					0	0	0	0	1	0	
1-	UNTREATED	2-	0 MG/KG/DAY	3-	5 MG/KG/DAY	4-	50 MG/KG/DAY	5-	150 MG/KG/DAY	6-	60 MG/KG CPS

1- UNTREATED 2- 0 MG/KG/DAY 3- 5 MG/KG/DAY 4- 50 MG/KG/DAY 5- 150 MG/KG/DAY 6- 60 MG/KG CPS

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09/19/2011
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		MALE					
GROUP:		1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED		0	0	0	0	1	0
ADRENAL CORTEX							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
ADRENAL MEDULLA							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
AORTA							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
BRAIN							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
CECUM							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
COLON							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG	CPS	
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED							

TABLE S18 (UNSCHEDULED DEATH)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 2

----- MALE -----

		GROUP:					
		1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED		0	0	0	0	1	0
DUODENUM							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
EPIDIDYMIDES							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
ESOPHAGUS							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
FEMUR							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
HEART							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
ILEUM							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
1- UNTREATED 2- 0 MG/KG/DAY 3- 5 MG/KG/DAY 4- 50 MG/KG/DAY 5- 150 MG/KG/DAY 6- 60 MG/KG CPS NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED							

1- UNTREATED 2- 0 MG/KG/DAY 3- 5 MG/KG/DAY 4- 50 MG/KG/DAY 5- 150 MG/KG/DAY 6- 60 MG/KG CPS
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED

PAGE 3

			MALE									
GROUP:			1	2	3	4	5	6				
NUMBER OF ANIMALS IN DOSE GROUP			10	10	10	10	10	6				
NUMBER OF ANIMALS EXAMINED			0	0	0	0	1	0				
JEJUNUM												
TOTAL NUMBER EXAMINED			0	0	0	0	1	NA				
EXAMINED, UNREMARKABLE			0	0	0	0	1	NA				
JOINT												
TOTAL NUMBER EXAMINED			0	0	0	0	1	NA				
EXAMINED, UNREMARKABLE			0	0	0	0	1	NA				
KIDNEYS												
TOTAL NUMBER EXAMINED			0	0	0	0	1	NA				
EXAMINED, UNREMARKABLE			0	0	0	0	0	NA				
-NEPHROPATHY, CHRONIC PROGRESSIVE			0	0	0	0	1	NA				
MINIMAL (F M N)			NONE	NONE	NONE	NONE	- - 1	NA				
LIVER												
TOTAL NUMBER EXAMINED			0	0	0	0	1	NA				
EXAMINED, UNREMARKABLE			0	0	0	0	1	NA				
LN, AXILLARY												
TOTAL NUMBER EXAMINED			0	0	0	0	1	NA				
EXAMINED, UNREMARKABLE			0	0	0	0	1	NA				
1- UNTREATED 2- 0 MG/KG/DAY 3- 5 MG/KG/DAY 4- 50 MG/KG/DAY 5- 150 MG/KG/DAY 6- 60 MG/KG CPS NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED												

			MALE					
GROUP:			1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP			10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED			0	0	0	0	1	0
LN, MANDIBULAR								
TOTAL NUMBER EXAMINED			0	0	0	0	1	NA
EXAMINED, UNREMARKABLE			0	0	0	0	1	NA
LN, MESENTERIC								
TOTAL NUMBER EXAMINED			0	0	0	0	1	NA
EXAMINED, UNREMARKABLE			0	0	0	0	1	NA
LUNGS								
TOTAL NUMBER EXAMINED			0	0	0	0	1	NA
EXAMINED, UNREMARKABLE			0	0	0	0	0	NA
-INFLAMMATION, CHRONIC			0	0	0	0	1	NA
MILD (F M N)			NONE	NONE	NONE	NONE	- 1 -	NA
MARROW, FEMUR								
TOTAL NUMBER EXAMINED			0	0	0	0	1	NA
EXAMINED, UNREMARKABLE			0	0	0	0	1	NA
NERVE, SCIATIC								
TOTAL NUMBER EXAMINED			0	0	0	0	1	NA
EXAMINED, UNREMARKABLE			0	0	0	0	1	NA
1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG	CPS		
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED								

PAGE 5

		MALE					
GROUP:		1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED		0	0	0	0	1	0
PANCREAS							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
PARATHYROIDS							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
PITUITARY							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
PROSTATE							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
RECTUM							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
SAL. GLAND MAND							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG	CPS	
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED							

		MALE					
GROUP:		1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED		0	0	0	0	1	0
SEMINAL VESICLES							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
SKIN							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
SKIN, TREATED							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
SKIN, UNTREATED							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
SPLEEN							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA
STOMACH, GLAN							
TOTAL NUMBER EXAMINED		0	0	0	0	1	NA
EXAMINED, UNREMARKABLE		0	0	0	0	1	NA

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			MALE					
GROUP:			1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP			10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED			0	0	0	0	1	0
STOMACH, NON								
TOTAL NUMBER EXAMINED			0	0	0	0	1	NA
EXAMINED, UNREMARKABLE			0	0	0	0	1	NA
TESTES								
TOTAL NUMBER EXAMINED			0	0	0	0	1	NA
EXAMINED, UNREMARKABLE			0	0	0	0	1	NA
THYMUS								
TOTAL NUMBER EXAMINED			0	0	0	0	1	NA
EXAMINED, UNREMARKABLE			0	0	0	0	0	NA
-CONGESTION			0	0	0	0	1	NA
MILD (F M N)			NONE	NONE	NONE	NONE	- 1 -	NA
THYROID GLANDS								
TOTAL NUMBER EXAMINED			0	0	0	0	1	NA
EXAMINED, UNREMARKABLE			0	0	0	0	1	NA
TRACHEA								
TOTAL NUMBER EXAMINED			0	0	0	0	1	NA
EXAMINED, UNREMARKABLE			0	0	0	0	1	NA
1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG	CPS		
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED								

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S18 (UNSCHEDULED DEATH)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 8

----- MALE -----						
GROUP:	1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED	0	0	0	0	1	0
URINARY BLADDER						
TOTAL NUMBER EXAMINED	0	0	0	0	1	NA
EXAMINED, UNREMARKABLE	0	0	0	0	1	NA
1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS	
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED						

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09/19/2011
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				MALE					
GROUP:				1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP				10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED				10	10	10	10	9	0
ADRENAL CORTEX									
TOTAL NUMBER EXAMINED				10	10	10	10	9	NA
EXAMINED, UNREMARKABLE				10	10	10	10	9	NA
ADRENAL MEDULLA									
TOTAL NUMBER EXAMINED				10	10	10	10	9	NA
EXAMINED, UNREMARKABLE				10	10	10	9	9	NA
-DILATATION				0	0	0	1	0	NA
MILD (F M N)				NONE	NONE	NONE	- 1 -	NONE	NA
AORTA									
TOTAL NUMBER EXAMINED				10	10	10	10	9	NA
EXAMINED, UNREMARKABLE				10	10	10	10	9	NA
BRAIN									
TOTAL NUMBER EXAMINED				10	10	10	10	9	NA
EXAMINED, UNREMARKABLE				10	10	10	10	9	NA
CECUM									
TOTAL NUMBER EXAMINED				10	10	10	10	9	NA
EXAMINED, UNREMARKABLE				10	10	10	10	9	NA
1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG	CPS			
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED									

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PAGE 2

			MALE					
GROUP:			1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP			10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED			10	10	10	10	9	0
COLON								
TOTAL NUMBER EXAMINED			10	10	10	10	9	NA
EXAMINED, UNREMARKABLE			10	10	10	10	9	NA
DUODENUM								
TOTAL NUMBER EXAMINED			10	10	10	10	9	NA
EXAMINED, UNREMARKABLE			10	10	10	10	9	NA
EPIDIDYMIDES								
TOTAL NUMBER EXAMINED			10	10	10	10	9	NA
EXAMINED, UNREMARKABLE			9	10	10	10	9	NA
-INFLAMMATION, CHRONIC			1	0	0	0	0	NA
MILD (F M N)			- 1 -	NONE	NONE	NONE	NONE	NA
ESOPHAGUS								
TOTAL NUMBER EXAMINED			10	10	10	10	9	NA
EXAMINED, UNREMARKABLE			10	10	10	10	9	NA
FEMUR								
TOTAL NUMBER EXAMINED			10	10	10	10	9	NA
EXAMINED, UNREMARKABLE			10	10	10	10	9	NA
1- UNTREATED 2- 0 MG/KG/DAY 3- 5 MG/KG/DAY 4- 50 MG/KG/DAY 5- 150 MG/KG/DAY 6- 60 MG/KG CPS NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED								

				MALE											
GROUP:				1	2	3	4	5	6						
NUMBER OF ANIMALS IN DOSE GROUP				10	10	10	10	10	6						
NUMBER OF ANIMALS EXAMINED				10	10	10	10	9	0						
HEART															
TOTAL NUMBER EXAMINED				10	10	10	10	9	NA						
EXAMINED, UNREMARKABLE				6	10	5	7	6	NA						
-CARDIOMYOPATHY				3	0	5	3	3	NA						
MINIMAL (F M N)				NONE	NONE	- 1 -	- 1 -	- 1 -	NA						
MILD (F M N)				2 1 -	NONE	2 2 -	1 1 -	- 2 -	NA						
-INFLAMMATION, ACUTE				1	0	0	0	0	NA						
MILD (F M N)				1 - -	NONE	NONE	NONE	NONE	NA						
ILEUM															
TOTAL NUMBER EXAMINED				10	10	10	10	9	NA						
EXAMINED, UNREMARKABLE				10	10	10	10	9	NA						
JEJUNUM															
TOTAL NUMBER EXAMINED				10	10	10	10	9	NA						
EXAMINED, UNREMARKABLE				10	10	10	10	9	NA						
JOINT															
TOTAL NUMBER EXAMINED				10	10	10	10	9	NA						
EXAMINED, UNREMARKABLE				10	10	10	10	9	NA						
KIDNEYS															
TOTAL NUMBER EXAMINED				10	10	10	10	9	NA						
EXAMINED, UNREMARKABLE				10	6	4	0	0	NA						
1- UNTREATED 2- 0 MG/KG/DAY 3- 5 MG/KG/DAY 4- 50 MG/KG/DAY 5- 150 MG/KG/DAY 6- 60 MG/KG CPS NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED															

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TABLE S19 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 4

		----- MALE -----					
GROUP:		1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED		10	10	10	10	9	0
KIDNEYS - CONTINUED							
-INFLAMMATION, SUBACUTE		0	1	4	3	0	NA
MINIMAL	(F M N)	NONE	NONE	1 -	1 1 -	NONE	NA
MILD	(F M N)	NONE	- 1 -	- 3 -	- 1 -	NONE	NA
-NEPHROPATHY, CHRONIC PROGRESSIVE		0	2	2	7	9	NA
MINIMAL	(F M N)	NONE	- - 1	- - 1	- - 6	- 2 2	NA
MILD	(F M N)	NONE	- - 1	- - 1	- - 1	- 4 1	NA
-REGENERATION, RENAL TUBULAR		0	1	0	0	0	NA
MINIMAL	(F M N)	NONE	- 1 -	NONE	NONE	NONE	NA
LIVER							
TOTAL NUMBER EXAMINED		10	10	10	10	9	NA
EXAMINED, UNREMARKABLE		3	4	2	0	1	NA
-ALTERATION, CYTOPLASMIC		0	0	0	0	1	NA
MILD	(F M N)	NONE	NONE	NONE	NONE	1 - -	NA
-INFLAMMATION, SUBACUTE		7	6	8	10	8	NA
MINIMAL	(F M N)	- 6 -	- 4 -	1 2 -	- 6 -	- 5 -	NA
MILD	(F M N)	- 1 -	- 2 -	- 5 -	- 4 -	- 3 -	NA
-NECROSIS, HEPATOCELLULAR, CENTRIOLOBULAR		0	0	0	0	2	NA
MILD	(F M N)	NONE	NONE	NONE	NONE	- 1 -	NA
MODERATE	(F M N)	NONE	NONE	NONE	NONE	- 1 -	NA
-VACUOLATION, HEPATOCELLULAR		0	0	0	1	2	NA
MILD	(F M N)	NONE	NONE	NONE	NONE	- 2 -	NA
MODERATE	(F M N)	NONE	NONE	NONE	1 - -	NONE	NA
1- UNTREATED 2- 0 MG/KG/DAY 3- 5 MG/KG/DAY 4- 50 MG/KG/DAY 5- 150 MG/KG/DAY 6- 60 MG/KG CPS							
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED							

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TABLE S19 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 5

----- MALE -----						
GROUP:	1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED	10	10	10	10	9	0
LN, AXILLARY						
TOTAL NUMBER EXAMINED	10	10	10	10	9	NA
EXAMINED, UNREMARKABLE	10	10	10	10	9	NA
LN, MANDIBULAR						
TOTAL NUMBER EXAMINED	10	10	10	10	9	NA
EXAMINED, UNREMARKABLE	9	10	9	10	9	NA
-HYPERPLASIA, LYMPHOID	0	0	1	0	0	NA
MODERATE (F M N)	NONE	NONE	- - 1	NONE	NONE	NA
-INFLAMMATION, ACUTE	1	0	0	0	0	NA
MILD (F M N)	- 1 -	NONE	NONE	NONE	NONE	NA
LN, MESENTERIC						
TOTAL NUMBER EXAMINED	10	10	10	10	9	NA
EXAMINED, UNREMARKABLE	10	10	10	10	9	NA
LUNGS						
TOTAL NUMBER EXAMINED	10	10	10	10	9	NA
EXAMINED, UNREMARKABLE	9	10	6	4	4	NA
-INFLAMMATION, SUBACUTE	1	0	4	6	5	NA
MINIMAL (F M N)	- 1 -	NONE	- 2 -	- 6 -	- 3 -	NA
MILD (F M N)	NONE	NONE	- 2 -	NONE	- 2 -	NA
1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS	

NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED

			MALE									
GROUP:			1	2	3	4	5	6				
NUMBER OF ANIMALS IN DOSE GROUP			10	10	10	10	10	6				
NUMBER OF ANIMALS EXAMINED			10	10	10	10	9	0				
MARROW, FEMUR												
TOTAL NUMBER EXAMINED			10	10	10	10	9	NA				
EXAMINED, UNREMARKABLE			10	10	10	10	9	NA				
NERVE, SCIATIC												
TOTAL NUMBER EXAMINED			10	10	10	10	9	NA				
EXAMINED, UNREMARKABLE			10	10	10	10	9	NA				
PANCREAS												
TOTAL NUMBER EXAMINED			10	10	10	10	9	NA				
EXAMINED, UNREMARKABLE			9	10	10	9	9	NA				
-INFLAMMATION, SUBACUTE			1	0	0	1	0	NA				
MILD (F M N)			- 1 -	NONE	NONE	1 - -	NONE	NA				
PARATHYROIDS												
TOTAL NUMBER EXAMINED			8	10	10	10	8	NA				
EXAMINED, UNREMARKABLE			8	10	10	10	8	NA				
NOT PRESENT FOR EXAMINATION			2	0	0	0	1	NA				
PITUITARY												
TOTAL NUMBER EXAMINED			10	10	10	10	9	NA				
EXAMINED, UNREMARKABLE			9	10	9	10	8	NA				
-CYST, PARS INTERMEDIA			1	0	0	0	0	NA				
PRESENT (F M N)			1 - -	NONE	NONE	NONE	NONE	NA				
1-	UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG	CPS					
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED												

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TABLE S19 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF MICROSCOPIC FINDINGS

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----- MALE -----							
GROUP:		1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED		10	10	10	10	9	0
PITUITARY - CONTINUED							
-DILATATION		0	0	1	0	0	NA
MILD	(F M N)	NONE	NONE	1 -	NONE	NONE	NA
-VACUOLATION		0	0	0	0	1	NA
MILD	(F M N)	NONE	NONE	NONE	NONE	- 1 -	NA
PROSTATE							
TOTAL NUMBER EXAMINED		10	10	10	10	9	NA
EXAMINED, UNREMARKABLE		9	10	9	10	9	NA
-INFLAMMATION, ACUTE		0	0	1	0	0	NA
MILD	(F M N)	NONE	NONE	1 -	NONE	NONE	NA
-INFLAMMATION, SUBACUTE		1	0	0	0	0	NA
MINIMAL	(F M N)	- 1 -	NONE	NONE	NONE	NONE	NA
RECTUM							
TOTAL NUMBER EXAMINED		10	10	10	10	9	NA
EXAMINED, UNREMARKABLE		10	10	10	10	9	NA
SAL. GLAND MAND							
TOTAL NUMBER EXAMINED		10	10	10	10	9	NA
EXAMINED, UNREMARKABLE		10	10	9	10	9	NA
-INFLAMMATION, SUBACUTE		0	0	1	0	0	NA
MILD	(F M N)	NONE	NONE	- 1 -	NONE	NONE	NA
1- UNTREATED							
2- 0 MG/KG/DAY							
3- 5 MG/KG/DAY							
4- 50 MG/KG/DAY							
5- 150 MG/KG/DAY							
6- 60 MG/KG CPS							

NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED

1- UNTREATED 2- 0 MG/KG/DAY 3- 5 MG/KG/DAY 4- 50 MG/KG/DAY 5- 150 MG/KG/DAY 6- 60 MG/KG CPS
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED

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TABLE S19 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF MICROSCOPIC FINDINGS

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		----- MALE -----					
GROUP:		1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED		10	10	10	10	9	0
SPLEEN							
TOTAL NUMBER EXAMINED		10	10	10	10	9	NA
EXAMINED, UNREMARKABLE		10	10	10	10	9	NA
STOMACH, GLAN							
TOTAL NUMBER EXAMINED		10	10	10	10	9	NA
EXAMINED, UNREMARKABLE		9	10	8	10	9	NA
-DILATATION, GLANDULAR		1	0	2	0	0	NA
MINIMAL (F M N)		NONE	NONE	1 1 -	NONE	NONE	NA
MILD (F M N)		- 1 -	NONE	NONE	NONE	NONE	NA
STOMACH, NON							
TOTAL NUMBER EXAMINED		10	10	10	10	9	NA
EXAMINED, UNREMARKABLE		10	10	10	10	9	NA
TESTES							
TOTAL NUMBER EXAMINED		10	10	10	10	9	NA
EXAMINED, UNREMARKABLE		10	9	10	10	9	NA
-INFLAMMATION, SUBACUTE		0	1	0	0	0	NA
MINIMAL (F M N)		NONE	- 1 -	NONE	NONE	NONE	NA
THYMUS							
TOTAL NUMBER EXAMINED		10	10	10	10	9	NA
EXAMINED, UNREMARKABLE		8	10	10	10	9	NA
-CONGESTION		2	0	0	0	0	NA
MILD (F M N)		- 2 -	NONE	NONE	NONE	NONE	NA
1- UNTREATED		2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS	
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED							

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TABLE S19 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF MICROSCOPIC FINDINGS

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----- MALE -----						
GROUP:	1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED	10	10	10	10	9	0
THYROID GLANDS						
TOTAL NUMBER EXAMINED	10	10	10	10	9	NA
EXAMINED, UNREMARKABLE	6	10	10	10	8	NA
-INVOLUTION, COLLOID	4	0	0	0	1	NA
MILD (F M N)	- 2 -	NONE	NONE	NONE	NONE	NA
MODERATE (F M N)	- 2 -	NONE	NONE	NONE	- 1 -	NA
TRACHEA						
TOTAL NUMBER EXAMINED	10	10	10	10	9	NA
EXAMINED, UNREMARKABLE	10	10	10	10	9	NA
URETERS						
TOTAL NUMBER EXAMINED	NA	NA	NA	NA	1	NA
EXAMINED, UNREMARKABLE	NA	NA	NA	NA	1	NA
URINARY BLADDER						
TOTAL NUMBER EXAMINED	10	10	10	10	9	NA
EXAMINED, UNREMARKABLE	10	10	9	10	9	NA
-INFLAMMATION, SUBACUTE	0	0	1	0	0	NA
MINIMAL (F M N)	NONE	NONE	1 - -	NONE	NONE	NA
1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS	

NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED

----- FEMALE -----

		GROUP:	1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP			10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED			10	10	10	10	10	0
ADRENAL CORTEX								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
ADRENAL MEDULLA								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
AORTA								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	9	10	10	NA
-HYPERPLASIA, ENDOTHELIAL			0	0	1	0	0	NA
MILD	(F M N)		NONE	NONE	1 - -	NONE	NONE	NA
BRAIN								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
CECUM								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG	CPS		
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED								

----- FEMALE -----

GROUP:			1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP			10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED			10	10	10	10	10	0
CERVIX								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
COLON								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
DUODENUM								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
ESOPHAGUS								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
FEMUR								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
HEART								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			9	9	6	9	8	NA
-CARDIOMYOPATHY			1	1	1	1	1	NA
MINIMAL (F M N)			NONE	1 - -	NONE	1 - -	NONE	NA
MILD (F M N)			1 - -	NONE	1 - -	NONE	1 - -	NA

1-	UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG	CPS	
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED								

----- FEMALE -----

GROUP:			1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP			10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED			10	10	10	10	10	0
HEART - CONTINUED								
-CHONDROPLASIA			0	0	0	0	1	NA
MILD	(F M N)	NONE	NONE	NONE	NONE	- 1 -		NA
-METAPLASIA, CHONDRO-OSSEOUS			0	0	1	0	0	NA
MILD	(F M N)	NONE	NONE	1 - -	NONE	NONE		NA
-MYXOMATOUS CHANGE			0	0	3	0	0	NA
MILD	(F M N)	NONE	NONE	- 3 -	NONE	NONE		NA
ILEUM								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
JEJUNUM								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
JOINT								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
KIDNEYS								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			3	4	2	2	1	NA
-HYPERPLASIA, RENAL TUBULE, SIMPLE			0	0	0	2	0	NA
MILD	(F M N)	NONE	NONE	NONE	- 2 -	NONE		NA
1- UNTREATED 2- 0 MG/KG/DAY 3- 5 MG/KG/DAY 4- 50 MG/KG/DAY 5- 150 MG/KG/DAY 6- 60 MG/KG CPS NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED								

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TABLE S19 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF MICROSCOPIC FINDINGS

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----- FEMALE -----

GROUP:			1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP			10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED			10	10	10	10	10	0
KIDNEYS - CONTINUED								
-INFLAMMATION, CHRONIC			0	0	0	1	0	NA
MILD	(F M N)	NONE	NONE	NONE	- 1 -	NONE		NA
-INFLAMMATION, SUBACUTE			2	5	2	1	4	NA
MINIMAL	(F M N)	- 2 -	- 2 -	- 1 -	- 1 -	- 3 -		NA
MILD	(F M N)	NONE	2 1 -	- 1 -	NONE	- 1 -		NA
-MINERALIZATION			5	4	6	6	7	NA
MINIMAL	(F M N)	2 - -	- 4 -	- 5 -	- 3 -	1 2 -		NA
MILD	(F M N)	- 3 -	NONE	- 1 -	- 3 -	- 4 -		NA
-NEPHROPATHY, CHRONIC PROGRESSIVE			0	0	4	2	1	NA
MINIMAL	(F M N)	NONE	NONE	- - 2	- - 1	NONE		NA
MILD	(F M N)	NONE	NONE	- - 2	- 1 -	- - 1		NA
LIVER								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			1	0	0	0	1	NA
-INFILTRATE, MONONUCLEAR			0	1	4	7	0	NA
MINIMAL	(F M N)	NONE	- 1 -	- 1 -	- 4 -	NONE		NA
MILD	(F M N)	NONE	NONE	- 3 -	- 3 -	NONE		NA
-INFLAMMATION, SUBACUTE			9	9	6	3	9	NA
MINIMAL	(F M N)	- 8 -	- 4 -	- 2 -	- 1 -	- 5 -		NA
MILD	(F M N)	- 1 -	- 5 -	- 4 -	1 1 -	- 4 -		NA
-PIGMENT, BROWN			0	0	1	0	0	NA
MINIMAL	(F M N)	NONE	NONE	1 - -	NONE	NONE		NA

1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS			
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED								

TABLE S19 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF MICROSCOPIC FINDINGS

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----- FEMALE -----

GROUP:			1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP			10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED			10	10	10	10	10	0
LIVER - CONTINUED								
LN, AXILLARY								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
LN, MANDIBULAR								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
LN, MESENTERIC								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
LUNGS								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	8	8	8	6	NA
-INFLAMMATION, ACUTE			0	0	1	0	0	NA
MILD (F M N)			NONE	NONE	- 1 -	NONE	NONE	NA
-INFLAMMATION, SUBACUTE			0	2	1	2	4	NA
MINIMAL (F M N)			NONE	- 1 -	- 1 -	NONE	- 3 -	NA
MILD (F M N)			NONE	- 1 -	NONE	1 1 -	- 1 -	NA
1-	UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG	CPS	
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED								

1- UNTREATED 2- 0 MG/KG/DAY 3- 5 MG/KG/DAY 4- 50 MG/KG/DAY 5- 150 MG/KG/DAY 6- 60 MG/KG CPS
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED

Page 172 of 1413

----- FEMALE -----

GROUP:			1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP			10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED			10	10	10	10	10	0
MARROW, FEMUR								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
NERVE, SCIATIC								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
OVARIES								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
OVIDUCTS								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	10	10	10	NA
PANCREAS								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			9	10	10	10	9	NA
-INFLAMMATION, SUBACUTE			1	0	0	0	1	NA
MINIMAL	(F M N)	NONE	NONE	NONE	NONE	NONE	- 1 -	NA
MILD	(F M N)	1 - -	NONE	NONE	NONE	NONE	NONE	NA
1-	UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG	CPS	
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED								

----- FEMALE -----

		GROUP:		1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP				10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED				10	10	10	10	10	0
PARATHYROIDS									
TOTAL NUMBER EXAMINED				10	10	9	7	10	NA
EXAMINED, UNREMARKABLE				10	10	9	7	10	NA
NOT PRESENT FOR EXAMINATION				0	0	1	3	0	NA
PITUITARY									
TOTAL NUMBER EXAMINED				10	10	10	10	10	NA
EXAMINED, UNREMARKABLE				10	10	9	10	10	NA
-VACUOLATION				0	0	1	0	0	NA
MODERATE (F M N)				NONE	NONE	- 1 -	NONE	NONE	NA
RECTUM									
TOTAL NUMBER EXAMINED				10	10	10	10	10	NA
EXAMINED, UNREMARKABLE				10	9	10	10	10	NA
-INFILTRATE, MONONUCLEAR, SUBMUCOSAL				0	1	0	0	0	NA
MILD (F M N)				NONE	- 1 -	NONE	NONE	NONE	NA
SAL. GLAND MAND									
TOTAL NUMBER EXAMINED				10	10	10	10	10	NA
EXAMINED, UNREMARKABLE				10	10	10	10	10	NA
SKIN									
TOTAL NUMBER EXAMINED				10	10	10	10	10	NA
EXAMINED, UNREMARKABLE				10	10	10	10	9	NA
1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG	CPS			
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED									

----- FEMALE -----

GROUP:			1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP			10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED			10	10	10	10	10	0
SKIN - CONTINUED								
-CYST, EPIDERMAL INCLUSION PRESENT	(F M N)	0	0	0	0	1		NA
		NONE	NONE	NONE	NONE	- 1 -		NA
SKIN, TREATED								
TOTAL NUMBER EXAMINED		10	10	10	10	10		NA
EXAMINED, UNREMARKABLE		10	10	10	10	9		NA
-HYPERKERATOSIS		0	0	0	0	1		NA
MINIMAL	(F M N)	NONE	NONE	NONE	NONE	- 1 -		NA
SKIN, UNTREATED								
TOTAL NUMBER EXAMINED		10	10	10	10	10		NA
EXAMINED, UNREMARKABLE		10	10	10	10	10		NA
SPLEEN								
TOTAL NUMBER EXAMINED		10	10	10	10	10		NA
EXAMINED, UNREMARKABLE		10	10	10	10	10		NA
STOMACH, GLAN								
TOTAL NUMBER EXAMINED		10	10	10	10	10		NA
EXAMINED, UNREMARKABLE		10	10	5	9	10		NA
-DILATATION, GLANDULAR		0	0	1	0	0		NA
MINIMAL	(F M N)	NONE	NONE	- 1 -	NONE	NONE		NA
-EDEMA, SUBMUCOSAL		0	0	3	1	0		NA
MILD	(F M N)	NONE	NONE	3 - -	- 1 -	NONE		NA
1- UNTREATED 2- 0 MG/KG/DAY 3- 5 MG/KG/DAY 4- 50 MG/KG/DAY 5- 150 MG/KG/DAY 6- 60 MG/KG CPS								
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED								

----- FEMALE -----

GROUP:			1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP			10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED			10	10	10	10	10	0
STOMACH, GLAN - CONTINUED								
-INFLAMMATION, CHRONIC			0	0	1	0	0	NA
MILD	(F M N)	NONE	NONE	- 1 -	NONE	NONE	NONE	NA
STOMACH, NON								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	8	10	10	NA
-HYPERKERATOSIS			0	0	1	0	0	NA
MILD	(F M N)	NONE	NONE	1 - -	NONE	NONE	NONE	NA
-INFLAMMATION, SUBACUTE			0	0	1	0	0	NA
MILD	(F M N)	NONE	NONE	- 1 -	NONE	NONE	NONE	NA
THYMUS								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	8	10	8	8	NA
-CONGESTION			0	2	0	2	2	NA
MILD	(F M N)	NONE	- 2 -	NONE	- 2 -	- 2 -	- 2 -	NA
THYROID GLANDS								
TOTAL NUMBER EXAMINED			10	10	10	10	10	NA
EXAMINED, UNREMARKABLE			10	10	9	10	9	NA
-INFLAMMATION, SUBACUTE			0	0	0	0	1	NA
MINIMAL	(F M N)	NONE	NONE	NONE	NONE	- 1 -	-	NA
-INVOLUTION, COLLOID			0	0	1	0	0	NA
MILD	(F M N)	NONE	NONE	- 1 -	NONE	NONE	NONE	NA
1- UNTREATED 2- 0 MG/KG/DAY 3- 5 MG/KG/DAY 4- 50 MG/KG/DAY 5- 150 MG/KG/DAY 6- 60 MG/KG CPS								
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED								

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE S19 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 20

----- FEMALE -----						
GROUP:	1	2	3	4	5	6
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10	6
NUMBER OF ANIMALS EXAMINED	10	10	10	10	10	0
TRACHEA						
TOTAL NUMBER EXAMINED	10	10	10	10	10	NA
EXAMINED, UNREMARKABLE	10	10	10	10	10	NA
URINARY BLADDER						
TOTAL NUMBER EXAMINED	10	10	10	10	10	NA
EXAMINED, UNREMARKABLE	10	10	10	10	10	NA
UTERUS						
TOTAL NUMBER EXAMINED	10	10	10	10	10	NA
EXAMINED, UNREMARKABLE	10	10	9	10	10	NA
-DILATATION, LUMEN	0	0	1	0	0	NA
MODERATE (F M N)	NONE	NONE	- - 1	NONE	NONE	NA
VAGINA						
TOTAL NUMBER EXAMINED	10	10	10	10	10	NA
EXAMINED, UNREMARKABLE	0	0	0	0	0	NA
-ESTROUS CYCLE: DIELSTRUS	6	6	5	3	3	NA
PRESENT (F M N)	- - 6	- - 6	- - 5	- - 3	- - 3	NA
-ESTROUS CYCLE: ESTRUS	2	3	1	4	4	NA
PRESENT (F M N)	- - 2	- - 3	- - 1	- - 4	- - 4	NA
-ESTROUS CYCLE: PROESTRUS	2	1	4	3	3	NA
PRESENT (F M N)	- - 2	- - 1	- - 4	- - 3	- - 3	NA
1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS	

NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED

PHSI2v4.35
09/19/2011

APPENDIX A

Study Protocol and Deviations

DEVIATIONS FROM THE PROTOCOL

This study was conducted in accordance with the protocol and protocol amendments, except for the following.

- **Protocol Section 9.1** states that animals judged to be in good health will be placed immediately in acclimation for at least 14 days. The date of animal receipt was 5 April 2011 and study day 0 was 18 April 2011; therefore, the acclimation period was only 13 days.

Reason for Deviation: Scheduling error.

- **Protocol Section 9.3.5** states that following each wash procedure, all animals will be transferred to clean cages. However, on 27 May 2011 (study day 39), this procedure was not documented.

Reason for Deviation: Technician error.

- **Protocol Section 9.3.7** states that residual test material will be gently removed using warm water and mild soap (1% Ivory Liquid Soap in tap water). However, on 18 April 2011 (study day 0), a 10% soap solution was prepared and used. This solution was discarded and a new 1% soap solution was prepared on 29 April 2011 (study day 11).

Reason for Deviation: Technician error.

- **Protocol Section 9.4.3** states that each sample will be collected using a positive displacement pipette. However, a class A volumetric pipette was used.

Reason for Deviation: The class A pipette was used to collect a more accurate sample volume under the conditions of this study.

- **Protocol Section 10.3.1** states that a clinical examination will be performed on all animals in Groups 1-5 at approximately 1-2 hours post-dose. On 10 May 2011 (study day 22), findings of dried or wet red material around nose and dried red material around right or left eye were recorded during the 1-2 hour post-dose observation. These findings are typical for animals wearing collars and need not to be recorded. As a result, these findings were deleted from the 1-2 hour post-dose observation computer protocol and entered into the unscheduled observations computer protocol. Animals with these findings will not have a 1-2 hour post-dose observation for this day.

Reason for Deviation: Technician error.

- **Protocol Section 10.7** states that serum chemistry parameters will be evaluated on all surviving animals in Groups 1-5 on the day of the scheduled necropsy. On 16 July 2011 (study day 89), serum chemistry parameters were inadvertently not evaluated for a sham control group female (no. 99541), a vehicle control group male and female (nos. 99471 and 99561, respectively), a 5 mg/kg/day group male and female (nos. 99479 and 99532, respectively), and a 50 mg/kg/day group male and female (nos. 99469 and 99538, respectively). However, on 19 July 2011 serum chemistry parameters for these animals were evaluated and recorded.

Reason for Deviation: Technician error.

These deviations did not negatively impact the quality or integrity of the data nor the outcome of the study.



PROTOCOL AMENDMENT 5

Study Number: WIL-402022

Sponsor: American Petroleum Institute

Title of Study:

A 90-Day Repeat-Dose Dermal Toxicity Study in Conjunction with a Micronucleus Assay Utilizing Extract, Light Paraffinic Distillate Solvent in Sprague Dawley Rats

Protocol Modifications:

1) 5 Study Schedule:

Experimental Completion Date:	7 November 2011
(Last bone marrow cytology examination)	

Reasons for Protocol Modification:

- 1) Addition of experimental completion date.

Approval:

Sponsor's approval was obtained via e-mail on 2 April 2012.
Date

WIL Research

[Redacted Signature]
Study Director

02 April 2012
Date

[Redacted Signature]
Senior Director, General Toxicology

2 Apr 2012
Date

American Petroleum Institute

[Redacted Signature]
Sponsor Representative

03 April 2012
Date



Study Number: WIL-402022

PROTOCOL AMENDMENT 4

Sponsor: American Petroleum Institute

Study Title:

A 90-Day Repeat-Dose Dermal Toxicity Study in Conjunction with a Micronucleus Assay Utilizing Extract, Light Paraffinic Distillate Solvent in Sprague Dawley Rats

Protocol Modifications:

- 1) The following section of the protocol will be amended to read as follows:

11 WIL Statistical Methods for In-Life, Clinical Pathology, and/or Organ Weight Parameters:

All analyses will be two-tailed for significance levels of 5% and/or 1%. All means will be presented with standard deviations. All statistical tests will be performed using appropriate computing devices or programs.

Body weight, body weight change, food consumption, clinical pathology, and organ weight (absolute and relative) data, for the vehicle control group (Group 2) and all test substance-treated groups (Groups 3-5) were subjected to a one-way analysis of variance (ANOVA) (Snedecor and Cochran, 1980) to determine intergroup differences. If the ANOVA revealed statistically significant ($p < 0.05$) intergroup variance, Dunnett's test (Dunnett, 1964) was used to compare the test substance-treated groups (Groups 3-5) to the vehicle control group (Group 2). The vehicle control group (Group 2) data were evaluated using the Student's t-Test (Sokal and Rohlf, 1981) and compared to the sham control group (Group 1) at a 95% confidence level ($p < 0.05$).

Body weight, body weight change and food consumption data for the positive control group (Group 6) were evaluated using the Student's t-Test (Sokal and Rohlf, 1981) and compared to the vehicle control group (Group 2) at a 95% confidence level ($p < 0.05$).

Gamma glutamyltransferase (GGT) values under range were assigned a value of 0.1 (half the lower limit of quantitation) for statistical analysis and reporting. GGT data were subjected to the Kruskal-Wallis nonparametric ANOVA test (Kruskal and Wallis, 1952) to determine intergroup differences. If the ANOVA revealed significance ($p < 0.05$), Dunn's test (Dunn, 1964) was used to compare the test substance-treated groups (Groups 3-5) to the vehicle control group (Group 2). In addition, the sham control group (Group 1) and vehicle control group (Group 2) were compared using a separate Kruskal-Wallis nonparametric ANOVA test. In addition, the positive control (Group 6) and vehicle control groups as well as the sham control and vehicle control groups will be compared using a separate Kruskal-Wallis nonparametric ANOVA test (Kruskal and Wallis, 1952).

- 2) The following section of the protocol is amended to add the following:

18 References:

Sokal, R.R. and Rohlf, F.J. In: Biometry. Freeman, San Francisco, 1981, pp. 222-229.

Reasons for Protocol Modification:

- 1) Correction of statistical analysis for comparison of vehicle control group to all test-substance treated groups using Dunnett's only if ANOVA is statistically significant. Addition of statistics for the evaluation of the vehicle control group (Group 2) data to the sham control group (Group 1) using the Student's t-Test at a 95% confidence level ($p < 0.05$).
- 2) Addition of statistic reference as appropriate.

Approval:

Sponsor's approval was obtained via e-mail on 04 November 2011.
Date

WIL Research Laboratories, LLC

Study Director

04 November 2011
Date

Senior Director, General Toxicology

04 Nov 2011
Date

American Petroleum Institute

Sponsor Representative

10 Nov 2011
Date



Study Number: WIL-402022

PROTOCOL AMENDMENT 2/3^①

Sponsor: American Petroleum Institute

Title of Study:

A 90-Day Repeat-Dose Dermal Toxicity Study in Conjunction with a Micronucleus Assay Utilizing Extract, Light Paraffinic Distillate Solvent in Sprague-Dawley Rats

Protocol Modifications:

The following section of the protocol is added:

1) 4.7 Study Clinical Pathologist:

[REDACTED]
Veterinary Clinical Pathology Consultant
25 Grandview Avenue
Kalamazoo, MI 49001
Tel: (269) 383-0025
Fax: (269) 342-2207
E-mail: [REDACTED]

The following section of the protocol will be revised as follows:

2) 10.8.5 Bone Marrow Cytology Evaluations for Groups 1-5:

The bone marrow smears will be evaluated by the Clinical Pathologist listed in Section 4.7. A full differential of the bone marrow smears will be performed on approximately 400 - 500 nucleated cells. Cell morphology will be examined and

① Typographical error ASB 10/13/11

alterations will be noted as appropriate. ME ratios, means and standard deviations will be calculated. No statistical analyses, other than means and standard deviations will be performed.

A written signed report will be prepared by the clinical pathologist and will be included as an appendix to the Final Report. Quality assurance auditing of the report of bone marrow cytology and clinical pathology will be the responsibility of WIL Research Laboratories, LLC.

Reasons for Protocol Modification:

- 1) Study clinical pathologist added.
- 2) Bone marrow smears will be evaluated microscopically for all animals in Groups 1-5. Section added for bone marrow evaluation instruction.

Approval:

Sponsor's approval was obtained via e-mail on 12 October 2011
Date

WIL Research Laboratories, LLC

[Redacted Signature]

Study Director

13 October 2011
Date

[Redacted Signature]

Senior Director, General Toxicology

13 Oct 2011
Date

American Petroleum Institute

[Redacted Signature]

Sponsor Representative

13 October 2011
Date



Study Number: WIL-402022

PROTOCOL AMENDMENT 2

Sponsor: American Petroleum Institute

Title of Study:

A 90-Day Repeat-Dose Dermal Toxicity Study in Conjunction with a Micronucleus Assay Utilizing Extract, Light Paraffinic Distillate Solvent in Sprague-Dawley Rats

Protocol Modifications:

The first paragraph of the following section of the protocol will be revised as follows:

1) 10.8.4 Microscopic Examination for Groups 1-5:

Microscopic preparation of hematoxylin-eosin stained paraffin sections will be performed on all tissues listed in section 10.8.1 from all animals euthanized *in extremis*, found dead, or surviving to the scheduled necropsy. Microscopic examination of hematoxylin-eosin stained paraffin sections will be conducted on all tissues listed in section 10.8.1 from all animals euthanized *in extremis*, found dead, or surviving to the scheduled necropsy, except for the mammary gland (females only), the spinal cord, muscle, eyes with optic nerve, and exorbital lacrimal glands, unless these tissues are noted as a potential target organ.

Reasons for Protocol Modification:

- 1) Clarification that all tissues will go to slide and selected tissues will be examined unless they are noted as a potential target organ. In addition, the femur was removed from the list of excluded tissues to examine.

Approval:

Sponsor's approval was obtained via e-mail on 20 July 2011
Date

WIL Research Laboratories, LLC

[Redacted Signature]

Study Director

20 July 2011
Date

[Redacted Signature]

Senior Director, General Toxicology

20 July 2011
Date

American Petroleum Institute

[Redacted Signature]

Sponsor Representative

21-July-2011
Date

Departmental/Study Director Notification

Study Director: [REDACTED]
Study No.: WIL- 402022

Please note the following:

This Study Director Notification is written to amend the following:

Protocol Modifications:

The following section of the protocol will be revised as follows:

1) **10.8.4 Microscopic Examination for Groups 1-5:**

Microscopic preparation of hematoxylin-eosin stained paraffin sections will be performed on all tissues listed in section 10.8.1 from all animals euthanized *in extremis*, found dead, or surviving to the scheduled necropsy. Microscopic examination of hematoxylin-eosin stained paraffin sections will be conducted on all tissues listed in section 10.8.1 from all animals euthanized *in extremis*, found dead, or surviving to the scheduled necropsy, except for the mammary gland (females only), and the spinal cord, muscle, eyes with optic nerve, and exorbital lacrimal glands, unless these tissues are noted as a potential target organ.

Histologic preparation will be conducted at either the WIL laboratory site in Ashland, Ohio, or at the WIL Research Laboratories subsidiary, Biotechnics, in Hillsborough, North, Carolina, and documented in the raw data. If the tissues are shipped to North Carolina, an appropriate protocol amendment will be issued prior to such shipment.

This Study Director Notification will be followed by a protocol amendment.

If there are any questions or comments, please do not hesitate to contact me.

Reason for change: Clarification of the slide preparation and examination to be conducted.

Sponsor approval on: NA

☒ Protocol amendment forthcoming

☐ Clarification of procedure, no protocol amendment required

Study Director: 

Date: 7/20/11

A-186-9

Original: QAU
Copies as per protocol distribution



Study Number: WIL-402022

PROTOCOL AMENDMENT 1

Sponsor: American Petroleum Institute

Title of Study:

A 90-Day Repeat-Dose Dermal Toxicity Study in Conjunction with a Micronucleus Assay Utilizing Extract, Light Paraffinic Distillate Solvent in Sprague-Dawley Rats

Protocol Modifications:

1) **7.5 Approximate Age and Weight:**

Animals will be approximately 5-6 weeks of age when received, and approximately 7-8 weeks of age at initiation of dosing. The males will weigh approximately 240 to 340 grams and the females approximately 170 to 270 grams at randomization.

2) **9.3.7 Removal of Test Substance:**

This section of the protocol has been revised as follows:

Residual test material will be gently removed (as much as possible without introducing irritation of the skin) from animals following the 5-day exposure period using warm water and mild soap (1% Ivory Liquid Soap in tap water). The site will be rinsed with water and gently patted dry and animals will be placed in clean caging.

3) **9.3.3 Positive Control:**

The first sentence of the first paragraph of this section of the protocol will be revised to read as follows:

The Group 6 positive control animals will **NOT** be subject to the same procedures (i.e., shaving, collaring, sham dosing with glass rod and removal of residual test substance) as animals in Groups 2-5, with the exception of collaring and shaving of the animals during the acclimation period prior to randomization of the animals into groups.

4) **9.3.6 Method of Administration and Dose Calculations:**

The last sentence of this section of the protocol will be revised to read as follows:

The collars will be replaced after the 2-day non-dosing period prior to the next exposure period with the exception of the last week of dosing (see Section 9.3.5.) when the collars will be replaced after a 3-day non-dosing period for the animals assigned to the study day 90 necropsy.

5) **9.4.3 Concentration and Homogeneity Analysis:**

This section of the protocol has been revised as follows:

Two sets of duplicate samples will be collected from each test substance formulation, from preparations to be used on study week 0 (top, middle, and bottom strata), week 6 (middle stratum only), and week 12 (middle stratum only). Each sample will be collected using a positive displacement pipette. One set of duplicate samples will be stored at room temperature as reserve samples and will be discarded upon the study director's approval of results. The other set of samples will be analyzed using a method validated by WIL Research Laboratories, LLC to confirm the concentration and homogeneity of the bulk test substance formulations.

An analytical chemistry report will be included as an appendix to the main report.

6) **10.3.3 Dermal Observations:**

This section of the protocol will be revised to read as follows:

Dermal scoring according to Appendix A will be conducted on all animals once during the pretreatment period and on all animals in Groups 1-5 at the end of each 5-day dosing period after approximately 1-2 hours following the removal (as much as possible without introducing irritation of the skin) of any residual test substance from the animal's back.

7) **10.8.1 Macroscopic Examination for Groups 1-5:**

The first sentence of the first paragraph of this section will be revised as follows:

A complete necropsy examination will be conducted on all animals in Groups 1-5. Animals *in extremis* will be euthanized via CO₂ inhalation. Animals surviving to the scheduled necropsy will be euthanized via isoflurane following the clinical pathology blood collection by necropsy personnel.

The tissues list is revised as follows:

Bone marrow smear (from sternum)^a

a = Not taken from animals found dead; not placed in formalin; to be examined only if scientifically warranted. Bone marrow smear will be taken from the sternum.

8) Bone with marrow

Femur with joint^f

f= Bone marrow for histopathology will be collected from the left femur and bone marrow for the micronucleus assay will be collected from the right femur.

9) **10.8.3.1 Bone Marrow Collection for Groups 1-6:**

The fourth paragraph of this section of the protocol will be revised to read as follows:

Slides for the micronucleus test will be blinded to dose group at WIL Research so that the Principal Investigator is unaware of the treatment group during the evaluation. Slides will be placed in numerical order based on the animal number prior to shipment.

10) The first sentence of the fifth paragraph will be revised as follows:

The slides will be shipped to Midwest BioResearch, a WIL Research Company, for staining and evaluation (WIL-selected test site).

Reasons for Protocol Modification:

- 1) Correction of animal age at receipt and initiation of dosing.
- 2) Clarification that the washing procedure of the animals should remove test substance without introducing skin irritation.
- 3) All animals will be collared and shaved for pretest study-related activities prior to randomization.
- 4) Half of the animals/sex in Groups 1-5 will have a 3-day non-dosing period prior to the final 5-day exposure period.
- 5) Clarification of concentration and homogeneity sample collection and collection intervals.
- 6) Dermal scoring will be conducted on all animals prior to randomization of animals into the study groups.
- 7) Change of bone from which bone marrow smear will be prepared (tissue list) and clarification of sternum to be used for collection of bone marrow (footnote). Clarification that the surviving animals will be euthanized via isoflurane and not carbon dioxide.
- 8) Change in bone from which bone marrow for histopathologic evaluation will be collected (tissue list) and clarification of which femur to collect for histology and which femur to collect for the micronucleus assay. (added footnote)
- 9) To blind the dose groups, the slides will be placed in numerical order and not placed together by dose group.
- 10) To clarify Midwest BioResearch as the test site selected by WIL Research.

Approval:

Sponsor's approval was obtained via e-mail on 08 April 2011.
Date

WIL Research Laboratories, LLC




Date 11 April 2011
Study Director



Date 11 April 2011
Senior Director, General Toxicology

American Petroleum Institute



Date 12 April 2011
Sponsor Representative



PROTOCOL

A 90-DAY REPEAT-DOSE DERMAL TOXICITY STUDY IN CONJUNCTION WITH A MICRONUCLEUS ASSAY UTILIZING EXTRACT, LIGHT PARAFFINIC DISTILLATE SOLVENT IN SPRAGUE DAWLEY RATS

Submitted To:

American Petroleum Institute
1220 L Street, NW
Washington, DC 20005

WIL Research Laboratories, LLC
1407 George Road
Ashland, OH 44805-8946

1 OBJECTIVE:

The objectives of this study are to 1) evaluate the toxicity potential of repeated dermal exposure of Extract, light paraffinic distillate solvent for 90 days and determine the effects on male and female rats, 2) verify/expand the existing data pertaining to polycyclic aromatic compounds (PAC) and the prediction of toxicity following exposure to high-boiling substances based on their PAC content, and 3) to assess the potential of extract, light paraffinic distillate solvent to induce micronuclei in polychromatic erythrocytes (PCEs) and normochromatic erythrocytes (NCEs) in rat bone marrow following the 90-day repeated dose treatment. This assay evaluates compounds for *in vivo* clastogenic activity and/or disruption of the mitotic apparatus.

2 REGULATORY COMPLIANCE:

This protocol has been designed and the study will be conducted in general accordance with the United States Environmental Protection Agency (EPA) Health Effects Test Guidelines OPPTS 870.3250, the 40 CFR 798.2250 and 798.5395, and the OECD (Organisation for Economic Cooperation and Development) Guidelines for Testing of Chemicals, Health Effects Test Guidelines, Section 411, May 12, 1981, and the OECD (Organisation for Economic Cooperation and Development) Guidelines for Testing of Chemicals, Health Effects Test Guidelines, Section 474, July 21, 1997. The study will be conducted in compliance with the EPA (40 CFR Part 792) and OECD Good Laboratory Practice (GLP) Standards, [C(97) 186/Final]. The study will also be performed according to the protocol and WIL standard operating procedures.

3 MICRONUCLEUS ASSAY BACKGROUND:

The micronucleus assay is a test for clastogenic agents that interfere with normal mitotic cell division (Heddle *et al.*, 1983). Micronuclei are small chromatin bodies consisting of entire chromosomes and/or acentric chromosome fragments that lag behind at mitotic anaphase. At telophase, these chromosomes and/or fragments are not segregated to either daughter nucleus and form single or multiple micronuclei in the cytoplasm. During the maturation of erythroblasts to erythrocytes, the nucleus is extruded. Micronuclei, if present, persist in the cytoplasm of these anucleate cells. Test articles affecting spindle fiber function or formation, as well as clastogenic agents can be detected through micronucleus induction (Schmid, 1975). In this study, immature red blood cells or polychromatic erythrocytes (PCEs) and mature red blood cells or normochromatic erythrocytes (NCEs) will be analyzed for the presence of micronuclei.



4 PERSONNEL INVOLVED IN THE STUDY:**4.1 Sponsor's Representative:**

[REDACTED]
American Petroleum Institute
1220 L Street, NW
Washington, DC 20005
Tel: (202) 682-8344
Email: [REDACTED]

4.2 Sponsor's Technical Monitor:

[REDACTED]
Senior Toxicologist
ExxonMobil Biomedical Sciences, Inc.
1545 Route 22 East
Annandale, New Jersey 08801
Tel: (908) 730-1017
Email: [REDACTED]

4.3 WIL Study Director:

[REDACTED]
Staff Toxicologist, General Toxicology
Tel: (419) 289-8700
Fax: (419) 289-3650
E-mail: [REDACTED]

4.4 Principal Investigator (Micronucleus Test):

[REDACTED]
Midwest BioResearch
8025 Lamon Avenue
Skokie, IL 60077
Tel: (847) 972-2500 ext. 328
Fax: (847) 972-2506
Email: [REDACTED]



4.5 WIL Departmental Responsibilities:

[REDACTED]
Senior Toxicologist, General Toxicology
Emergency Contact
Tel: (419) 289-8700
Fax: (419) 289-3650
E-mail: [REDACTED]

[REDACTED]
President and Chief Operating Officer

[REDACTED]
Senior Director, General Toxicology

[REDACTED]
Director, Operations

[REDACTED]
Senior Operations Manager, Vivarium

[REDACTED]
Operations Manager, Toxicology

[REDACTED]
Clinical Veterinarian

[REDACTED]
Group Manager, Formulations Laboratory

[REDACTED]
Group Supervisor, Sample Processing Laboratory

[REDACTED]
Vice President, Pathology

[REDACTED]
Operations Manager, Pathology

[REDACTED]
Manager, Clinical Pathology



[REDACTED]
Manager, Gross Pathology and
Developmental Toxicology Laboratory

[REDACTED] CM
Manager, Histology

[REDACTED]
Operations Manager, Reporting &
Technical Support Services

[REDACTED]
Manager, Quality Assurance

[REDACTED]
Director, Informational Systems

[REDACTED]
Manager and Research Chemist, Analytical Chemistry

[REDACTED]
Assistant Director, Analytical Chemistry

4.6 Contributing Scientists:

[REDACTED]
Consulting Ophthalmologist
The Ohio State University

or

[REDACTED]
Consulting Ophthalmologist
Ophthalmic Consulting



5 STUDY SCHEDULE:

Proposed Experimental Starting Date: 05 April 2011
(Animal Receipt Date)

Proposed Experimental Start Dates: 18 April 2011 (Groups 1-5 males)
(Proposed Initiation of Dosing)

Proposed Cyclophosphamide Dosing: 16 July 2011 (Group 6)

Proposed Necropsy Dates: 16 July 2011 (Groups 1-5 half each sex)
17 July 2011 (Groups 1-5 half each sex)
17 July 2011 (Group 6)

Proposed Preliminary Quality Assurance
Reviewed Tables and Interpretation: Approximately 3 weeks following the
scheduled necropsy

Proposed Audited Draft Report Date: Approximately 12-14 weeks following
the scheduled necropsy

Proposed Experimental Completion Date: To be added by amendment

6 TEST SUBSTANCE INFORMATION:**6.1 Test Substance Shipment:**

Test substance and applicable documentation will be shipped under Sponsor's responsibility to:

Formulations Laboratory (WIL-402022; [REDACTED])
Attn. [REDACTED]
WIL Research Laboratories, LLC
1407 George Road
Ashland, Ohio 44805-8946

6.2 Identification:

Extract, light paraffinic distillate solvent (CAS# 64742-05-8)

Also known as distillate aromatic extract (DAE)

6.3 Lot Number:

7:23



6.4 Expiration/Retest Date:

Retest after five years.

6.5 Purity:

100%

6.6 Stability:

The test substance is considered to be stable under the storage conditions provided by the Sponsor.

6.7 Physical Description:

To be documented by WIL Research Laboratories, LLC.

6.8 Storage Conditions:

Room temperature, protected from light.

6.9 Reserve Samples:

Reserve samples of the test substance will be taken in accordance with WIL Standard Operating Procedures and stored in the Archives at WIL Research Laboratories, LLC indefinitely, unless otherwise specified.

6.10 Personnel Safety:

Routine safety precautions apply. It is the responsibility of the Sponsor to notify the testing facility of any special handling requirements for the test substance. A Material Safety Data Sheet (MSDS) will be provided.

6.11 Test Substance Disposition:

Unless otherwise indicated, all unused test substance will be retained for subsequent studies or returned to the Sponsor's contact listed below:

EPL Archives, Inc.
45610 Terminal Drive
Sterling, VA 20166
Attn: [REDACTED] (703) 435-8780 x212



6.12 Positive Control:**6.12.1 Identification:**

Cyclophosphamide monohydrate (CP, CAS number 6055-19-2) is a known clastogen.

The positive control will be characterized by the manufacturer (Sigma-Aldrich). A copy of the Certificate of Analysis, generated by Sigma-Aldrich, will be provided to WIL Research Laboratories, LLC.

6.12.2 Lot Number:

To be documented in the study records.

6.12.3 Purity:

To be provided in the Certificate of Analysis.

6.12.4 Stability:

The positive control is considered to be stable under the storage conditions provided by the manufacturer.

6.12.5 Physical Description:

To be documented by WIL Research Laboratories, LLC in the study records.

6.12.6 Storage Conditions:

To be stored as per the conditions provided by the manufacturer.

6.12.7 Reserve Samples:

A reserve sample of the positive control will not be collected as part of this study.

6.12.8 Positive Control Disposition:

The positive control article will be disposed of, as appropriate, following the issuance of the Final Report or retained for use on future studies.



6.12.9 Personnel Safety:

If available, an MSDS will be provided by the manufacturer. Double nitrile gloves and a half-face negative respirator with cartridge #60923 are to be worn while preparing and administering doses. Otherwise, routine safety precautions will be followed.

6.13 Vehicle:**6.13.1 Identification:**

Acetone, Min. 99.0% (2-propanone, CAS# 67-64-1, Spectrum Chemical Mfg. Corp., product code AC115).

6.13.2 Stability:

The vehicle is considered to be stable under the storage conditions provided by the manufacturer.

6.13.3 Physical Description:

To be documented by WIL Research Laboratories, LLC in the study records.

6.13.4 Storage Conditions:

To be stored as per the conditions provided by the manufacturer.

6.13.5 Reserve Samples:

A reserve sample of the vehicle will not be collected as part of this study.

6.13.6 Personnel Safety:

Routine safety precautions apply. It is the responsibility of the Sponsor to notify the testing facility of any special handling requirements for the test substance. A Material Safety Data Sheet (MSDS) will be provided.

7 TEST SYSTEM:**7.1 Species:**

Rat



7.2 Strain:

Crl:CD(SD)

7.3 Source:

Charles River Laboratories, Inc.
Facility to be documented in the raw data

7.4 Number of Animals:

Sixty-five (65) naïve males and 65 naïve females will be purchased. Fifty-six (56) males and 56 females will be placed on study. Females will be nulliparous and non-pregnant. Animals not utilized on study will be assigned to the WIL stock colony or euthanized by CO₂ inhalation and discarded.

7.5 Approximate Age and Weight:

Animals will be approximately 5-6 weeks of age when received, and approximately 8-9 weeks of age at initiation of dosing. The males will weigh approximately 240 to 340 grams and the females approximately 170 to 270 grams at randomization.

7.6 Identification System:

Animals will be uniquely identified by a metal eartag displaying the animal number. Individual cage cards will be affixed to each cage and will display at least the animal number, group number, sex, and study number.

7.7 Justification for Selection and Number of Animals:

This species and strain of animal is recognized as appropriate for subchronic and chronic toxicity studies. The Crl:CD(SD) rat will be utilized because it is a widely used strain for which historical control data are available. The number of animals selected is the minimum needed to yield statistically and scientifically meaningful data.

7.8 Justification for Selection for Micronucleus Assay:

There is currently no validated *in vitro* assay available to reliably test for the induction of micronuclei in polychromatic erythrocytes in animals; therefore, it is necessary to use an *in vivo* assay.

The Sprague Dawley rat was chosen as the test system for this portion of the study because there is a large amount of historical biological data available for this species and strain. Its sensitivity to drug- or chemical-induced toxicity has



been shown to be sufficient for detecting the potential toxicity of compounds. The number of animals selected for this study is sufficient to yield statistically meaningful and adequately predictive data, and is consistent with agency expectations (e.g., OECD 474 and 411 guideline).

8 SPECIFIC MAINTENANCE SCHEDULE:

8.1 Animal Housing:

Animals will be housed individually in an environmentally controlled room in suspended, wire-mesh cages. The cages will be elevated above cage-board or other suitable material. The cages will be subject to routine cleaning at a frequency consistent with maintaining good animal health. The facilities at WIL Research Laboratories, LLC are fully accredited by the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC International).

8.2 Environmental Conditions:

Controls will be set to maintain temperature at $71 \pm 5^{\circ}\text{F}$ ($22 \pm 3^{\circ}\text{C}$) and relative humidity at approximately $50 \pm 20\%$. Temperature and relative humidity will be monitored continuously. Data for these two parameters will be scheduled for automatic collection on an hourly basis. Fluorescent lighting will provide illumination for a 12-hour light/dark photoperiod. Temporary adjustments to the light/dark cycles may be made to accommodate protocol specified activities. The ventilation rate will be set at a minimum of 10 room air changes per hour, 100% fresh air.

8.3 Drinking Water:

Reverse osmosis-treated tap water will be available *ad libitum*. Filters servicing the automatic watering system will be changed regularly according to standard operating procedures. The municipal water (Ashland City Water Department) supplying the laboratory will be analyzed for contaminants according to standard operating procedures to ascertain that none are present at concentrations that would be expected to affect the outcome of the study.

8.4 Diet:

PMI Nutrition International (Richmond, IN), LLC Certified Rodent LabDiet® 5002 (pellet) will be offered *ad libitum* during the study, except during overnight fasting prior to necropsy for all animals. Each lot utilized will be identified and recorded. Standard operating procedures provide specifications for acceptable levels of heavy metals and pesticides that are reasonably expected to be present in the diet without interfering with the purpose or



conduct of the study. Each lot of feed has been analyzed to assure specifications are met. Feeders will be changed and sanitized once per week. Copies of the appropriate analyses will be maintained in the study records.

8.5 Enrichment:

Animals will be offered enrichment devices for the duration of the study as per WIL SOPs.

9 EXPERIMENTAL DESIGN:

9.1 Animal Receipt and Acclimation:

Each animal will be inspected by qualified personnel upon receipt. Animals judged to be in good health will be placed immediately in acclimation for at least 14 days. All animals will be weighed and assigned a permanent animal number. During the acclimation period, each animal will be observed twice daily for changes in general appearance or behavior.

The animals will be allowed a pretreatment week (during the acclimation period) at which time food consumption will be determined, eye exams will be performed, and general health will be monitored, but they will not receive the test substance. All animals will also be fitted with collars during the acclimation period. All animals will receive a detailed physical examination and body weight determination prior to the time of animal selection for randomization.

9.2 Randomization:

Near the end of the pretest period, animals judged to be suitable for testing will be assigned to groups at random based on body weight stratification into a block design using a computer program. A printout containing the animal numbers and individual group assignments will be generated. Animals will then be arranged into the groups according to the printout. Body weights at randomization will be within $\pm 20\%$ of the mean of each sex. Following randomization, it may be necessary to replace individual animals prior to or shortly after the initiation of dosing, based on the health status of the animals.

Replacement animals will be selected from remaining pretest animals and assigned arbitrarily. These instances will be appropriately documented in the study records.



9.3 Route and Rationale of Test Substance Administration:

The route of administration will be dermal for Groups 1-5 since the study objective is to determine the potential toxicity of the test substance when administered by the dermal route.

9.3.1 Organization of Test Groups:

The following table presents the study group arrangement. The dosage levels were selected by the Sponsor's Representatives.

Group Number	Test Substance	Dosage Level (mg/kg/day)	Dose Concentration (mg/mL)	Dose Volume (mL/kg)	Number of Animals ^{c, f}	
					Males	Females
1	Sham Control	NA	NA	NA	10	10
2	Vehicle ^a	0	0	1.5	10	10
3	Test Substance ^b	5	3.3	1.5	10	10
4	Test Substance ^b	50	33.3	1.5	10	10
5	Test Substance ^b	150	100.0	1.5	10	10
6	Positive Control ^{d, e)}	60	6	10	6	6

a) The vehicle used for Groups 2-5 in this study is acetone.

b) The test substance used for Groups 3-5 is Extract, light paraffinic distillate solvent.

c) All surviving animals will be assigned to the scheduled necropsies on Study Day 89 or 90.

d) The positive control, cyclophosphamide, will be administered to animals in Group 6 via oral gavage on Study Day 89 (last day of dosing), and then the animals will be terminated approximately 24 hours following dose administration for bone marrow collection on Study Day 90.

e) The first five (5) surviving animals in Group 6 will be utilized for bone marrow collection (see Section 10.8.3.1). If not needed, the sixth animal will be euthanized via CO₂ inhalation without bone marrow collection and discarded.

f) Five (5) animals/sex in Groups 1-5 will have bone marrow collected immediately following euthanasia (see Section 10.8.3.1) of their scheduled necropsy.

9.3.2 Sham Control:

The Group 1 sham control animals will be subject to the same procedures (i.e. shaving, collaring, sham dosing with glass rod and removal of residual test substance) as animals in Groups 2-5. However, no vehicle or test substance will be applied to the sham control animals.



9.3.3 Positive Control:

The Group 6 positive control animals will **NOT** be subject to the same procedures (i.e. shaving, collaring, sham dosing with glass rod and removal of residual test substance) as animals in Groups 2-5. The positive control formulation will be administered via oral gavage to Group 6 animals once on Study Day 89 (last day of dosing). Bone marrow will be harvested from 5 animals/sex/group on Study Day 90 (approximately 24 hours after the last dose is administered).

The positive control formulations will be administered by oral gavage. Doses will be administered using steel ball-tipped flexible Teflon cannula with syringes of appropriate size. The dose volume will be 10 mL/kg/dose.

9.3.4 Adjustment of Dose Volumes:

Individual doses for Groups 2-5 will be calculated based upon the most recent body weights to provide the proper dosage.

9.3.5 Treatment Regimen:

A process of 5 days of dosing (Monday-Friday) followed by 2 days of nondosing (Saturday and Sunday) will be repeated for the duration of the study with the exception of the last week of dosing. Due to the staggered necropsy, the last week on study will include dosing half of each sex for all dose groups Monday-Friday and the remaining half of each sex for all dose groups Tuesday-Saturday. Following this regimen, the second half of each sex will have 3 days of nondosing prior to the last week of dosing. The first half of each sex will be assigned to the scheduled necropsy on study day 89 and the second half of each sex will be assigned to the scheduled necropsy on study day 90. The vehicle or test substance will be administered dermally once daily, 5 days a week for a minimum of 90 days (last dose to occur the day prior to the scheduled necropsy). Study Day 0 is the first day of dosing and Study Day 89 or 90 is the day of the scheduled necropsies. All animals in Groups 1-5 will be collared during each 5-day dosing period. At the end of each dosing day, after an approximate 6 hour exposure period, all animals in Groups 1-5 will be gently wiped with a paper towel to remove unabsorbed test substance. Following a 6-hour test substance exposure on the fifth day of dosing during each of the dosing periods, the residual test substance will be removed by washing each animal in Groups 1-5 with a warm, 1% mild soap solution followed by a deionized water rinse and drying of the animals with a clean paper towel. Following each wash procedure, all animals will be transferred to clean



cages and Groups 1-5 animals will have the collars removed for a 2-day non-dosing period. Prior to the first dose of the next 5-day dosing period, collars will be replaced on all animals in Groups 1-5.

9.3.6 Method of Administration and Dose Calculations:

Prior to dosing administration, the back (down each side to the ventral surface) and flanks of each animal in Groups 1-5 will be clipped free of hair using an electric clipper. Additional clipping throughout the study will be performed as necessary. Dosing sites will be marked with a permanent marker for animals in Groups 1-5 and remarked as necessary throughout the duration of the study.

The vehicle and test substance formulations, adjusted as mL/kg per the most recent body weight, will be spread uniformly over the treatment site (target area of approximately 10% of the body surface area). The area covered by test substance will be measured and recorded once per week for a representative animal of each sex in each group whose body weight is close to the mean body weight and the resulting approximate % of body surface area covered will be reported. The vehicle and test substance formulations will be applied to each animal in Groups 2-5 (as appropriate) and spread over the area using a glass rod. The area will remain uncovered. Animals will be exposed for 5 consecutive days and collared for the duration of the exposure to prevent ingestion of the test substance. At the end of the 5-day exposure period, the exposure site will be cleaned to remove residual test substance and the collars removed. The collars will be replaced after the 2-day nondosing period prior to the next exposure period.

9.3.7 Removal of Test Substance:

Residual test material will be gently removed from animals in Groups 2-5 following the 5-day exposure period using warm water and mild soap (1% Ivory Liquid Soap in tap water). The site will be rinsed with water and gently patted dry and animals placed in clean caging.

9.4 Preparation and Analysis of Test Substance Formulations:

9.4.1 Method and Frequency of Preparation:

The test substance will be prepared for dosing as a weight-to-volume mixture in acetone. The dosing formulations will be prepared approximately weekly. A complete and detailed description of the methods of test substance preparation will be included in the study records and described in the final report.



9.4.2 Homogeneity, Resuspension Homogeneity, and Stability of Test Substance Formulations

Analyses to demonstrate homogeneity and resuspension homogeneity as well as 8-day room temperature stability for the range of concentrations to be used on this study will be conducted by the Analytical Chemistry Department at WIL Research Laboratories, LLC (WIL-402026, Freer, Draft) prior to the initiation of dosing (if possible).

9.4.3 Concentration and Homogeneity Analysis

Two sets of duplicate samples will be collected from the top, middle, and bottom stratum of each test substance formulation, from preparations to be used on study week 0 (concentration and homogeneity analysis), study week 6 (concentration analysis only), and study week 12 (concentration analysis only). Each sample will be collected using a positive displacement pipette from the middle of each stratum of each formulation. One set of duplicate samples will be stored at room temperature as reserve samples and will be discarded upon the Study Director's approval of results. The other set of samples will be analyzed using a method validated by WIL Research Laboratories, LLC to confirm concentration and homogeneity of the bulk test substance formulations.

An analytical chemistry report will be included as an appendix to the main report.

9.5 Preparation of the Positive Control Formulation:

9.5.1 Method and Frequency of the Positive Control Article Formulation:

The positive control formulation will be prepared for dosing as a weight-to-volume mixture in deionized water. A complete description of the method of the preparation for the positive control formulation will be documented in the study records and described in the final report. The positive control formulation will be prepared on the day of dose administration, Study Day 89.

9.5.2 Analysis of Positive Control Formulation:

No analysis to confirm cyclophosphamide concentration in the dosing formulation will be performed as part of this study. No correction factor will be used for the preparation of positive control formulation.



10 PARAMETERS TO BE EVALUATED:

10.1 Viability Observations:

All animals will be observed for mortality and moribundity twice daily, once in the morning and once in the afternoon. Moribund animals will be euthanized by CO₂ inhalation and necropsied as described in section 10.8.1.

10.2 Animals to Be Euthanized *in Extremis*:

All animals to be euthanized *in extremis* will have a body weight collected and undergo a final detailed physical observation prior to release for euthanasia and subsequent necropsy.

10.3 Clinical Observations:

10.3.1 Daily Observations:

A clinical examination will be performed on all animals in Groups 1-5 prior to dosing and at approximately 1-2 hours post-dose. A single daily observation will be recorded on non-dosing days. Observations will include, but are not limited to, changes in the skin, fur, eyes and mucous membranes; respiratory, circulatory, autonomic and central nervous systems functions; somatomotor activity and behavior patterns. Findings or lack of findings noted at the clinical examination will be recorded for individual animals. Observations outside of the above-mentioned range will also be recorded for individual animals.

10.3.2 Detailed Physical Examinations:

A detailed physical examination will be conducted for all animals in Groups 1-6 approximately once during the pretreatment period, and approximately once weekly during the study. All animals assigned to study will also receive a detailed physical examination on the days of the scheduled or unscheduled euthanasia. The animals will be removed from their home cages and placed in a standard arena for observations. Observations will be detailed and carefully recorded. Where appropriate an explicitly defined scoring system will be used if in the opinion of the Study Director, and with approval of the Sponsor, doing so increases the utility of the data. Signs noted shall include, but not be limited to, changes in skin, fur, eyes, mucous membranes, occurrence of secretions and excretions and autonomic activity (e.g., lacrimation, piloerection, pupil size, unusual respiratory pattern), changes in gait, posture and response to handling, as well as the presence of clonic or tonic movements, stereotypic behavior (e.g., excessive grooming, repetitive



circling) or bizarre behavior (e.g., self-mutilation, walking backwards) will be recorded. The absence or presence of findings will be recorded for individual animals.

10.3.3 Dermal Observations:

Dermal scoring according to Appendix A will be conducted on all animals in Groups 1-5 once during the pretreatment period and at the end of each 5-day dosing period after approximately 1-2 hours following the removal of any residual test substance from the animal's back.

10.4 Individual Body Weights:

Individual body weights will be recorded for all animals approximately once weekly, beginning during pretest, for the duration of the study. A final fasted body weight will be recorded at the time of necropsy. **The terminal body weights are to be audited and reported to the Sponsor within 3 weeks of necropsy.**

10.5 Individual Food Consumption:

Individual food consumption will be recorded for all animals approximately once weekly, beginning during pretest, for the duration of the study.

10.6 Ophthalmology:

Ophthalmic examinations will be conducted by a board-certified veterinary ophthalmologist using an indirect ophthalmoscope and slit-lamp biomicroscope. Prior to examination, rats will be treated with an appropriate mydriatic agent. All animals will be examined prior to randomization and animals in Groups 1-5 will be examined prior to the scheduled necropsy.

10.7 Clinical Pathology:

The following hematology, serum chemistry, and coagulation parameters will be evaluated on all surviving animals in Groups 1-5 on the day of the scheduled necropsy. The animals in Groups 1-5 will be fasted overnight before taking blood samples. Blood samples will be collected at necropsy from the vena cava of animals euthanized by isoflurane.

Anticoagulants used will be potassium EDTA for the hematology and sodium citrate for the coagulation tests. Samples for serum chemistry will be collected without anticoagulants.



10.7.1 Hematology:

Total leukocyte count	Mean corpuscular volume
Erythrocyte count	Mean corpuscular hemoglobin
Hemoglobin^b	Mean corpuscular hemoglobin concentration
Hematocrit	Platelet count^b
Hemoglobin distribution width	Reticulocyte count
Red cell distribution width	Differential leukocyte count ^a

^a = If performed manually, results will include platelet estimates and RBC morphology.

^b = Data for the designated (**bold**) hematology parameters are to be audited and reported to the sponsor within 3 weeks of necropsy.

10.7.2 Coagulation:

Prothrombin time	Activated partial thromboplastin Time
------------------	---------------------------------------

10.7.3 Serum Chemistry:

Albumin	Aspartate aminotransferase
Total protein	Gamma glutamyl transferase
Globulin (calculated)	Glucose
A/G ratio (calculated)	Total cholesterol
Total bilirubin	Calcium
Urea nitrogen	Chloride
Creatinine	Phosphorus
Alkaline phosphatase	Potassium
Alanine aminotransferase	Sodium
Sorbitol dehydrogenase	Triglycerides

10.8 Anatomic Pathology:**10.8.1 Macroscopic Examination for Groups 1-5:**

A complete necropsy examination will be conducted on all animals in Groups 1-5. Animals *in extremis* or surviving to the scheduled necropsy will be euthanized by CO₂ inhalation. Necropsy will include examination of the external surface; all orifices; and the cranial, thoracic, abdominal and pelvic cavities including viscera. At the time of the scheduled necropsy, the following tissues will be collected and placed in 10% neutral-buffered formalin (or other fixative if applicable).



Adrenals (2)	Skin with Mammary gland ^d (females only)
Aorta	Skeletal Muscle (Rectus Femoris)
Bone with marrow	Ovaries (2) with oviducts ^e
Sternum	Pancreas
Femur with joint	Peripheral nerve (sciatic)
Bone marrow smear (from femur) ^a	Pituitary
Brain	Prostate
Cerebrum (2 levels)	Salivary glands [mandibular (2)]
Cerebellum with pons/medulla	Seminal vesicles (2)
Cervix	Skin
Exorbital lacrimal glands (2)	Sham, Vehicle and Treated (3 sections)
Eyes with optic nerves (2) ^b	Untreated (posterior to treated skin)
Epididymides (2) ^c	Spinal cord
Gastrointestinal tract	Cervical
Esophagus	Thoracic
Stomach	Lumbar
Duodenum	Spleen
Jejunum	Testes (2) ^c
Ileum	Thymus
Cecum	Thyroid with parathyroids (2) ^e
Colon	Trachea
Rectum	Urinary bladder
Heart	Uterus
Kidneys (2)	Vagina
Liver (sections of two lobes)	All gross lesions
Lungs (including bronchi, fixed by inflation with fixative)	
Lymph nodes [Axillary (2), mesenteric and mandibular(2)]	

a= Not taken from animals found dead; not placed in formalin; to be examined only if scientifically warranted.

b= To be placed in Davidson's solution.

c= To be placed in Bouin's solution.

d= For females; A corresponding section of skin will be collected from the same anatomical area for males.

e= Parathyroids and oviducts will be examined histopathologically if in the plane of section and in all cases where a gross lesion is present.



10.8.2 Organ Weights for Groups 1-5:

The following organs, from animals in Groups 1-5, will be weighed at the scheduled necropsy:

Adrenals (2)	Pituitary gland
Brain	Prostate
Epididymides (2)	Spleen
Heart	Testes (2)
Kidneys (2)	Thymus
Liver	Thyroid with parathyroids (2)*
Ovaries (2)with oviducts	Uterus

Paired organs will be weighed together. Designated (*) organs will be weighed after fixation. Organ-to-body-weight and organ-to-brain-weight ratios will be calculated from animals euthanized at the scheduled necropsy. Data for the designated (**bold**) organs are to be audited and reported to the Sponsor within 3 weeks of necropsy.

10.8.3 Macroscopic Examination for Group 6:

Animals euthanized *in extremis* or at the scheduled euthanasia in Group 6 will be euthanized by CO₂ inhalation. A gross necropsy will be conducted on all animals found dead or euthanized *in extremis*. Gross necropsy for animals found dead or euthanized *in extremis* will include examination of the external surface, all orifices and the cranial, thoracic, abdominal and pelvic cavities, including viscera. The femurs for bone marrow collection will not be collected for found dead animals. A gross macroscopic examination will not be performed on animals surviving to the scheduled euthanasia in Group 6.

10.8.3.1 Bone Marrow Collection for Groups 1-6:

Immediately following euthanasia, bone marrow from the right femur will be collected and processed. It may be necessary to use the left femur instead of the right femur. The reason(s) for using the left femur will be appropriately documented in the study records. The carcasses and remaining tissues will be discarded.

The first five (5) animals/sex in Groups 1-6 will have bone marrow collected as described below. The sixth animal/sex of Group 6 will be euthanized via CO₂ inhalation and discarded if not needed.



Using a syringe containing fetal bovine serum, the bone marrow will be aspirated or flushed from the right femur into a centrifuge tube. Cells will be aspirated at least 2-3 times to ensure all cells are collected and there are no cell clumps. The suspension will be centrifuged and all but approximately 0.25 mL of the supernatant will be poured off. The pellet will be resuspended in the remaining fetal bovine serum. Using a 23-gauge needle with syringe, approximately one drop of the cell suspension will be used to prepare a bone marrow smear on an appropriately labeled, clean microscope slide. A minimum of two slides per animal will be prepared. Slides will be allowed to air dry and will then be fixed in 100% methanol for approximately 20 minutes and allowed to air dry again. The slides will be stored and shipped at ambient temperature to Midwest BioResearch.

Slides will be blinded to dose group at WIL Research for the micronucleus test so that the Principal Investigator is unaware of the treatment group during the evaluation.

The slides will be shipped to Midwest BioResearch for staining and evaluation. Slides will be shipped on the first available non-holiday Monday, Tuesday or Wednesday to the following address:

Midwest BioResearch
8025 Lamon Avenue
Skokie, IL 60077
Tel: (847) 972-2500 ext. 328
Fax: (847) 972-2506
Email: [REDACTED]

The recipient will be contacted prior to shipment to ensure that the shipment will be handled appropriately upon receipt.

Quality assurance auditing of the conduct, results and reporting of the micronucleus test and interpretation of the results, as well as the archiving of these data, are the responsibility of the Test Site where the analyses will be conducted. Quality assurance inspections (audits) will be submitted to the Study Director at WIL Research Laboratories, LLC. A copy of the final micronucleus test report and the interpretation of the results (including Quality Assurance and GLP Compliance



statements) will be included as an appendix to the WIL final report. Appropriate interpretation and data will be incorporated into the text of the WIL final report for the study.

10.8.4 Microscopic Examination for Groups 1-5:

Microscopic examination of hematoxylin-eosin stained paraffin sections will be conducted on all tissues listed in section 10.8.1 from all animals euthanized *in extremis*, found dead, or surviving to the scheduled necropsy, except for the female mammary gland, spinal cord, muscle, eyes, femur, and exorbital lacrimal glands, unless these tissues are noted as a potential target organ.

Histologic preparation will be conducted at either the WIL laboratory site in Ashland, Ohio, or at the WIL Research Laboratories subsidiary, Biotechnics, in Hillsborough, North, Carolina, and documented in the raw data. If the tissues are shipped to North Carolina, an appropriate protocol amendment will be issued prior to such shipment.

10.9 Micronucleus Test:

Section 10.9 provides a brief description of the activities that will be performed by Midwest BioResearch in accordance with their onsite Standard Operating Procedures.

10.9.1 Processing of Bone Marrow Slides:

Slides will be stained with Acridine Orange (A/O) staining solution (Hayashi *et al.*, 1983).

10.9.2 Scoring Bone Marrow Polychromatic Erythrocytes for Micronuclei:

Slides from up to five (5) surviving animals/sex in the treatment and control groups will be analyzed. All microscopic analyses will be performed on blinded slides so that the examiner does not know to which treatment group a slide belongs. The number of polychromatic erythrocytes (PCEs) and normochromatic erythrocytes (NCEs) will be simultaneously tallied in each field until 1000 total erythrocytes (TEs, or NCEs + PCEs) per animal have been scored by sequentially progressing one field at a time. NCEs appear as anucleate cells with a cytoplasm that stains dark, grayish-green with A/O stain. PCEs are also anucleate cells that are generally larger than NCEs with a cytoplasm that stains bright orange with A/O stain. The total number of PCEs and NCEs will be recorded and the ratio of PCE/TE determined. The number of micronucleated PCEs per 2000 PCEs and micronucleated NCEs per



2000 NCEs is also evaluated. Micronuclei stain bright yellow or yellow/green with A/O stain and are generally round or almond shaped within the cytoplasm of the erythrocytes. Micronuclei have sharp borders and are generally between 1/20th and 1/5th the size of a PCE. Cells are scored as micronucleated whether they have one micronucleus or >1, which can sometimes occur.

10.9.3 Micronuclei Data Presentation:

The number of PCEs, NCEs, micronucleated PCEs, and micronucleated NCEs will be recorded manually. The percentage of micronucleated PCEs, the percentage of micronucleated NCEs, and the ratio of PCE/(PCE+NCE) will be calculated for each animal. Group means and standard deviations will be presented.

10.9.4 Criteria for Acceptability and Interpretation of the Micronucleus Assay:

In addition to the criteria listed below, the Principal Investigator may take additional factors into consideration in evaluating the test results based on sound scientific judgment and biological relevance.

10.9.5 Unacceptable Data:

Data will not be used either in the individual animal data or for statistical evaluation if obtained from study animals with either fewer than 500 PCEs or a PCE to total erythrocyte (PCE+NCE) ratio of less than 20% of the vehicle control.

10.9.6 Acceptable Micronuclei Scores for Negative and Positive Controls

The vehicle group mean must lie within the historical control range and will usually be less than 0.4% micronucleated PCEs. The positive control response must be higher than the vehicle group and be consistent with historical positive control data.

10.9.7 Statistical Evaluation:

The percentages of micronucleated cells in (PCEs), micronucleated cells in NCEs, and in the ratio of PCEs to total erythrocytes for the test article and vehicle treated groups will be compared using an analysis of variance (ANOVA) (Snedecor and Cochran, 1980). Dunnett's test (Dunnett, 1964) will be used to compare each test article-treated group to the vehicle group. In addition, the positive control and vehicle groups as well as the sham control and vehicle control groups will be compared



using a separate parametric one-way analysis of variance (ANOVA) (Snedecor and Cochran, 1980). Statistical significance will be assessed at a 95% confidence level ($p \leq 0.05$).

10.9.8 Criteria for Positive Response:

The test article may be considered positive for induction of micronuclei if a dose-related increase in the percentage of PCEs with micronuclei or percentage of NCEs with micronuclei is observed or a statistically significant increase relative to the vehicle is seen at one or more dose levels. Statistical significance will not be the only factor in determining a positive response. Other criteria, such as historical control data, that take into account the biological relevance of the results will be considered in the final evaluation.

10.9.9 Criteria for Negative Response:

The test article is considered to be negative for induction of micronuclei if there is no statistically significant increase in the percentage of PCEs or NCEs with micronuclei when compared to the concurrent vehicle at any dose level.

10.9.10 Criteria for Equivocal Response:

Cases which do not clearly fit into the positive or negative criteria may be judged equivocal. In these cases the Principal Investigator, based on sound scientific judgment, may take additional factors into consideration in evaluating the test results. As a general rule, the biological relevance of any result will be considered first.

11 WIL STATISTICAL METHODS FOR IN-LIFE, CLINICAL PATHOLOGY, AND/OR ORGAN WEIGHT PARAMETERS:

All analyses will be two-tailed for significance levels of 5% and 1%. All means will be presented with standard deviations. All statistical tests will be performed using appropriate computing devices or programs. Body weights, body weight changes, and food consumption data, for the vehicle group (Group 2) and all test article treated groups (Groups 3-5) will be subjected to a one way analysis of variance (ANOVA) (Snedecor and Cochran, 1980). In addition, a comparison of the vehicle group (Group 2) to each treated group (Groups 3-5) by Dunnett's test (Dunnett, 1964) will follow.

Body weights, body weight changes, and food consumption data, for the positive control will be compared to the vehicle control using a separate parametric one-way



analysis of variance (ANOVA) (Snedecor and Cochran, 1980). Statistical significance will be assessed at a 95% confidence level ($p \leq 0.05$).

Body weights, body weight changes, and food consumption data, for the sham control data will be compared to the vehicle control using a separate parametric one-way analysis of variance (ANOVA) (Snedecor and Cochran, 1980). Statistical significance will be assessed at a 95% confidence level ($p \leq 0.05$).

Clinical pathology data and organ weights (absolute and relative) for the vehicle group (Group 2) and all test article treated groups (Groups 3-5) will be subjected to a one way analysis of variance (ANOVA) (Snedecor and Cochran, 1980). In addition, a comparison of the vehicle group (Group 2) to each treated group (Groups 3-5) by Dunnett's test (Dunnett, 1964) will follow.

Clinical pathology data and organ weights (absolute and relative) for the sham control will be compared to the vehicle control using a separate parametric one-way analysis of variance (ANOVA) (Snedecor and Cochran, 1980). Statistical significance will be assessed at a 95% confidence level ($p \leq 0.05$).

Gamma glutamyltransferase values under range will be assigned a value of 0.1 (half the lower limit of quantitation) for statistical analysis and reporting. Gamma glutamyltransferase data will be subjected to the Kruskal-Wallis nonparametric ANOVA test (Kruskal and Wallis, 1952) to determine the intergroup differences. If the ANOVA reveals statistically significant ($p < 0.05$) intergroup variance, Dunn's test (Dunn, 1964) will be used to compare the test article-treated groups to the vehicle control group. In addition, the positive control and vehicle control groups as well as the sham control and vehicle control groups will be compared using a separate Kruskal-Wallis nonparametric ANOVA test (Kruskal and Wallis, 1952).

12 QUALITY ASSURANCE:

The study will be audited by the WIL Quality Assurance Unit while in progress to assure compliance with EPA TSCA GLP and OECD Good Laboratory Practice Regulations, adherence to the protocol and to WIL standard operating procedures. The raw data and draft report will be audited by the WIL Quality Assurance Unit to assure that the final report accurately describes the conduct and the findings of the study.

This study is a regulated study and will be included on the WIL master list of regulated studies

13 RECORDS TO BE MAINTAINED:

All original raw data records, as defined by WIL SOPs will be stored in Archives at WIL Research Laboratories, LLC as described in protocol Section 14.



14 WORK PRODUCT:

Sponsor will have title to all documentation records, raw data, slides, specimens, or other work products generated during the performance of the study. All work including data, report, and slides performed at Midwest BioResearch will be shipped to WIL Research Laboratories, LLC for archiving. All work products including raw paper data, pertinent electronic storage media and specimens will be retained at no charge for a period of 6 months following issuance of the final report in the Archives at WIL Research Laboratories, LLC. Thereafter, WIL Research Laboratories will charge a monthly archiving fee for retention of all work products. All work products will be stored in compliance with regulatory requirements. Unless otherwise indicated, all remaining clinical pathology samples, and Analytical Chemistry samples will not be archived, but will be discarded at the time of report finalization.

Any work product, including documents, specimens, and samples, that are required by this protocol, its amendments, or other written instructions of the Sponsor, to be shipped by WIL Research Laboratories, LLC to another location will be appropriately packaged and labeled as defined by WIL's SOPs and delivered to a common carrier for shipment. WIL Research Laboratories, LLC will not be responsible for shipment following delivery to the common carrier.

15 REPORTS:

Within three weeks of necropsy, the following data will be audited by Quality Assurance:

- Terminal body weight
- Absolute and relative liver weight
- Absolute thymus weight
- Hemoglobin levels
- Platelet counts

A brief report including the data with explanation and interpretation will be prepared and sent to the study monitor or sponsor representative.

The final report will contain a summary, test substance data, methods and procedures, appropriate individual animal and summary data tables, supporting sub-reports (e.g., analytical chemistry report, micronucleus report) a copy of the protocol and amendments (if any), and an interpretation and discussion of the study results. Data interpretation and data tables from the Principal Investigator reports will be included within the text of the WIL report, as appropriate. The report will contain all information necessary to conform to current EPA and OECD specifications. The report will be comprehensive and shall attempt to define levels inducing toxic effects under the conditions of this investigation.



WIL Research Laboratories, LLC will submit an electronic copy (PDF with an MS Word copy of the report text for editing and comments) of the audited draft report in a timely manner upon completion of data collection prior to issuance of the final report. It is expected that the Sponsor will review the draft report and provide comments to WIL within a two-month time frame following submission. Within one month following receipt of the Sponsor's comments, WIL shall provide a revised draft report that incorporates the Sponsor's reasonable revisions and suggestions. One revision will be permitted as part of the cost of the study. WIL shall submit the final report within two weeks of receiving authorization from the Sponsor. If the Sponsor's comments and/or authorization to finalize the report have not been received at WIL within one year following submission of the draft report, WIL may elect to finalize the report following appropriate written notification to the Sponsor. Two submission ready electronic versions (linked, searchable PDF) of the final report on CD-R will be provided as well as a copy of the report text in MS Word.

16 PROTOCOL MODIFICATION:

Modification of the protocol may be accomplished during the course of this investigation. However, no changes will be made in the study design without the verbal or written permission of the Sponsor Representative. In the event that the Sponsor verbally requests or approves changes in the protocol, documentation will be maintained as e-mail or other suitable correspondence, and may be communicated to WIL Research Laboratory staff in the form of Study Director Notifications, as appropriate.

17 ANIMAL WELFARE ACT COMPLIANCE:

This study will comply with all applicable sections of the Final Rules of the Animal Welfare Act regulations (9 CFR). The Sponsor should make particular note of the following:

- The Sponsor signature on this protocol documents for the Study Director the Sponsor's assurance that the study described does not unnecessarily duplicate previous experiments
- Whenever possible, procedures used in this study have been designed to avoid or minimize discomfort, distress or pain to animals. All methods are described in this study protocol or in written laboratory standard operating procedures.
- Animals that experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized, as deemed appropriate by the veterinary staff and Study Director. The Sponsor will be advised by the Study Director of all circumstances which could lead to this action, in as timely a manner as possible.



- Methods of euthanasia used during this study are in conformance with the above-referenced regulation.
- The sponsor/study director has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animals and has provided a written narrative description (AWA covered species) of the methods and sources used to determine that alternatives are not available.

18 REFERENCES:

Dunnett, C.W. New tables for multiple comparisons with a control. *Biometrics* **1964**, 20, 482-491.

Dunn, O.J. Multiple comparisons using rank sums. *Technometrics* **1964**, 6(3), 241-252.

Freer, S. Analytical Validation and Stability Study of Extract, Light Paraffinic Distillate Solvent in Acetone Formulations (Study No. WIL-402026), WIL Research Laboratories, LLC, Ashland, OH, Draft.

Hayashi M, Sofuni T and Ishidate M (Jr.). An application of acridine orange fluorescent staining to the micronucleus test. *Mutation Research* 1983 Jun; 120(4):241-7.

Heddle JA, Hite M, Kirkhart B, Mavournin K, MacGregor JT, Newell GW and Salamone MF. The induction of micronuclei as a measure of genotoxicity. A report of the U.S. Environmental Protection Agency Gene-Tox Program. *Mutation Research* 1983 Sep; 123(1):61-118.

Kruskal, W.H.; Wallis, W.A. Use of ranks in one-criterion variance analysis. *Journal of the American Statistical Association* **1952**, 47, 583-621.

Schmid W. The micronucleus test. *Mutation Research* 1975 Feb; 31(1):9-15.

Snedecor, G.W.; Cochran, W.G. One Way Classifications; Analysis of Variance. In *Statistical Methods*, 7th ed.; The Iowa State University Press: Ames, IA, **1980**; pp 215-237.

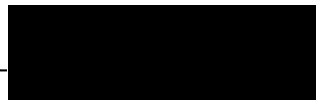


19 PROTOCOL APPROVAL:

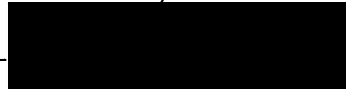
Sponsor approval received via e-mail on 31 March 2011
Date

American Petroleum Institute

Sponsor Representative

3 April 2011
Date**WIL Research Laboratories, LLC**

Study Director

01 April 2011
Date

Senior Director, General Toxicology

1 April 2011
Date

APPENDIX A**SCORING CRITERIA FOR DERMAL REACTIONS****Evaluation of Dermal Reactions***

<u>Value</u>	<u>Erythema and Eschar Formation</u>	<u>Computer Designation</u>
0	No erythema	No erythema
1	Very slight erythema (barely perceptible, edges of area not well defined)	Very slight erythema
2	Slight erythema (pale red in color and edges definable)	Slight erythema
3	Moderate to severe erythema (definite red in color and area well defined)	Moderate erythema
4	Severe erythema (beet or crimson red) to slight eschar formation (injuries in depth)	Severe erythema
<hr/>		
	<u>Edema Formation</u>	<u>Computer Designation</u>
0	No edema	No edema
1	Very slight edema (barely perceptible, edges of area not well defined)	Very slight edema
2	Slight edema (edges of area well defined by definite raising)	Slight edema
3	Moderate edema (raised approximately 1 mm)	Moderate edema
4	Severe edema (raised more than 1 mm and extending beyond area of exposure)	Severe edema

*Draize, J. H., 1965. The Appraisal of the Safety of Chemicals in Foods, Drugs and Cosmetics. Dermal Toxicity, pp. 46-59. Assoc. of Food and Drug Officials of the U.S., Topeka, Kansas.



APPENDIX B

Test Substance Characterization and Certificate of Analysis (Sponsor- and Supplier-Provided Data)

Client: American Petroleum Institute (API)
Job Location: Deer Park, TX, USA
Vessel: API
Our Reference Number: US785-0016850

Client Reference Number:
None

Sample ID: 2009-DRPK-002498-001
Drawn By: Client
Sample Designated As: Various
Representing: Site #2 Sx. #28 (As Received)

Date Taken: 02-March-2009
Date Submitted: 02-March-2009
Date Tested: 12-March-2009

Method	Test	Result	Units
ASTM D4052	Density of Liquids by Digital Density Meter		
	Relative Density @ 60/60°F	0.9920	
	API Gravity @ 60°F	11.1	*API
ASTM D2887	Boiling Range Distribution of Petroleum Fractions by GC (Simulated Distillation)	See Attached Report	
AD HOC	Boiling Point Distribution		
	Various Methodology		
	Method Name	ASTM_D2007	
	Saturates	14.97	Mass %
	Polar	17.75	Mass %
	Aromatics	67.28	Mass %

Sample ID: 2009-DRPK-002498-002
Drawn By: Client
Sample Designated As: Various
Representing: Site #7 Sx. #23 (As Received)

Date Taken: 02-March-2009
Date Submitted: 02-March-2009
Date Tested: 12-March-2009

Method	Test	Result	Units
ASTM D4052	Density of Liquids by Digital Density Meter		
	Relative Density @ 60/60°F	0.9965	
	API Gravity @ 60°F	10.5	*API
ASTM D2887	Boiling Range Distribution of Petroleum Fractions by GC (Simulated Distillation)	See Attached Report	
AD HOC	Boiling Point Distribution		
	Various Methodology		
	Method Name	ASTM_D2007	
	Polar	5.48	Mass %
	Saturates	11.04	Mass %
	Aromatics	83.48	

Sample ID: 2009-DRPK-002498-003
Drawn By: Client
Sample Designated As: Various
Representing: Site #38 Sx. #1 (As Received)

Date Taken: 02-March-2009
Date Submitted: 02-March-2009
Date Tested: 12-March-2009

Method	Test	Result	Units
ASTM D4052	Density of Liquids by Digital Density Meter		
	Relative Density @ 60/60°F	0.9989	
	API Gravity @ 60°F	10.2	*API



Report of Analysis

INTERIM

Sample ID: 2009-DRPK-002498-003	Date Taken: 02-March-2009
Drawn By: Client	Date Submitted: 02-March-2009
Sample Designated As: Various	Date Tested: 12-March-2009
Representing: Site #38 Sx. #1 (As Received)	

Method	Test	Result	Units
ASTM D2887	Boiling Range Distribution of Petroleum Fractions by GC (Simulated Distillation)		
	Boiling Point Distribution	See Attached Report	
AD HOC	Various Methodology		
	Method Name	ASTM_D2007	
	Saturates	12.45	Mass %
	Polar	24.57	Mass %
	Aromatics	62.98	Mass %

Signed: _____ Date: _____
Intertek

This report has been reviewed for accuracy, completeness, and comparison against specifications when available. The reported results are only representative of the samples submitted for testing and are subject to confirmation upon completion of the final report, which may contain warnings, exceptions and terms and conditions which are pertinent to the data supplied herein. It is the position of Intertek that the final report is the prevailing document, and that the use of interim documents by the client is at their own risk. This report shall not be reproduced except in full without written approval of the laboratory.

Simdist-2000
ITS Caleb Brett - Houston

SAMPLE:	09-2498-2 Site #7 Sx. #23	Injection Date:	0090306104745-0600
FILE:	C:\CP32 Instruments\ID2887 & D3710\Data\2009\MAR-09\09-2498-2.0004.CDF	Report Date:	3/6/09 10:49
PROCEDURE:	C:\CP32 Instruments\ID2887 & D3710\PROCEDURES\ID2887-022609.prc		
EXCEL FILE:	C:\CP32 Instruments\ID2887 & D3710\Reports\2009\FEB-09\09-2498-2_0004_CDF.xls		

Boiling Point Distribution Report
ASTM D2887 Simulated Distillation

%Off	BP °F	BP °C	%Off	BP °F	BP °C	%Off	BP °F	BP °C
IBP	609.3	320.7	40%	733.7	389.8	80%	799.7	426.5
1%	628.6	331.5	41%	735.2	390.7	81%	801.8	427.7
2%	643.9	339.9	42%	736.8	391.5	82%	804.0	428.9
3%	652.7	344.9	43%	738.3	392.4	83%	806.3	430.1
4%	658.4	348.0	44%	739.8	393.2	84%	808.6	431.5
5%	662.8	350.4	45%	741.3	394.0	85%	811.0	432.8
6%	666.5	352.5	46%	742.9	394.9	86%	813.4	434.1
7%	669.8	354.4	47%	744.4	395.8	87%	816.1	435.6
8%	672.9	356.1	48%	746.0	396.7	88%	819.0	437.2
9%	675.7	357.6	49%	747.7	397.6	89%	822.1	438.9
10%	678.2	359.0	50%	749.2	398.5	90%	825.4	440.8
11%	680.8	360.4	51%	750.9	399.4	91%	829.0	442.8
12%	683.3	361.8	52%	752.4	400.2	92%	833.0	445.0
13%	685.6	363.1	53%	754.0	401.1	93%	837.5	447.5
14%	687.9	364.4	54%	755.6	402.0	94%	842.7	450.4
15%	690.1	365.6	55%	757.2	402.9	95%	848.9	453.8
16%	692.2	366.8	56%	758.7	403.7	96%	856.6	458.1
17%	694.2	367.9	57%	760.2	404.6	97%	867.0	463.9
18%	696.2	369.0	58%	761.7	405.4	98%	881.9	472.1
19%	698.0	370.0	59%	763.3	406.3	99%	909.4	487.4
20%	699.8	371.0	60%	764.9	407.2	FBP	944.3	506.8
21%	701.6	372.0	61%	766.5	408.0			
22%	703.5	373.0	62%	768.0	408.9			
23%	705.3	374.0	63%	769.7	409.8			
24%	707.1	375.0	64%	771.3	410.7			
25%	708.8	376.0	65%	773.0	411.6			
26%	710.6	377.0	66%	774.6	412.6			
27%	712.3	377.9	67%	776.3	413.5			
28%	714.0	378.9	68%	777.9	414.4			
29%	715.7	379.8	69%	779.5	415.3			
30%	717.3	380.7	70%	781.3	416.3			
31%	718.9	381.6	71%	783.0	417.2			
32%	720.5	382.5	72%	784.7	418.2			
33%	722.2	383.4	73%	786.5	419.2			
34%	723.8	384.4	74%	788.4	420.2			
35%	725.5	385.3	75%	790.1	421.2			
36%	727.2	386.2	76%	792.0	422.2			
37%	728.9	387.1	77%	793.8	423.2			
38%	730.5	388.1	78%	795.7	424.3			
39%	732.1	388.9	79%	797.7	425.4			

Start Elution Time (mins):	2.814	Sample Wt:	0 g
End Elution Time (mins):	23.42	Solvent Wt:	0 g
		Material Balance:	100.0 wt%
Blank File:	C:\CP32 Instruments\ID2887 & D3710\Data\2009\MAR-09\BLANK2-030509.0002.CDF		
Calib File:	D:\CP32 Instruments\ID2887 & D3710\DATA\RTMIX-060905.0006.CDF		
Resp Factor:	1.000E+00		

PORT ROYAL RESEARCH, LLC

Final Report
PTI Study No. 2009-0203
February 27, 2009

CHARACTERIZATION AND QUANTITATION OF
POLYNUCLEAR AROMATIC COMPOUNDS (PAC) IN THREE
HPV AROMATIC EXTRACTS BY PRR ("MOBIL" METHOD 2)
PAC

Sponsor: American Petroleum Institute

CHARACTERIZATION AND QUANTITATION OF POLYNUCLEAR AROMATIC
COMPOUNDS (PAC) IN THREE HPV AROMATIC EXTRACTS BY PRR ("MOBIL"
METHOD 2) PAC

STUDY NO.: 2009-0203

MATERIALS TESTED: 3 – HPV Aromatic Extracts

CRU SAMPLE NOS.: 020904 - 020906

REQUESTER: American Petroleum Institute
1220 L Street, NW
Washington, DC 2005-4070

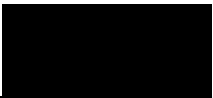
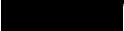


LIAISON:



STUDY PERFORMED BY: Port Royal Research, LLC
61 S. Port Royal Drive
Hilton Head, SC 29928

EXPERIMENTAL START DATE: February 23, 2009

EXPERIMENTAL TERMINATION DATE: February 26, 2009


 
Study Director  Date 2/27/09

DISTRIBUTION

Study Director
API Liaison (original)



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RESULTS**PRR ("MOBIL" METHOD 2) PAC**

The polynuclear aromatics (PAC) were isolated by following PRR Standard Operating Procedure No. A.3.1.. The total weight percent PAC and the group percentages of the total Wt.% are as follows:

TABLE I

Sample Identification		total Wt. %	Group Percentages of total Wt. %						
			I	II	III	IV	V	VI	≥VII
SITE #38	SAMPLE #1	18.4	0	0	20	40	20	10	3
SITE #2	SAMPLE #28	12.2	0	0	20	50	20	10	4
SITE #7	SAMPLE #23	13.6	0	0	40	50	10	2	0

Percentages are reported to one significant figure where groups I through VII represent benzenes and two-through seven-fused ring aromatics, respectively.

Table II below reports these same results as the weight percent of the total in each ring group:

TABLE II

Sample Identification		total Wt. %	Group Wt%						
			I	II	III	IV	V	VI	≥VII
SITE #38	SAMPLE #1	18.4	0.00	0.00	3.68	7.36	3.68	1.84	0.55
SITE #2	SAMPLE #28	12.2	0.00	0.00	2.44	6.10	2.44	1.22	0.49
SITE #7	SAMPLE #23	13.6	0.00	0.00	5.44	6.80	1.36	0.27	0.00

Certificate of Analysis

SIGMA-ALDRICH

Product Name	Cyclophosphamide monohydrate, bulk package
Product Number	C0768
Product Brand	SIGMA
CAS Number	6055-19-2
Molecular Formula	$C_7H_{15}Cl_2N_2O_2P \cdot H_2O$
Molecular Weight	279.10

TEST	SPECIFICATION	LOT 079K1569 RESULTS
Appearance (Color)	White to Off-White	White
Appearance (Form)	Powder	Powder
Solubility (Color)	Colorless	Colorless
Solubility (Turbidity)	Clear	Clear
	100 mg/ml in H ₂ O	
Water (by Karl Fischer)	4.7 - 7.8 %	7.7 %
Proton NMR spectrum	Conforms to Structure	Conforms
Purity (HPLC)	97.0 - 103.0 %	100.5 %
Recommended Retest Period	-----	-----
	3 Years	
Specification Date:		OCT 2009
Date of QC Release:		OCT 2009
Recommended Retest Date:		JUL 2012
Print Date:		OCT 12 2009



Rodney Burbach, Manager
Quality Control
St. Louis, Missouri USA

APPENDIX C

Analyses of Dosing Formulations (WIL Research)

A 90-Day Repeat-Dose Dermal Toxicity
Study in Conjunction with a Micronucleus
Assay Utilizing Extract, Light Paraffinic
Distillate Solvent in Sprague Dawley Rats

Analyses of Dosing Formulations

Analytical Chemistry Department

WIL Research



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1. SUMMARY

A gas chromatography method using flame ionization detection for the determination of light paraffinic distillate solvent (LPDS) concentration in acetone formulations and test substance ranging in concentration from 1.00 to 500 mg/mL was validated in a previous study (Freer, 2011, WIL-402026). In the present study, dosing formulations prepared at target concentrations of 3.3, 33.3, and 100.0 mg LPDS/mL were analyzed to assess test substance homogeneity and concentration acceptability. The results met the WIL Research SOP acceptance criteria for homogeneity, *i.e.*, the relative standard deviation (RSD) for the mean concentration was $\leq 10\%$ at a concentration within the acceptable limits (85% to 115% of the target concentration), and concentration acceptability for suspension formulations, *i.e.*, the analyzed concentration was 85% to 115% of the target concentration. No test substance was detected in the analyzed vehicle administered to the control group.

2. INTRODUCTION

This report provides a detailed description of a gas chromatography (GC) method using flame ionization detection (FID) for the determination of light paraffinic distillate solvent (LPDS) concentration in acetone formulations and test substance ranging in concentration from 1.00 to 500 mg/mL. The method was validated in a previous study (Freer, 2011, WIL-402026) where assay specificity/selectivity, calibration reproducibility, precision, accuracy, ruggedness, and test substance stability in calibration standards and processed QC samples stored at room temperature for up to 2 days were established. Also in the previous study, test substance homogeneity and, following 10 days of room temperature storage, stability were assessed in formulations ranging in concentration from 1 to 500 mg LPDS/mL. In the present study, formulations used for dose administration were analyzed to verify test substance homogeneity and concentration acceptability.

A list of abbreviations potentially used in this report is presented in Section 8. (Abbreviations).

2.1. KEY STUDY DATES

<u>Date(s)</u>	<u>Event(s)</u>
15 April 2011	First date of analysis
8 July 2011	Last date of analysis

2.2. WIL RESEARCH KEY STUDY PERSONNEL

[REDACTED]	Research Chemist, Analytical Chemistry
[REDACTED]	Chemist III, Analytical Chemistry
[REDACTED]	Chemist I, Analytical Chemistry
[REDACTED]	Publishing Specialist, Reporting & Technical Support Services
[REDACTED]	Group Manager, Reporting & Technical Support Services

3. EXPERIMENTAL PROCEDURES - MATERIALS AND METHODS

3.1. GAS CHROMATOGRAPHY

Instrument:	Agilent 6890 gas chromatograph equipped with a flame ionization detector, autosampler, and Dionex Chromeleon [®] software, or equivalent system
Column:	Zebron ZB-1HT Inferno column, 15 m × 0.32 mm ID, 0.25-μm film thickness
Carrier Gas:	Helium
Carrier Gas Flow Rate:	1.5 mL/minute
Injector Temperature:	300°C
Injection Volume:	1 μL, split (5:1)
Detector:	FID at 400°C
Temperature Program:	120°C, hold for 1 minute, ramp at 40°C/minute to 400°C, hold for 2 minutes
Retention Time:	Approximately 3.5 to 7.0 minutes for LPDS peak group
Run Time:	10.0 minutes

3.2. PREPARATION OF CALIBRATION STOCK SOLUTION AND STANDARDS

A calibration stock solution was prepared at a concentration of 2.00 mg LPDS/mL as follows. Approximately 20 mg of LPDS (WIL log no. 8470A, no correction for purity) was accurately weighed in a tared glass weigh funnel and transferred to a 10-mL volumetric flask with rinses of ethyl acetate. Ethyl acetate used for preparation of stock solutions and dilutions had to be HPLC grade >99%. The preparation was mixed as necessary to achieve complete dissolution of the test substance. Additional ethyl acetate was added to obtain the desired concentration, and the solution was thoroughly mixed.

Calibration standards at concentrations of 500, 625, 750, 875, and 1000 µg LPDS/mL were prepared by diluting aliquots of the calibration stock solution with ethyl acetate in amber autosampler vials. At least single calibration standards at each concentration were prepared for routine analyses.

3.3. PREPARATION OF THE QUALITY CONTROL STOCK SOLUTION AND SAMPLES

A QC stock solution was prepared at a concentration of 10.0 mg LPDS/mL as follows. Approximately 0.25 g of LPDS (WIL log no. 8470A, no correction for purity) was accurately weighed in a tared glass weigh funnel and transferred to a 25-mL volumetric flask with rinses of ethyl acetate. The preparation was mixed as necessary to achieve complete dissolution of the test substance. Additional ethyl acetate was added to obtain the desired concentration, and the solution was thoroughly mixed.

As detailed in the following table, QC samples were prepared to simulate the processing of formulations at concentrations of 1.00, 10.0, and 100 mg LPDS/mL (nominal QC concentrations) by combining aliquots of the QC stock solution, vehicle (acetone), and ethyl acetate in polypropylene tubes. The processed samples were mixed with vortex action. Portions of the samples were further diluted as necessary with ethyl acetate in amber autosampler vials. The vials were capped, and the diluted samples were mixed

with vortex action. The QC samples were prepared in triplicate at each concentration; a single vehicle blank sample was prepared.

QC Level	Nominal QC Concentration (mg/mL)	Vehicle Volume (mL)	QC Stock Volume (mL)	Ethyl Acetate Volume (mL)	Secondary Dilution	Theoretical Final Concentration (µg/mL)
Blank	0	0.500	0	0.300	NA	0
QC1	1.00	0.500	0.0500	0.250	NA	625
QC2	10.0	0.500	0.500	7.00	NA	625
QC3	100	0.500	5.00	4.50	6.67-fold	750

NA = Not applicable

3.4. FORMULATION SAMPLE COLLECTION AND PROCESSING

Quadruplicate formulation samples were collected using a class A glass volumetric pipette and placed in polypropylene tubes. Two samples (from each quadruplicate set) were processed for analysis. The remaining 2 samples (back-up samples) were stored at room temperature and, if not processed for analysis, were discarded after the Study Director's approval of analytical results.

As detailed in the following table, formulation samples were processed by adding ethyl acetate and mixing with vortex action. Samples were further diluted with ethyl acetate in amber autosampler vials. The vials were capped, and the diluted samples were mixed with vortex action.

Dose Group	Target Test Substance Concentration (mg/mL)	Sample Volume (mL)	Ethyl Acetate Volume (mL)	Secondary Dilution	Theoretical Final Concentration (µg/mL)
2	0	1.0	2.00	1.47-fold	0
3	3.3	1.0	2.00	1.47-fold	750
4	33.3	1.0	29.0	1.47-fold	757
5	100.0	1.0	19.0	6.67-fold	750

3.5. CALIBRATION AND QUANTITATION

Single injections were made of each calibration standard and processed QC and formulation sample. A calibration curve was constructed for each set of analyses. The LPDS peak areas (y) and the theoretical concentrations (x) of the calibration standards were fit with least-squares regression analysis to the quadratic function:

$$y = ax^2 + bx + c$$

Concentrations were calculated from the results of the regression analysis using Dionex Chromeleon[®] software. The concentration data were transferred to Microsoft Excel[®], where appropriate summary statistics, *i.e.*, mean, standard deviation (SD), relative standard deviation (RSD), and concentration as a percent of target concentration, were calculated and presented in tabular form. The concentrations of QC and formulation samples were calculated by applying any necessary factors to correct for sample dilution or unit conversion.

4. RESULTS AND DISCUSSION

Under the described chromatographic conditions, the retention time of the test substance peak group was approximately 3.5 to 7.0 minutes. Figure 1, Figure 2, Figure 3, and Figure 4 are typical chromatograms of a calibration standard, a processed QC sample, a processed formulation sample, and a processed control group formulation sample, respectively. The total analysis time required for each run was 10.0 minutes.

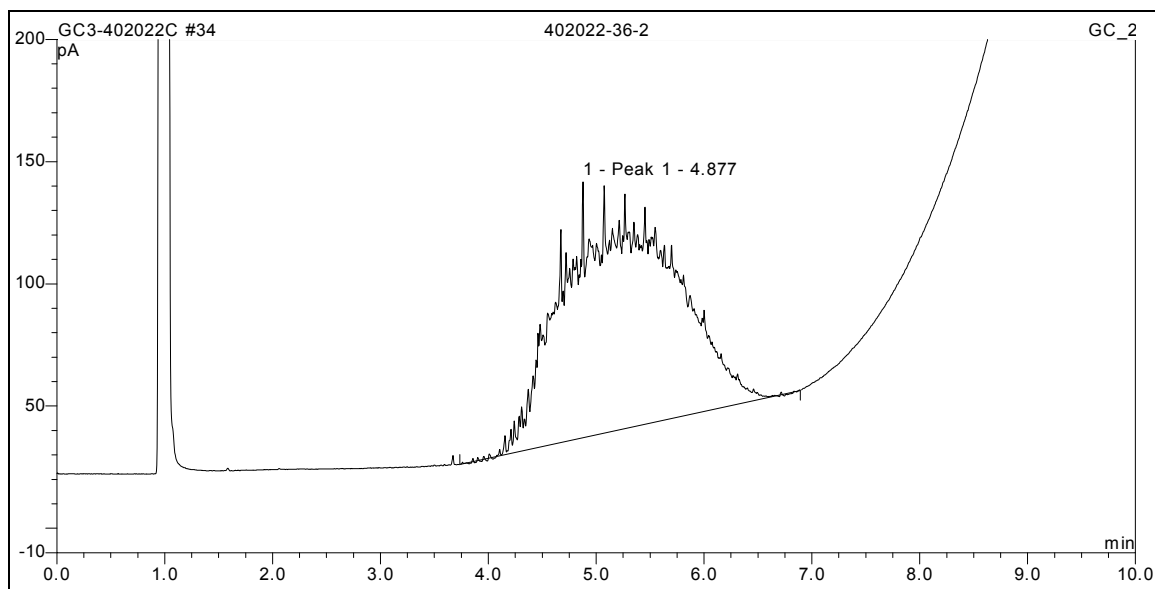


Figure 1: Representative Chromatogram of a 500 µg LPDS/mL Calibration Standard

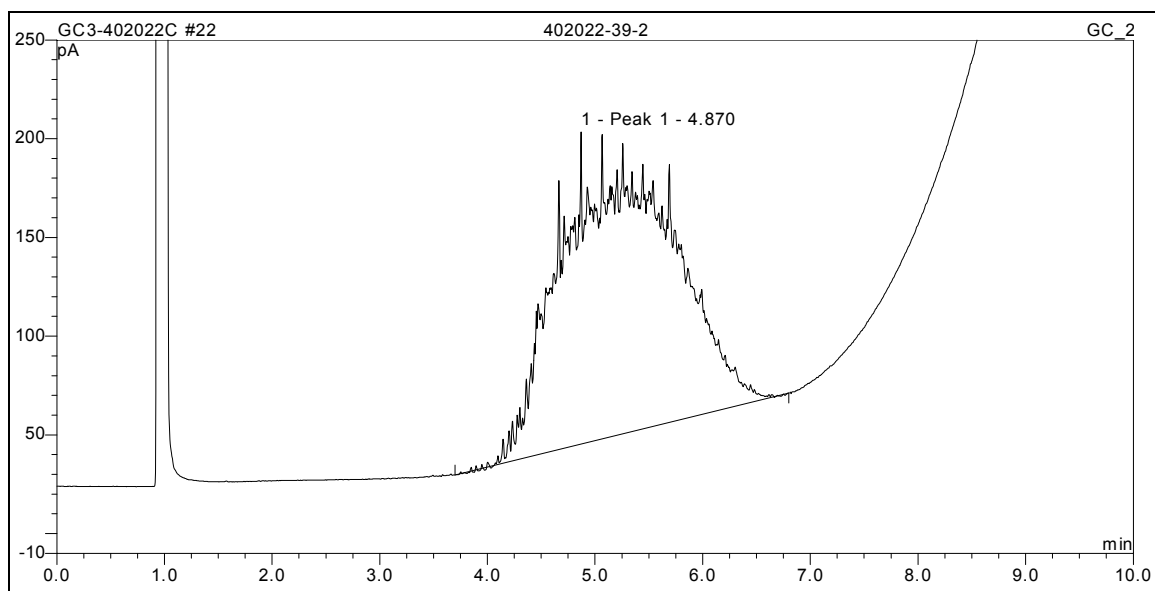


Figure 2: Representative Chromatogram of a Processed 100 mg LPDS/mL Quality Control Sample

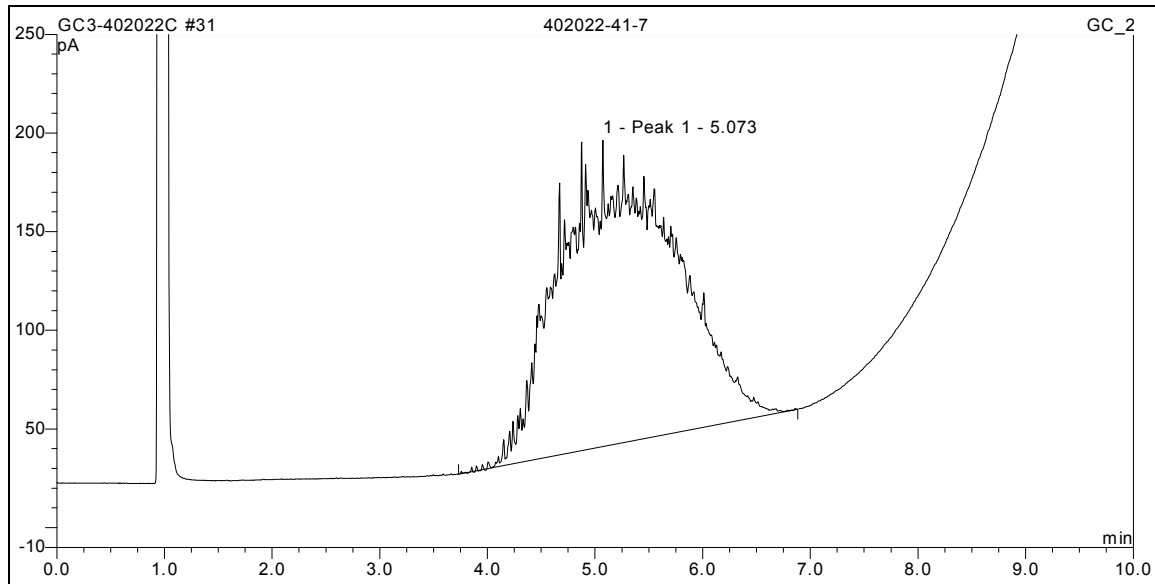


Figure 3: Representative Chromatogram of a Processed 100.0 mg LPDS/mL Formulation Sample

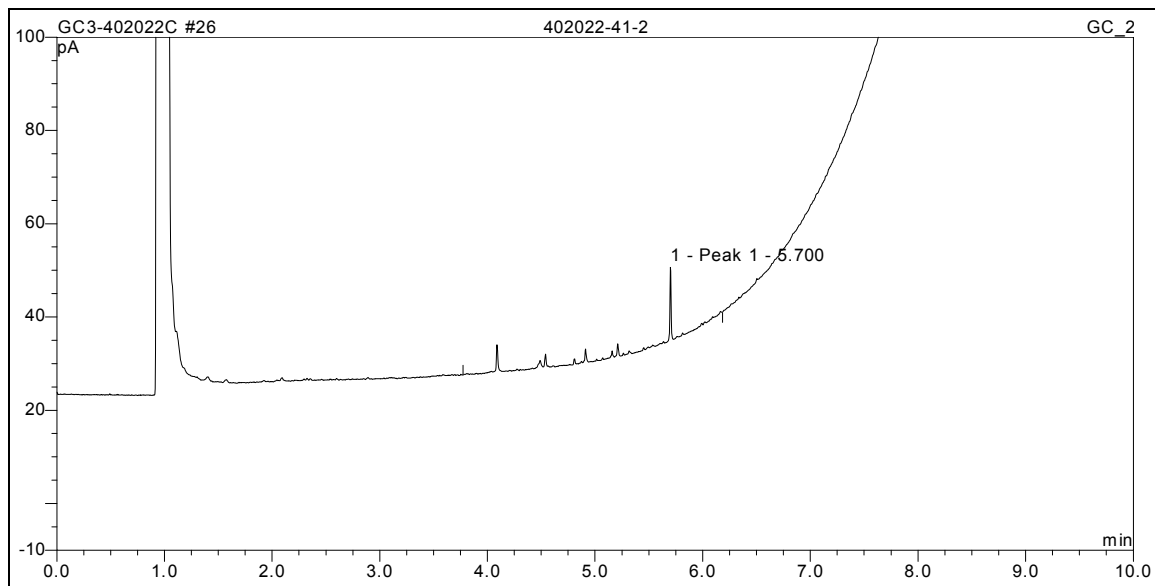


Figure 4: Chromatogram of a Processed Control Group Formulation Sample

4.1. SPECIFICITY/SELECTIVITY

As shown in Figure 4 (and in contrast to the chromatograms shown in Figure 1, Figure 2, and Figure 3), assay specificity/selectivity was confirmed when GC/FID analysis of processed vehicle samples revealed that there were no significant peaks (with signal to noise ratio $[S/N] > 10$) at or near the retention time for the test substance peak group (approximately 3.5 to 7.0 minutes).

4.2. ASSAY ACCEPTABILITY

In addition to the experimental samples, each analytical session consisted of (but was not limited to) calibration standards at 5 concentrations and triplicate QC samples prepared at each of 3 concentrations. In this study, the formulations were prepared at target concentrations of 0, 3.3, 33.3, and 100.0 mg LPDS/mL, and the QC samples were prepared at nominal concentrations of 1.00, 10.0, and 100 mg LPDS/mL. For an analytical session to be considered valid, at least two-thirds of the calculated QC concentrations with at least 1 sample at each concentration had to be 85% to 115% of the nominal QC concentration. All reported results were from analytical sessions that met the acceptance criteria.

4.3. TEST SUBSTANCE HOMOGENEITY/CONCENTRATION ASSESSMENT OF FORMULATIONS

Duplicate samples from the top, middle, and bottom strata of the formulations prepared on 15 April 2011 at target LPDS concentrations of 0, 3.3, 33.3, and 100.0 mg/mL were analyzed to assess test substance homogeneity and concentration acceptability. The results of the homogeneity/concentration analyses are presented in Table 1, with the overall statistics summarized in the following table.

Homogeneity/Concentration Assessment of the 15 April 2011 Formulation Samples				
Statistics	Group 2 (0 mg/mL)	Group 3 (3.3 mg/mL)	Group 4 (33.3mg/mL)	Group 5 (100.0 mg/mL)
Mean Concentration (mg/mL)	ND	3.39	34.3	103
SD	NA	0.054	0.40	0.34
RSD (%)	NA	1.6	1.2	0.33
Mean Concentration % of Target	NA	103	103	103

ND = Not detected; no test substance chromatographic peak detected with S/N >10

NA = Not applicable

The analyzed formulations met the WIL Research SOP acceptance criteria for homogeneity, *i.e.*, the RSD for the mean concentration was $\leq 10\%$ at a concentration within the acceptable limits (85% to 115% of the target concentration), and concentration acceptability for suspension formulations, *i.e.*, the analyzed concentration was 85% to 115% of the target concentration.

4.4. TEST SUBSTANCE CONCENTRATION IN FORMULATIONS

Formulations used for dose administration were analyzed to assess test substance concentration acceptability. The results of the concentration acceptability assessments are presented in Table 2 and Table 3 with the mean concentration and percent of target values summarized in the following table.

Mean Concentration, mg/mL (% of Target)				
Date of Preparation	Group 2 (0 mg/mL)	Group 3 (3.3 mg/mL)	Group 4 (33.3 mg/mL)	Group 5 (100.0 mg/mL)
26 May 2011	ND	3.49 (106)	35.3 (106)	108 (108)
7 July 2011	ND	3.48 (105)	35.2 (106)	105 (105)

ND = Not detected; no test substance chromatographic peak detected with S/N >10

The analyzed formulations used for dose administration met the previously stated WIL Research SOP acceptance criteria for concentration acceptability for suspension

formulations. No test substance was detected in the analyzed vehicle administered to the control group (Group 2).

5. CONCLUSIONS

A validated GC method using FID for the determination of LPDS concentration in suspension formulations was used to verify test substance homogeneity and concentration acceptability in formulations used for dose administration. The analytical results met the applicable WIL Research SOP acceptance criteria. No test substance was detected in the analyzed vehicle administered to the control group.

6. REPORT REVIEW AND APPROVAL

WIL-402022 Analytical Chemistry Report

Report Prepared and Approved by:

[Redacted Signature]

Research Chemist, Analytical Chemistry
Principal Chemist

8 AUG 2012
Date

Report Reviewed by:

[Redacted Signature]

Assistant Director, Analytical Chemistry

08 Aug 2012
Date

7. REFERENCES

Freer, S.D. Analytical Validation and Stability Study of Extract, Light Paraffinic Distillate Solvent in Acetone Formulations. (Study No. WIL-402026). WIL Research, Ashland, OH, **2011**.

8. ABBREVIATIONS

The following abbreviations may apply to this report:

μ	-	micro
μL	-	microliter
ACN	-	acetonitrile
btm	-	bottom
conc.	-	concentration
DI	-	deionized
DMSO	-	dimethylsulfoxide
ESI+	-	positive electrospray ionization
FA	-	formic acid
g	-	gram
HPLC	-	high performance liquid chromatography
hr	-	hour(s)
IS	-	internal standard
kg	-	kilogram
L	-	liter
LLOQ	-	lower limit of quantitation
MC	-	methylcellulose
MeOH	-	methanol
mg	-	milligram
mL	-	milliliter
mm	-	millimeter
msec	-	milliseconds
MS	-	mass spectrometry
mM	-	millimolar
NA	-	not applicable
ND	-	not detected
ng	-	nanogram
QC	-	quality control
%RE	-	percent relative error
RSD	-	relative standard deviation
SD	-	standard deviation
SOP	-	standard operating procedure
SPE	-	solid phase extraction
UV	-	ultraviolet
v	-	volume
w	-	weight

TABLES 1 - 3

Table 1. Homogeneity/Concentration Assessment of the 15 April 2011 Formulations
(Analyzed 15 April 2011)

<u>Group</u>	<u>Strata</u>	<u>Dose Conc</u> (mg/mL)	<u>Ref #</u> (402022-)	<u>Run #</u>	<u>Analyzed Conc</u> (mg/mL)	<u>Percent of Target</u> (%)	<u>Mean Conc</u> (mg/mL)	<u>SD</u>	<u>RSD</u> (%)	<u>Mean Conc % of Target</u> (%)
2	Top	0	7 - 1	38			-----Not Detected-----			
			7 - 2	39			-----Not Detected-----			
	Mid	0	7 - 3	40			-----Not Detected-----			
			7 - 4	41			-----Not Detected-----			
	Btm	0	7 - 5	42			-----Not Detected-----			
			7 - 6	43			-----Not Detected-----			
3	Top	3.3	7 - 7	44	3.41	103	3.39	0.054	1.6	103
			7 - 8	45	3.48	105				
	Mid	3.3	7 - 9	46	3.37	102				
			7 - 10	47	3.35	101				
	Btm	3.3	7 - 11	48	3.40	103				
			7 - 12	49	3.33	101				
4	Top	33.3	7 - 13	50	33.7	101	34.3	0.40	1.2	103
			7 - 14	51	34.2	103				
	Mid	33.3	7 - 15	52	34.2	103				
			7 - 16	53	34.7	104				
	Btm	33.3	7 - 17	54	34.7	104				
			7 - 18	55	34.6	104				
5	Top	100.0	7 - 19	56	103	103	103	0.34	0.33	103
			7 - 20	57	103	103				
	Mid	100.0	7 - 21	58	102	102				
			7 - 22	59	103	103				
	Btm	100.0	7 - 23	60	103	103				
			7 - 24	61	103	103				

Table 2. Concentration Assessment of the 26 May 2011 Formulations
(Analyzed 26 May 2011)

<u>Group</u>	<u>Strata</u>	<u>Dose Conc</u> (mg/mL)	<u>Ref #</u> (402022-)	<u>Run #</u>	<u>Analyzed Conc</u> (mg/mL)	<u>Percent of Target</u> (%)	<u>Mean Conc</u> (mg/mL)	<u>SD</u>	<u>RSD</u> (%)	<u>Mean Conc % of Target</u> (%)
2	Mid	0	25 - 1 25 - 2	103 104			-----Not Detected----- -----Not Detected-----			
3	Mid	3.3	25 - 3 25 - 4	105 106	3.48 3.50	105 106	3.49	0.012	0.35	106
4	Mid	33.3	25 - 5 25 - 6	107 108	35.0 35.6	105 107	35.3	0.48	1.4	106
5	Mid	100.0	25 - 7 25 - 8	109 110	109 107	109 107	108	1.3	1.2	108

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Table 3. Concentration Assessment of the 7 July 2011 Formulations
(Analyzed 8 July 2011)

<u>Group</u>	<u>Strata</u>	<u>Dose Conc</u> (mg/mL)	<u>Ref #</u> (402022-)	<u>Run #</u>	<u>Analyzed Conc</u> (mg/mL)	<u>Percent of Target</u> (%)	<u>Mean Conc</u> (mg/mL)	<u>SD</u>	<u>RSD</u> (%)	<u>Mean Conc % of Target</u> (%)
2	Mid	0	41 - 1	136	-----Not Detected-----					
			41 - 2	137	-----Not Detected-----					
3	Mid	3.3	41 - 3	138	3.46	105	3.48	0.035	0.99	105
			41 - 4	139	3.51	106				
4	Mid	33.3	41 - 5	140	34.8	104	35.2	0.59	1.7	106
			41 - 6	141	35.6	107				
5	Mid	100.0	41 - 7	142	105	105	105	0.10	0.098	105
			41 - 8	143	105	105				

Note: Samples were processed on 7 July 2011 and stored room temperature until analysis on 8 July 2011

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APPENDIX D

Pretest Clinical Observations

----- M A L E -----		
TABLE RANGE:	04-08-11 TO 04-17-11	
GROUP:		1

NORMAL
-NO SIGNIFICANT CLINICAL OBSERVATIONS 130/65

1- PRETEST

PROJECT NO.:WIL-402022P	TABLE P1 (PRETEST DETAILED PHYSICAL EXAMINATIONS)	PAGE	2
SPONSOR:AMERICAN PETROLEUM	A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS		
	SUMMARY OF CLINICAL FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS		
----- F E M A L E -----			
TABLE RANGE:	04-08-11 TO 04-17-11		
GROUP:			1

NORMAL			
-NO SIGNIFICANT CLINICAL OBSERVATIONS			129/65
DISPOSITION			
-SENT TO NECROPSY TO BE EUTHANIZED IN			1/ 1
EXTREMIS- PHYSICAL CONDITION			
BEHAVIOR/CNS			
-HYPOACTIVITY			1/ 1
-TREMORS, INTERMITTENT			1/ 1
CARDIO-PULMONARY			
-BODY COOL TO TOUCH			1/ 1
EYES/EARS/NOSE			
-DRIED RED MATERIAL AROUND LEFT EYE			1/ 1
-DRIED RED MATERIAL AROUND RIGHT EYE			1/ 1
-DRIED RED MATERIAL AROUND NOSE			1/ 1
EXCRETA			
-DEFECATION DECREASED			1/ 1
-SOFT FECES			1/ 1

1- PRETEST			

----- F E M A L E -----

TABLE RANGE:
GROUP:

04-08-11 TO 04-17-11

1

BODY/INTEG III

-WET YELLOW MATERIAL UROGENITAL AREA

1/ 1

-DRIED RED MATERIAL FORELIMB(S)

1/ 1

1- PRETEST

PCSUv4.07
09/20/2011

----- M A L E -----

TABLE RANGE: 04-08-11 TO 04-17-11

GROUP: 1

SPECIAL II

-SCORED, NOT REMARKABLE 64/64

-SCABBING WITHIN DOSE SITE 1/ 1

-NO ERYTHEMA 1/ 1

-NO EDEMA 1/ 1

1- PRETEST

PROJECT NO.:WIL-402022P
SPONSOR:AMERICAN PETROLEUM

TABLE P2 (PRETEST DERMAL OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
SUMMARY OF DERMAL OBSERVATIONS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 2

----- F E M A L E -----

TABLE RANGE: 04-08-11 TO 04-17-11
GROUP:

1

SPECIAL II
-SCORED, NOT REMARKABLE
-SCABBING WITHIN DOSE SITE
-NO ERYTHEMA
-NO EDEMA

61/61
3/ 3
3/ 3
3/ 3

1- PRETEST

PCSUv4.07
09/20/2011
R:09/20/2011

APPENDIX E

Animal Room Environmental Conditions

A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS

PROJECT NO.:WIL- 402022

TEMPERATURE/HUMIDITY - STUDY SUMMARY REPORT

SPONSOR: 402 - AMERICAN PETROLEUM

Page 1 of 8

STUDY SPECIFICATIONS: 402022

DATE IN 04/05/11 TIME IN 08:00

DATE OUT 07/17/11 TIME OUT 16:00

ROOM SPECIFICATIONS: B ROOM 41

LOW TEMPERATURE °F: 66.0 HIGH TEMPERATURE °F: 76.0 LOW HUMIDITY %RH: 30.0

TEST SYSTEM: Rat

LOW TEMPERATURE °C: 18.9 HIGH TEMPERATURE °C: 24.4 HIGH HUMIDITY %RH: 70.0

DATE	PRIMARY TEMP		SECONDARY TEMP		PRIMARY HUM	SECONDARY HUM
	MEAN (°F)	MEAN (°C)	MEAN (°F)	MEAN (°C)	MEAN (%RH)	MEAN (%RH)
04/05/11	70.7	21.5	71.7	22.1	39.9	39.2
04/06/11	70.8	21.6	71.8	22.1	41.1	40.7
04/07/11	70.7	21.5	71.5	21.9	41.6	41.5
04/08/11	70.7	21.5	71.5	21.9	42.2	42.2
04/09/11	70.8	21.6	71.6	22.0	41.8	41.7
04/10/11	70.8	21.6	71.5	21.9	46.3	47.9
04/11/11	70.6	21.4	71.2	21.8	48.1	50.2
04/12/11	70.7	21.5	71.5	21.9	40.6	40.0
04/13/11	70.7	21.5	71.5	21.9	41.3	40.8
04/14/11	70.8	21.6	71.5	21.9	40.9	40.5
04/15/11	70.6	21.4	71.4	21.9	41.3	41.0
04/16/11	70.7	21.5	71.7	22.1	42.0	41.8
04/17/11	70.7	21.5	71.6	22.0	40.3	39.6
04/18/11	70.7	21.5	71.6	22.0	40.8	40.3
04/19/11	70.7	21.5	71.6	22.0	42.1	42.0
04/20/11	70.7	21.5	71.5	21.9	45.0	45.9
04/21/11	70.7	21.5	71.5	21.9	40.3	39.8
04/22/11	70.8	21.6	71.7	22.1	42.2	42.1
04/23/11	70.7	21.5	71.4	21.9	47.7	49.6

A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS

PROJECT NO.:WIL- 402022

TEMPERATURE/HUMIDITY - STUDY SUMMARY REPORT

SPONSOR: 402 - AMERICAN PETROLEUM

Page 2 of 8

DATE	PRIMARY TEMP		SECONDARY TEMP		PRIMARY HUM	SECONDARY HUM
	MEAN (°F)	MEAN (°C)	MEAN (°F)	MEAN (°C)	MEAN (%RH)	MEAN (%RH)
04/24/11	70.7	21.5	71.5	21.9	46.3	47.6
04/25/11	70.7	21.5	71.5	21.9	47.7	49.5
04/26/11	70.8	21.6	71.5	21.9	48.0	50.1
04/27/11	70.6	21.4	71.3	21.8	48.3	50.5
04/28/11	70.7	21.5	71.4	21.9	43.6	44.1
04/29/11	70.7	21.5	71.5	21.9	42.6	42.8
04/30/11	70.7	21.5	71.6	22.0	41.7	41.5
05/01/11	70.7	21.5	71.6	22.0	45.9	47.1
05/02/11	70.7	21.5	71.6	22.0	43.8	44.3
05/03/11	70.6	21.4	71.6	22.0	42.2	42.0
05/04/11	70.7	21.5	71.5	21.9	41.9	41.7
05/05/11	70.7	21.5	71.5	21.9	41.2	40.9
05/06/11	70.8	21.6	71.6	22.0	42.6	42.8
05/07/11	70.8	21.6	71.7	22.1	43.0	43.2
05/08/11	70.7	21.5	71.6	22.0	44.0	44.6
05/09/11	70.7	21.5	71.4	21.9	41.7	41.6
05/10/11	70.6	21.4	71.4	21.9	43.3	43.8
05/11/11	70.8	21.6	71.4	21.9	44.7	45.6
05/12/11	70.8	21.6	71.4	21.9	45.2	46.2
05/13/11	70.8	21.6	71.5	21.9	45.8	46.9
05/14/11	70.6	21.4	71.4	21.9	44.8	45.6
05/15/11	70.7	21.5	71.6	22.0	44.1	44.6
05/16/11	70.6	21.4	71.6	22.0	41.8	41.5

A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS

PROJECT NO.:WIL- 402022

TEMPERATURE/HUMIDITY - STUDY SUMMARY REPORT

SPONSOR: 402 - AMERICAN PETROLEUM

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DATE	PRIMARY TEMP		SECONDARY TEMP		PRIMARY HUM	SECONDARY HUM
	MEAN (°F)	MEAN (°C)	MEAN (°F)	MEAN (°C)	MEAN (%RH)	MEAN (%RH)
05/17/11	70.7	21.5	71.6	22.0	42.1	41.9
05/18/11	70.8	21.6	71.6	22.0	45.6	46.6
05/19/11	70.6	21.4	71.4	21.9	44.1	44.7
05/20/11	70.7	21.5	71.4	21.9	44.5	45.4
05/21/11	70.7	21.5	71.4	21.9	44.9	45.8
05/22/11	70.7	21.5	71.3	21.8	44.9	45.9
05/23/11	70.7	21.5	71.3	21.8	45.7	46.8
05/24/11	70.7	21.5	71.3	21.8	44.5	45.2
05/25/11	70.8	21.6	71.5	21.9	44.7	45.4
05/26/11	70.7	21.5	71.5	21.9	44.2	44.7
05/27/11	70.7	21.5	71.5	21.9	45.3	46.1
05/28/11	70.7	21.5	71.5	21.9	44.4	45.0
05/29/11	70.7	21.5	71.3	21.8	44.7	45.5
05/30/11	70.7	21.5	71.1	21.7	46.4	47.9
05/31/11	70.9	21.6	71.2	21.8	48.1	50.4
06/01/11	70.7	21.5	71.0	21.7	44.9	46.0
06/02/11	70.7	21.5	71.3	21.8	41.8	41.6
06/03/11	70.7	21.5	71.4	21.9	42.0	41.8
06/04/11	70.8	21.6	71.5	21.9	45.5	46.6
06/05/11	70.7	21.5	71.2	21.8	44.0	44.6
06/06/11	70.7	21.5	71.2	21.8	44.2	44.9
06/07/11	70.6	21.4	71.2	21.8	44.6	45.4
06/08/11	70.7	21.5	71.1	21.7	45.4	46.6

A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS

PROJECT NO.:WIL- 402022

TEMPERATURE/HUMIDITY - STUDY SUMMARY REPORT

SPONSOR: 402 - AMERICAN PETROLEUM

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DATE	PRIMARY TEMP		SECONDARY TEMP		PRIMARY HUM	SECONDARY HUM
	MEAN (°F)	MEAN (°C)	MEAN (°F)	MEAN (°C)	MEAN (%RH)	MEAN (%RH)
06/09/11	70.7	21.5	71.1	21.7	44.1	44.8
06/10/11	70.6	21.4	71.4	21.9	44.9	45.6
06/11/11	70.8	21.6	71.5	21.9	48.2	50.1
06/12/11	70.7	21.5	71.5	21.9	44.8	45.5
06/13/11	70.6	21.4	71.4	21.9	43.8	44.1
06/14/11	70.8	21.6	71.6	22.0	43.3	43.3
06/15/11	70.7	21.5	71.6	22.0	44.9	45.5
06/16/11	70.7	21.5	71.3	21.8	48.7	50.5
06/17/11	70.7	21.5	71.3	21.8	49.2	51.4
06/18/11	70.7	21.5	71.4	21.9	44.4	45.0
06/19/11	70.7	21.5	71.5	21.9	44.3	44.7
06/20/11	70.8	21.6	71.6	22.0	44.3	44.8
06/21/11	70.8	21.6	71.3	21.8	46.4	47.8
06/22/11	70.8	21.6	71.3	21.8	45.5	46.5
06/23/11	70.7	21.5	71.4	21.9	44.2	44.7
06/24/11	70.7	21.5	71.5	21.9	45.5	46.3
06/25/11	70.7	21.5	71.5	21.9	44.3	44.7
06/26/11	70.7	21.5	71.5	21.9	44.3	44.8
06/27/11	70.7	21.5	71.4	21.9	46.3	47.5
06/28/11	70.6	21.4	71.2	21.8	46.0	47.2
06/29/11	70.6	21.4	71.2	21.8	44.5	45.2
06/30/11	70.7	21.5	71.3	21.8	44.4	45.1
07/01/11	70.8	21.6	71.3	21.8	45.2	46.3

A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS

PROJECT NO.:WIL- 402022

TEMPERATURE/HUMIDITY - STUDY SUMMARY REPORT

SPONSOR: 402 - AMERICAN PETROLEUM

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DATE	PRIMARY TEMP		SECONDARY TEMP		PRIMARY HUM	SECONDARY HUM
	MEAN (°F)	MEAN (°C)	MEAN (°F)	MEAN (°C)	MEAN (%RH)	MEAN (%RH)
07/02/11	70.6	21.4	71.2	21.8	45.2	46.3
07/03/11	70.7	21.5	71.1	21.7	45.8	47.0
07/04/11	70.7	21.5	71.2	21.8	45.8	47.0
07/05/11	70.7	21.5	71.2	21.8	44.8	45.6
07/06/11	70.6	21.4	71.0	21.7	45.2	46.2
07/07/11	70.7	21.5	71.1	21.7	44.6	45.3
07/08/11	70.5	21.4	71.3	21.8	45.4	46.2
07/09/11	70.5	21.4	71.1	21.7	45.3	46.1
07/10/11	70.7	21.5	71.1	21.7	45.5	46.6
07/11/11	70.7	21.5	71.2	21.8	47.1	48.5
07/12/11	70.9	21.6	71.2	21.8	49.6	52.4
07/13/11	70.8	21.6	71.3	21.8	46.2	47.4
07/14/11	70.7	21.5	71.2	21.8	44.8	45.5
07/15/11	70.8	21.6	71.4	21.9	45.5	46.5
07/16/11	70.6	21.4	71.1	21.7	45.2	46.2
07/17/11	70.7	21.5	71.3	21.8	44.3	44.8

A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS

PROJECT NO.:WIL- 402022

TEMPERATURE/HUMIDITY - STUDY SUMMARY REPORT

SPONSOR: 402 - AMERICAN PETROLEUM

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DATE	PRIMARY TEMP		SECONDARY TEMP		PRIMARY HUM	SECONDARY HUM
	MEAN (°F)	MEAN (°C)	MEAN (°F)	MEAN (°C)	MEAN (%RH)	MEAN (%RH)
SUMMARY OF DAILY MEANS	MEAN	MIN	MAX			
PRIMARY TEMP °F:	70.7	70.5	70.9			
PRIMARY TEMP °C:	21.5	21.4	21.6			
SECONDARY TEMP °F:	71.4	71.0	71.8			
SECONDARY TEMP °C:	21.9	21.7	22.1			
PRIMARY HUM %RH:	44.4	39.9	49.6			
SECONDARY HUM %RH:	45.1	39.2	52.4			
N DAYS	104					

A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS

PROJECT NO.:WIL- 402022

TEMPERATURE/HUMIDITY - STUDY SUMMARY REPORT

SPONSOR: 402 - AMERICAN PETROLEUM

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B ROOM 41 SUMMARY OF HOURLY VALUES

	PRIMARY TEMP				SECONDARY TEMP				PRIMARY HUM		SECONDARY HUM	
MEAN	70.7	°F	21.5	°C	71.4	°F	21.9	°C	44.4	%RH	45.1	%RH
MIN	69.0	°F	20.6	°C	69.6	°F	20.9	°C	37.9	%RH	36.4	%RH
MAX	72.0	°F	22.2	°C	72.6	°F	22.6	°C	63.2	%RH	66.9	%RH
SD	0.25		0.14		0.40		0.22		3.10		4.15	
SE	0.01		0.00		0.01		0.00		0.06		0.08	
N SAMPLES	2472				2472				2472		2472	
FIRST DAY	04/05/11											
LAST DAY	07/17/11											
N DAYS	104											

STUDY 402022 SUMMARY OF HOURLY VALUES

	PRIMARY TEMP				SECONDARY TEMP				PRIMARY HUM		SECONDARY HUM	
MEAN	70.7	°F	21.5	°C	71.4	°F	21.9	°C	44.4	%RH	45.1	%RH
MIN	69.0	°F	20.6	°C	69.6	°F	20.9	°C	37.9	%RH	36.4	%RH
MAX	72.0	°F	22.2	°C	72.6	°F	22.6	°C	63.2	%RH	66.9	%RH
SD	0.25		0.14		0.40		0.22		3.10		4.15	
SE	0.01		0.00		0.01		0.00		0.06		0.08	
N SAMPLES	2472				2472				2472		2472	
FIRST DAY	04/05/11											
LAST DAY	07/17/11											
N DAYS	104											

APPENDIX F

Unscheduled Clinical Observations and Treatments

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE U1 (UNSCHEDULED CLINICAL OBSERVATIONS AND TREATMENTS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 1

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99472	M	UNTREATED	EYES/EARS/NOSE	22	10:13	P	DRIED RED MATERIAL AROUND NOSE
99474	M	UNTREATED	EYES/EARS/NOSE	22	10:14	P	DRIED RED MATERIAL AROUND RIGHT EYE
99496	M	UNTREATED	EYES/EARS/NOSE	22	10:14	P	DRIED RED MATERIAL AROUND NOSE
99467	M	0 MG/KG/DAY	EYES/EARS/NOSE	22	11:03	P	DRIED RED MATERIAL AROUND NOSE
99498	M	0 MG/KG/DAY	EYES/EARS/NOSE	22	11:03	P	DRIED RED MATERIAL AROUND NOSE
99502	M	0 MG/KG/DAY	EYES/EARS/NOSE	22	11:03	P	DRIED RED MATERIAL AROUND NOSE
99519	M	0 MG/KG/DAY	EYES/EARS/NOSE	22	11:04	P	DRIED RED MATERIAL AROUND NOSE
99483	M	5 MG/KG/DAY	EYES/EARS/NOSE	22	11:07	P	DRIED RED MATERIAL AROUND NOSE
99495	M	5 MG/KG/DAY	EYES/EARS/NOSE	22	11:08	P	DRIED RED MATERIAL AROUND NOSE
99511	M	5 MG/KG/DAY	EYES/EARS/NOSE	22	11:08	P	DRIED RED MATERIAL AROUND NOSE
99464	M	50 MG/KG/DAY	EYES/EARS/NOSE	22	11:10	P	DRIED RED MATERIAL AROUND NOSE
99469	M	50 MG/KG/DAY	EYES/EARS/NOSE	22	11:10	P	DRIED RED MATERIAL AROUND NOSE
99500	M	50 MG/KG/DAY	EYES/EARS/NOSE	22	11:11	P	DRIED RED MATERIAL AROUND NOSE
				22	11:11	P	DRIED RED MATERIAL AROUND LEFT EYE
99512	M	50 MG/KG/DAY	SPECIAL II	17	11:03	P	WATER BOTTLE ADDED-POOR BODY CONDITION
99468	M	150 MG/KG/DAY	EYES/EARS/NOSE	22	11:13	P	WET RED MATERIAL AROUND NOSE
99468	M	150 MG/KG/DAY	SPECIAL II	84	10:57	P	WATER BOTTLE ADDED - BODY WEIGHT LOSS
99482	M	150 MG/KG/DAY	EYES/EARS/NOSE	22	11:14	P	WET RED MATERIAL AROUND NOSE
99482	M	150 MG/KG/DAY	SPECIAL II	88	11:05	P	WATER BOTTLE ADDED - BODY WEIGHT LOSS
99487	M	150 MG/KG/DAY	EYES/EARS/NOSE	22	11:14	P	DRIED RED MATERIAL AROUND NOSE
99499	M	150 MG/KG/DAY	EYES/EARS/NOSE	22	11:14	P	DRIED RED MATERIAL AROUND NOSE
99521	M	150 MG/KG/DAY	SPECIAL II	17	11:03	P	WATER BOTTLE ADDED-POOR BODY CONDITION
99522	M	150 MG/KG/DAY	EYES/EARS/NOSE	22	11:15	P	DRIED RED MATERIAL AROUND NOSE
99522	M	150 MG/KG/DAY	SPECIAL II	79	11:02	P	WATER BOTTLE ADDED-POOR BODY CONDITION
99523	M	150 MG/KG/DAY	EYES/EARS/NOSE	22	11:15	P	DRIED RED MATERIAL AROUND NOSE
99526	M	150 MG/KG/DAY	DISPOSITION	40	0:00	P	FOUND DEAD
99526	M	150 MG/KG/DAY	SPECIAL II	39	17:15	P	WATER BOTTLE ADDED-POOR BODY CONDITION
99535	F	UNTREATED	EYES/EARS/NOSE	22	10:15	P	DRIED RED MATERIAL AROUND NOSE
				22	10:15	P	DRIED RED MATERIAL AROUND RIGHT EYE

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE U1 (UNSCHEDULED CLINICAL OBSERVATIONS AND TREATMENTS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 2

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99544	F	UNTREATED	SPECIAL II	49	11:23	P	WATER BOTTLE ADDED - BODY WEIGHT LOSS
99547	F	UNTREATED	EYES/EARS/NOSE	22	10:15	P	DRIED RED MATERIAL AROUND NOSE
99559	F	UNTREATED	EYES/EARS/NOSE	22	10:16	P	DRIED RED MATERIAL AROUND RIGHT EYE
99569	F	UNTREATED	EYES/EARS/NOSE	22	10:16	P	DRIED RED MATERIAL AROUND NOSE
				22	10:16	P	DRIED RED MATERIAL AROUND RIGHT EYE
99580	F	UNTREATED	EYES/EARS/NOSE	22	10:16	P	DRIED RED MATERIAL AROUND NOSE
99586	F	UNTREATED	EYES/EARS/NOSE	22	10:17	P	DRIED RED MATERIAL AROUND NOSE
99534	F	0 MG/KG/DAY	EYES/EARS/NOSE	22	11:04	P	DRIED RED MATERIAL AROUND NOSE
99561	F	0 MG/KG/DAY	EYES/EARS/NOSE	22	11:04	P	DRIED RED MATERIAL AROUND NOSE
99563	F	0 MG/KG/DAY	EYES/EARS/NOSE	22	11:05	P	DRIED RED MATERIAL AROUND NOSE
99575	F	0 MG/KG/DAY	EYES/EARS/NOSE	22	11:05	P	DRIED RED MATERIAL AROUND NOSE
99576	F	0 MG/KG/DAY	EYES/EARS/NOSE	22	11:05	P	DRIED RED MATERIAL AROUND NOSE
99578	F	0 MG/KG/DAY	EYES/EARS/NOSE	22	11:06	P	DRIED RED MATERIAL AROUND NOSE
99585	F	0 MG/KG/DAY	EYES/EARS/NOSE	22	11:06	P	DRIED RED MATERIAL AROUND NOSE
99556	F	5 MG/KG/DAY	EYES/EARS/NOSE	22	11:09	P	WET RED MATERIAL AROUND NOSE
99571	F	5 MG/KG/DAY	EYES/EARS/NOSE	22	11:09	P	DRIED RED MATERIAL AROUND NOSE
				22	11:09	P	DRIED RED MATERIAL AROUND LEFT EYE
				22	11:09	P	DRIED RED MATERIAL AROUND RIGHT EYE
99533	F	50 MG/KG/DAY	EYES/EARS/NOSE	22	11:12	P	DRIED RED MATERIAL AROUND NOSE
99538	F	50 MG/KG/DAY	EYES/EARS/NOSE	22	11:12	P	DRIED RED MATERIAL AROUND NOSE
99560	F	50 MG/KG/DAY	EYES/EARS/NOSE	22	11:12	P	DRIED RED MATERIAL AROUND NOSE
99584	F	50 MG/KG/DAY	EYES/EARS/NOSE	22	11:13	P	DRIED RED MATERIAL AROUND NOSE
99536	F	150 MG/KG/DAY	EYES/EARS/NOSE	22	11:15	P	DRIED RED MATERIAL AROUND NOSE
				22	11:15	P	DRIED RED MATERIAL AROUND LEFT EYE
99540	F	150 MG/KG/DAY	EYES/EARS/NOSE	22	11:15	P	DRIED RED MATERIAL AROUND NOSE
				22	11:15	P	DRIED RED MATERIAL AROUND LEFT EYE
99577	F	150 MG/KG/DAY	SPECIAL II	56	13:54	P	WATER BOTTLE ADDED - BODY WEIGHT LOSS
99581	F	150 MG/KG/DAY	EYES/EARS/NOSE	22	11:16	P	DRIED RED MATERIAL AROUND NOSE

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PCRDv4.17
09/04/2011

APPENDIX G

Scoring Criteria for Dermal Reactions

SCORING CRITERIA FOR DERMAL REACTIONS

Evaluation of Dermal Reactions*

<u>Value</u>	<u>Erythema and Eschar Formation</u>	<u>Computer Designation</u>
0	No erythema	No erythema
1	Very slight erythema (barely perceptible, edges of area not well defined)	Very slight erythema
2	Slight erythema (pale red in color and edges definable)	Slight erythema
3	Moderate to severe erythema (definite red in color and area well defined)	Moderate erythema
4	Severe erythema (beet or crimson red) to slight eschar formation (injuries in depth)	Severe erythema

<u>Value</u>	<u>Edema Formation</u>	<u>Computer Designation</u>
0	No edema	No edema
1	Very slight edema (barely perceptible, edges of area not well defined)	Very slight edema
2	Slight edema (edges of area well defined by definite raising)	Slight edema
3	Moderate edema (raised approximately 1 mm)	Moderate edema
4	Severe edema (raised more than 1 mm and extending beyond area of exposure)	Severe edema

* Draize, J.H. The appraisal of the safety of chemicals in foods, drugs and cosmetics. *Dermal Toxicity* **1965**, 46-59. Assoc. of Food and Drug Officials of the U.S., Topeka, Kansas and the EPA-OPPTS Health Effects Test Guidelines **1998**.

APPENDIX H

Clinical Pathology Methods, Procedures, and References

CLINICAL PATHOLOGY METHODS, PROCEDURES AND REFERENCES

Serum Chemistry - Hitachi 912

Albumin - Bromcresol Green (BCG) Method, Modification of the Doumas reaction. Default unit: g/dL. Hitachi 912. Roche Reagent.

A/G Ratio - Calculated from Albumin and Globulin Results.

Alkaline Phosphatase - based on the International Federation of Clinical Chemistry (IFCC) Method (Tietz *et al.* J Clin Chem Clin Biochem 1983; 21:731-748). Default unit: U/L. Hitachi 912. Roche Reagent.

Alanine Aminotransferase - Modification of the International Federation of Clinical Chemistry (IFCC) recommended method. Default unit: U/L. Hitachi 912. Roche Reagent.

Aspartate Aminotransferase - Kinetic method based on the International Federation of Clinical Chemistry (IFCC) recommendations. Default unit: U/L. Hitachi 912. Roche Reagent.

Bilirubin (Total) - Diazo method developed by Wahlefeld *et al.* Scand J Clin Lab Invest 1972; 29: Supplement 126. Default unit: mg/dL. Hitachi 912. Roche Reagent.

Blood Urea Nitrogen (BUN) - A urease-triggered methodology based upon the method of Talke and Schubert Klin Wschr, 1965; 43:174. Default unit: mg/dL. Hitachi 912. Roche Reagent.

Calcium - Calcium reacts with o-cresolphthalein complexone in the presence of 8-hydroxyquinoline to form a purple chromophore. Default unit: mg/dL. Hitachi 912. Roche Reagent.

Chloride - An ion-selective electrode that measures the electrical potential of the ions present in solution. Default unit: mEq/L. Hitachi 912 Application. Roche Reagent, catalog numbers 450043, 450042, and 450041.

Cholesterol - Enzymatic reaction as described by Trinder. Ann Clin Biochem 1974; 12:266. Default unit: mg/dL. Hitachi 912 Application Code 722. Roche Reagent, catalog number 450061.

Creatinine - Modified Jaffe reaction based on the work of Popper *et al.* Biochem Z 1937; 291:354, and Seelig and Wust. Aerztl Labor 1969; 15:34. Default unit: mg/dL. Hitachi 912 Application Code 727. Roche Reagent, catalog number 450019.

Gamma-Glutamyltransferase (GGT) - Method based on the studies of Persijn and Van der Slik, J Clin Chem Clin Biochem, 1976; 14:421-427. Default unit: U/L. Hitachi 912. Roche Reagent.

Globulin - Calculation obtained by subtracting Albumin from Total Protein. Default unit: g/dL.

Glucose - Glucose hexokinase method based on the work of Schmidt, Peterson and Young. Klin Wschr 1961; 39:1244. Methods of Enzymatic Analysis, 2nd Eng ed. New York, Academic Press, 1974; 1196. Anal Biochemistry 1958; 23:301. Default unit: mg/dL. Hitachi 912. Roche Reagent.

Phosphorus - Method involves the formation of ammonium phosphomolybdate. Default unit: mg/dL. Hitachi 912. Roche Reagent.

Potassium - An ion-selective electrode that measures the electrical potential of the ions present in solution. Default unit: mEq/L. Hitachi 912. Roche Reagent.

Sodium - An ion-selective electrode that measures the electrical potential of the ions present in solution. Default unit: mEq/L. Hitachi 912. Roche Reagent.

Sorbitol Dehydrogenase (SDH) - An ultraviolet, kinetic method utilizing the following principal: $\text{Fructose} + \text{NADH} \xleftarrow{\text{SDH}} \text{Sorbitol} + \text{NAD}$. Default unit: U/L. Diagnostic Chemicals Limited. Hitachi 912.

Total Protein - Endpoint biuret method that utilizes a sample blank. Default unit: g/dL. Hitachi 912. Roche Reagent.

Triglycerides - Method that utilizes lipase from a microorganism to promote rapid and complete hydrolysis of triglycerides to glycerol. Default unit: mg/dL. Hitachi 912. Roche Reagent.

Hematology - Manual Methods

White Cell Differential - Manual method of counting 100 white cells stained with Wright Giemsa and entered on-line into the data files.

Reticulocyte Count - Manual method of counting the reticulocytes present in 1000 red blood cells stained with New Methylene Blue and entered on-line into the data files.

Red Blood Cell Morphology - Manual method of evaluating red blood cells on a Wright Giemsa-stained slide and entered on-line into the data files.

Platelet Estimate - Manual method of evaluating platelets on a Wright Giemsa-stained slide. Platelet estimation is evaluated and entered on-line into the data files as decreased, adequate or increased. Platelet clumps present on the slide will be reported as part of the RBC morphology.

AMAX Destiny Amelung Coagulation

Mechanical (Ball Method) Measurement - Mechanical measurement methods depend on the physical formation of fibrin strands that attach to a moving mechanical device that either completes or opens an electrical circuit. The elapsed time from the addition of the starting reagent, up to the beginning of fibrin formation is measured.

Prothrombin Time - (PT)/(PTMT) - The coagulation cascade is activated by incubating plasma with the optimal amount of thromboplastin and calcium; the clotting time is then measured. Default unit: sec. Dade[®] Thromboplastin C Plus* Reagent, catalog number B4216-2.

Activated Partial Thromboplastin Time - (APTT)/(PTTMT) - Factors of the intrinsic coagulation system are activated by incubating the plasma with the optimal amount of phospholipids and a surface activator. The addition of calcium ions triggers the coagulation process, and the clotting time is then measured. Default unit: sec. Dade[®] Actin[®] Activated Cephaloplastin Reagent, catalog number B4218-2.

Hematology-Bayer Advia[®] 120-Siemens Healthcare Diagnostics/(Formerly: Bayer Advia[®] 120)

WBC Count - The whole blood sample is mixed with ADVIA[®] 120 BASO reagent that contains acid and surfactant. The red cells are hemolyzed, and the white blood cells are then analyzed using two angle laser light scatter signals. Default unit: $\times 10^3$ cells/ μ L

RBC / Platelet Count - Both red blood cells and platelets are analyzed by a single optical cytometer after appropriate dilution of the blood sample with ADVIA[®] 120 RBC/PLT reagent. The red blood cells are isovolumetrically sphered and lightly fixed with glutaraldehyde to preserve the spherical shape. Red cells and platelets are counted from the signals from a common detector with 2 different gain settings. Default unit RBC: $\times 10^6$ cells/ μ L. Default unit PLT: $\times 10^3$ cells/ μ L

HGB - Hemoglobin: The hemoglobin method is a modification of the manual cyanmethemoglobin method developed by the International Committee for standardization in Hematology (ICSH). Default unit: g/dL.

HCT - Hematocrit: The percentage of blood volume that is occupied by red blood cells. Also referred to as the packed red cell volume. On the ADVIA[®] 120 Hematology System this parameter is derived from the measured red cell volume (MCV) and the red cell count (RBC). Default unit: %.

MCH - Mean Corpuscular Hemoglobin: the average weight of hemoglobin in the red blood cells, calculated from the RBC and Hgb measurements. Default unit: pg.

MCHC - Mean Corpuscular Hemoglobin Concentration: the average concentration of hemoglobin in the red blood cells. This parameter is computed from the measured hemoglobin and the computed hematocrit. Default unit: g/dL.

MCV - Mean Corpuscular Volume: the average volume of the red blood cells. Default unit: fL

HDW - Hemoglobin Concentration Distribution Width: this parameter is derived from direct flow cytometric measurements of red cell hemoglobin concentration, and is increased in conditions of red cell anisochromasia. Default unit: g/dL.

RDW - Red Cell Distribution Width: the CV of the RBC volume histogram, calculated from the RBC volume SD and the MCV. Default unit: %.

White blood cell differential - The ADVIA[®] 120 Hematology System White Blood Cell Differential (WBC DIFF) methods, consists of both the Peroxidase method and the Basophil/Lobularity method. The ADVIA[®] 120 Hematology System performs a six-part differential that consists of basophils, eosinophils, large unstained cells, lymphocytes, monocytes, and neutrophils. The white blood cell differential count is reported in percent and the actual number of each type of cell per microliter of blood.

Reticulocyte - This method uses a nucleic acid dye (oxazine 750) to stain cellular RNA. The ADVIA[®] 120 autoRETIC reagent isovolumetrically spheres the erythroid cells and stains cellular RNA. Low-angle laser light scatter, high-angle laser light scatter, and absorption characteristics of all cells are counted and measured. The absorption data are used to classify each cell as a reticulocyte or mature red blood cell based on its RNA content. The reticulocyte is reported in percent and actual number $\times 10^9$ cells/Liter = thous/ μ l.

References:

AMAX Destiny Operation Manual. Trinity Biotech Plc.

Dade[®] Thromboplastin C Plus* Reagent (PT) – Dade Behring. Package Insert (B4216 G1). 11/05 edition.

Dade[®] Actin[®] Activated Cephaloplastin Reagent (APTT) – Dade Behring. Package Insert (B4218 G1).

ADVIA[®] 120 Hematology System Operator's Guide: Copyright[©] 1997, 1998. Siemens Healthcare Diagnostics/(Formerly: Bayer Corporation Diagnostics Division).

APPENDIX I

Pathology Report (WIL Research)

A 90-Day Repeat-Dose Dermal Toxicity Study
in Conjunction with a Micronucleus Assay Utilizing Extract,
Light Paraffinic Distillate Solvent in Sprague Dawley Rats

Pathology Report

Pathology Department

WIL Research



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1. INTRODUCTION

The objectives of this study were to 1) evaluate the toxicity potential of repeated dermal exposure of Extract, light paraffinic distillate solvent for 90 days and determine the effects on male and female rats, 2) verify/expand the existing data pertaining to polycyclic aromatic compounds (PAC) and the prediction of toxicity following exposure to high-boiling substances based on their PAC content, and 3) assess the potential of extract, light paraffinic distillate solvent to induce micronuclei in polychromatic erythrocytes (PCEs) and normochromatic erythrocytes (NCEs) in rat bone marrow following the 90-day repeated dose treatment. This pathology report addresses the anatomical and clinical pathology endpoints of the study.

2. STUDY DESIGN

Male and female Crl:CD(SD) rats, approximately 7-8 weeks of age, were administered vehicle or extract, light paraffinic distillate solvent formulations by dermal exposure (Groups 2-5) 5 days a week for approximately 13 weeks as indicated in the following table. The vehicle and test substance formulations were spread uniformly over the clipped treatment site (target area of approximately 10% of the body surface area). The dose volume was 1.5 mL/kg for all groups.

The Group 1 sham control group animals were subject to the same procedures (*i.e.* shaving, collaring, sham dosing with glass rod, and removal of residual test substance) as animals in Groups 2-5. However, no vehicle or test substance was applied to the sham control group animals.

The Group 6 positive control animals were administered cyclophosphamide monohydrate by oral gavage once on study day 89 (last day of dosing). The dose volume was 10 mL/kg.

Group Number	Treatment	Dosage Level (mg/kg/day)	Number of Animals ^a	
			Males	Females
1	Sham Control	NA	10	10
2	Vehicle ^b	0	10	10
3	Extract, light paraffinic distillate solvent	5	10	10
4	Extract, light paraffinic distillate solvent	50	10	10
5	Extract, light paraffinic distillate solvent	150	10	10
6	Positive Control ^c	60	6	6

^a - Half of the animals/sex in Groups 1-5 had a 3-day nondosing period prior to the final 5-day exposure period.

^b - The vehicle used for Groups 2-5 was acetone.

^c - The positive control was cyclophosphamide monohydrate (CPS).

3. METHODS

3.1. CLINICAL PATHOLOGY

Hematology, coagulation, and serum chemistry parameters were evaluated on all surviving animals in Groups 1-5 on the day of the scheduled necropsy. Animals were fasted overnight prior to blood collection. Blood samples were collected at necropsy from the vena cava of animals euthanized by isoflurane. Anticoagulants were potassium EDTA for the hematology parameters and sodium citrate for the coagulation parameters. Anticoagulants were not used for serum chemistry samples.

The following parameters were evaluated.

3.1.1. HEMATOLOGY AND COAGULATION

Total leukocyte count (WBC)	Red cell distribution width (RDW)
Erythrocyte count (RBC)	Hemoglobin distribution width (HDW)
Hemoglobin (HGB)	Differential leukocyte count -
Hematocrit (HCT)	Percent and absolute
Mean corpuscular volume (MCV)	-Neutrophil (NEU)
Mean corpuscular hemoglobin (MCH)	-Lymphocyte (LYMPH)
Mean corpuscular hemoglobin concentration (MCHC)	-Monocyte (MONO)
Platelet count (Platelet)	-Eosinophil (EOS)
Prothrombin time (PT)	-Basophil (BASO)
Activated partial thromboplastin time (APTT)	-Large unstained cell (LUC)
Reticulocyte count	Platelet estimate ^a
Percent (Retic)	Red cell morphology (RBC Morphology) ^a
Absolute (Retic Absolute)	

() - Designates abbreviations used in data tables

^a - Presented on individual tables if a manual differential was performed, and the manual data were accepted and reported instead of the automated differential data

3.1.2. SERUM CHEMISTRY

Albumin	Gamma glutamyltransferase (GGT)
Total protein	Glucose
Globulin [by calculation]	Total cholesterol (Cholesterol)
Albumin/globulin ratio (A/G Ratio)	Calcium
[by calculation]	Chloride
Total bilirubin (Total Bili)	Phosphorus
Urea nitrogen	Potassium
Creatinine	Sodium
Alkaline phosphatase (ALP)	Triglycerides (Triglyceride)
Alanine aminotransferase (ALT)	Sorbitol dehydrogenase (SDH)
Aspartate aminotransferase (AST)	

() - Designates abbreviation used in data tables

3.2. ANATOMIC PATHOLOGY

3.2.1. MACROSCOPIC EXAMINATION

Complete *postmortem* examinations were performed on all animals in Groups 1-5 at the scheduled necropsy. Animals surviving to the scheduled necropsy were euthanized via isoflurane inhalation and exsanguinated following the clinical pathology blood collection. At the time of necropsy, the following tissues and organs were collected and placed in 10% neutral-buffered formalin fixative unless otherwise noted:

Adrenals (2)	Lymph nodes
Aorta	Axillary (2)
Bone with marrow	Mandibular (2)
Femur with joint ^a	Mesenteric
Bone marrow smear (from sternum) ^b	Ovaries (2) with oviducts ^e
Brain	Pancreas
Cerebrum (2 levels)	Peripheral nerve (sciatic)
Cerebellum with pons/medulla	Pituitary
Cervix	Prostate
Epididymides (2) ^c	Salivary glands [mandibular (2)]
Exorbital lacrimal glands (2)	Seminal vesicles (2)
Eyes with optic nerves (2) ^d	Skeletal muscle (rectus femoris)
Gastrointestinal tract	Skin with mammary gland ^f
Esophagus	Skin
Stomach	Sham, Vehicle, and Treated (3 sections)
Duodenum	Untreated (posterior to treated skin)
Jejunum	Spinal cord (cervical, thoracic,
Ileum	lumbar)
Cecum	Spleen
Colon	Testes (2) ^c
Rectum	Thymus
Heart	Thyroid with parathyroids (2) ^e
Kidneys (2)	Trachea
Liver (sections of 2 lobes)	Urinary bladder
Lungs (including bronchi, fixed	Uterus
by inflation with fixative)	Vagina
	Gross lesions (when possible)

^a - Bone marrow for histopathology was collected from the left femur and bone marrow for the micronucleus assay was collected from the right femur.

^b - Bone marrow smears were collected at the scheduled necropsy, were not placed in formalin, slides were examined.

^c - Fixed in Bouin's solution

^d - Fixed in Davidson's solution

^e - Oviducts and parathyroids were examined microscopically when in the plane of section and in all cases where a gross lesion was present.

^f - For females; a corresponding section of skin was taken from the same anatomical area for males.

3.2.2. ORGAN WEIGHTS

The following organs were weighed from all animals in Groups 1-5 at the scheduled necropsy:

Adrenals	Pituitary gland
Brain	Prostate
Epididymides	Spleen
Heart	Testes
Kidneys	Thymus
Liver	Thyroid with parathyroids*
Ovaries with oviducts	Uterus

Paired organs were weighed together. Designated (*) organs were weighed after fixation. Organ to final body weight and organ to brain weight ratios were calculated.

3.2.3. MICROSCOPIC EXAMINATION

Microscopic examination of routinely prepared hematoxylin-eosin stained paraffin sections was performed on all tissues (except for the mammary gland, spinal cord, muscle, eyes with optic nerve, and exorbital lacrimal glands) collected at necropsy from all animals. Gross lesions were examined from all animals and correlated to microscopic findings if possible. Stained histologic sections were examined by light microscopy and observations were entered in the WIL Toxicology Data Management System (WTDMS™) by the pathologist. Three male animals, 1 from each of the following groups: sham control group, vehicle control group, and 5 mg/kg/day group, had skin lesions that were stained with Brown & Hopps tissue Gram stains and examined microscopically. An attempt to determine a cause-of-death was made for the animal that died prior to scheduled study termination. Histologic sections were of adequate size and quality for detailed evaluation, and the number of tissues examined from each treatment group was sufficient to allow detection of test substance-related histologic alterations.

Severity scores were assigned to non-neoplastic histopathologic diagnoses in compliance with the following general guidelines, as presented in the following table. Severity

scores were assigned based on the severity of alterations in the examined histologic sections and may not reflect the overall severity of the pathologic process in the entire tissue, organ, or animal. The WTDMS™ histopathology tables contain all of the recorded data and serve as the basis for this narrative report.

Unremarkable	Tissue considered to be within normal limits, under the conditions of the study and considering the age, sex, and strain of the animal concerned.
Present	A non-gradable histologic change for which no additional information would be gained by assigning a severity score (<i>e.g.</i> cyst).
Grade 1 (Minimal)	A histologic change that barely exceeds that which is considered to be within normal limits. This change is unlikely to produce any functional impairment.
Grade 2 (Mild)	A histologic change that is easily identified but of limited severity. This change probably does not produce any functional impairment.
Grade 3 (Moderate)	A histologic change that is a prominent feature of the tissue but not of maximal severity. Limited tissue or organ dysfunction is possible.
Grade 4 (Severe)	A histologic change that is an overwhelming feature of the tissue and that may cause significant tissue or organ dysfunction.

3.3. DATA INTERPRETATION

In the discussion of clinical pathology parameters, values derived from the control group animals at all time points evaluated were considered as concurrent control values for purposes of constructing a ‘normal’ range for the present study. In addition, historical control values for this laboratory were consulted to refine data interpretation. Unless otherwise stated in this report, the ‘normal’ historical control range was represented by values within the WIL Research historical control reference range (the central 95% values).

In the discussion of organ weights, the indication of higher or lower mean organ weights refers to a statistically significant difference ($p < 0.05$ or $p < 0.01$ using Dunnett’s test) between test substance-treated versus vehicle control group animals or a statistically

significant difference ($p < 0.05$ or $p < 0.01$ using Student's t-Test) between the sham control group and the vehicle control group animals in the present study. In addition, historical control values for this laboratory were consulted to refine data interpretation. The WIL Research historical control databases for male and female Crl:CD(SD) rats 19-21 weeks of age version 3.1 were used as historical reference data.

4. RESULTS

4.1. SURVIVAL

Male no. 99526 in the 150 mg/kg/day group died on study day 40. A complete necropsy and histologic examination was conducted; however, a cause of death was not revealed.

4.2. CLINICAL PATHOLOGY

For the presentation of clinical pathology results in this report, the terms “higher” or “lower” refer to comparisons between test substance-treated groups versus the concurrent vehicle control group.

4.2.1. HEMATOLOGY AND COAGULATION

Test substance-related lower red blood cell (RBC) counts, hemoglobin, hematocrit, white blood cell (WBC) counts, lymphocyte counts, eosinophil counts, and platelet counts were noted in the 150 mg/kg/day group. Lower hemoglobin, eosinophil counts, and platelet counts were also noted in the 50 mg/kg/day group, and lower mean eosinophil counts (absolute and percentage) were noted in the 5 mg/kg/day female group. Test substance-related higher red cell distribution widths (RDW) and hemoglobin distribution widths (HDW) were noted in the 50 and 150 mg/kg/day groups. Reticulocyte counts (absolute counts and percentages) were statistically significantly higher in the 150 mg/kg/day group males ($p < 0.01$, Dunnett's test) and the mean reticulocyte percentage was higher in the 150 mg/kg/day group females ($p < 0.05$, Dunnett's test).

The following table presents the test substance-related effects on hematology and coagulation parameters:

**Text Table 1: Test Substance-Related Hematology and Coagulation Changes
(Means and % Difference from the Vehicle Control Group)**

Parameter	Vehicle Control		5 mg/kg/day		50 mg/kg/day		150 mg/kg/day	
	Male	Female	Male	Female	Male	Female	Male	Female
White blood cell count (thousands/ μ L)	9.15	8.85	-	-	-	-	-	6.46* (-27.0%)
Red blood cell count (millions/ μ L)	9.08	8.56	-	-	-	-	7.44** (-18.1%)	-
Hemoglobin (g/dL)	15.6	15.3	-	-	14.4* (-7.7%)	-	12.6** (-19.2%)	14.1* (-7.8%)
Hematocrit (%)	47.8	45.6	-	-	-	-	39.1** (-18.2%)	-
Platelet count (thousands/ μ L)	1003	1163	-	-	877 (-12.6%)	846** (-27.3%)	888 (-11.5%)	774** (-33.4%)
Absolute reticulocyte count (thousands/ μ L)	161.3	155.0	-	-	-	-	342.6** (+112.4%)	188.2 (+21.4%)
Reticulocytes (%)	1.8	1.8	-	-	-	-	4.7** (+161.1%)	2.3* (+27.8%)
Absolute lymphocyte counts (thousands/ μ L)	7.23	7.06	-	-	-	-	6.89 (-4.7%)	5.32 (-24.6%)
Absolute eosinophil counts (thousands/ μ L)	0.10	0.10	-	0.07** (-30.0%)	0.03** (-70.0%)	0.04** (-60.0%)	0.02** (-80.0%)	0.02** (-80.0%)
Eosinophils (%)	1.1	1.2	0.7 (-36.4%)	0.8* (-33.3%)	0.4** (-63.6%)	0.5** (-58.3%)	0.3** (-72.7%)	0.3** (-75%)
Red cell distribution width (%)	12.0	11.1	-	-	-	12.0** (+8.1%)	16.6** (+38.3%)	13.3** (+19.8%)
Hemoglobin distribution width (%)	2.23	1.97	-	-	2.53** (+13.5%)	2.31** (+17.3%)	3.01** (+35.0%)	2.49** (+26.4%)

- = No test substance-related changes.

* = Significantly different from vehicle control group at $p < 0.05$.

** = Significantly different from vehicle control group at $p < 0.01$.

There were no other test substance-related effects on hematology or coagulation parameters. However, some statistically significant differences were observed when the control and test substance-treated groups were compared. Higher monocyte counts were noted in the male sham control group versus the male vehicle control group; this difference was not considered biologically or toxicologically meaningful but reflected variation between groups as the test substance-treated groups were not statistically significantly different from the vehicle control group. The mean percentage of large unstained cells was higher in the 150 mg/kg/day group females, but the absolute numbers

were not changed indicating that this was a spurious finding due to the decreased white blood cell count for this group. Mean activated partial thromboplastin time (APTT) measured in the male 150 mg/kg/day group was significantly lower than the control group value but is not biologically relevant as lower APTT time would indicate improved clotting time.

4.2.2. SERUM CHEMISTRY

Test substance-related higher cholesterol and sorbitol dehydrogenase (SDH) values were noted in the 150 mg/kg/day group, and higher urea nitrogen (BUN) values were noted in the 50 and 150 mg/kg/day groups. Test substance-related lower alanine aminotransferase (ALT) and triglycerides values were noted in the 150 mg/kg/day group.

Higher values for cholesterol (150 mg/kg/day group males and females; $p > 0.01$, Dunnett's test), BUN (150 mg/kg/day group females and 50 mg/kg/day group females; $p < 0.01$ and $p < 0.05$, respectively, Dunnett's test), and SDH (150 mg/kg/day group males; $p < 0.05$, Dunnett's test) were noted. Lower values for ALT and triglycerides in the 150 mg/kg/day group females ($p < 0.05$, Dunnett's test) were also noted.

The following table presents the test substance-related effects on serum chemistry parameters:

**Text Table 2: Test Substance-Related Serum Chemistry Changes
(Means and % Difference from the Vehicle Control Group)**

Parameter	Vehicle Control		50 mg/kg/day		150 mg/kg/day	
	Male	Female	Male	Female	Male	Female
Urea nitrogen (mg/dL)	14.2	14.2	-	16.4* (+15.5%)	-	17.4** (+22.5%)
Alanine aminotransferase (U/L)	48	70	-	-	-	37* (-47.1%)
Cholesterol (mg/dL)	45	71	-	-	86** (+91.1%)	104** (+46.5%)
Triglyceride (mg/dL)	20	30	-	-	-	20 (-33.3%)
SDH (U/L)	12	15	-	-	61* (+408.3%)	-

- = No test substance-related changes.

* = Significantly different from vehicle control group at $p < 0.05$.

** = Significantly different from vehicle control group at $p < 0.01$.

There were no other test substance-related effects on serum chemistry parameters. However, statistically significant lower total bilirubin values were observed when the vehicle control and test substance-treated groups were compared. This was not a dose-related response; however, as it was only observed in the 50 mg/kg/day group females and was not lower in the higher dose group.

4.3. GROSS OBSERVATIONS

Review of the gross necropsy observations revealed no observations that were considered to be associated with application of the test substance.

4.4. ORGAN WEIGHTS

Test substance-related higher thyroid/parathyroid relative to brain weights were noted in the 150 mg/kg/day group.

Test substance-related higher liver and spleen weights (absolute and relative to body and brain weights) were noted in the 50 and 150 mg/kg/day groups and higher heart weights (relative to body weight) were noted in the 150 mg/kg/day group.

Test substance-related lower pituitary (absolute and relative to brain weight) and thymus weights (absolute and relative to body and brain weights) were noted in the 50 and/or 150 mg/kg/day groups.

Higher thyroid/parathyroid relative to brain weights were noted in the 150 mg/kg/day group males ($p < 0.05$, Dunnett's test). Higher heart weight relative to body weight was noted in the 150 mg/kg/day group males as well ($p < 0.05$, Dunnett's test). Higher liver weights (absolute and relative to body and brain weights) were noted in the 50 and 150 mg/kg/day group males and females ($p < 0.01$, Dunnett's test) and higher spleen weights (absolute and relative to body and brain weights) were noted in the 50 and 150 mg/kg/day group males ($p < 0.01$, Dunnett's test).

Lower pituitary (absolute and relative to brain weights) were noted in the 150 mg/kg/day group females ($p < 0.05$, Dunnett's test) and lower thymus weights (absolute and relative to body and brain weights) were noted in the 50 mg/kg/day group females and the 150 mg/kg/day group males and females ($p < 0.01$).

There were no other test substance-related effects on organ weights. However, statistically significantly higher mean adrenal gland weight (absolute and relative to brain weight) were observed when the vehicle control and test substance-treated groups were compared. The sham control group males were also noted with statistically significantly higher mean adrenal gland weight (absolute and relative to brain weight) when compared to the vehicle control group indicating the lack of a test substance-related effect.

4.5. HISTOLOGIC CHANGES

No test substance-related microscopic findings were noted in any of the groups examined histologically.

The most frequent lesions noted were minimal to mild chronic progressive nephropathy (CPN) and hepatic mononuclear infiltrate. Incidence of CPN was higher in the 50 and 150 mg/kg/day group males, but when compared to the WIL Research historical control

database for Crl:CD(SD) rats 19-21 weeks of age, the incidence was not substantially above historical incidence and was judged to not be test substance-related. Increased incidence of minimal to mild mononuclear cell infiltrate was detected in the 50 mg/kg/day group females, but failed to show a dose-response relationship in the 150 mg/kg/day group. Three animals, 1 male each from the sham control group (no. 99496), vehicle control group (no. 99467), and 5 mg/kg/day group (no. 99495), exhibited gross lesions of scabbing of the skin which histologically presented as ulceration with serocellular crusts. Affected skin sections from these 3 animals were stained with Brown & Hopps tissue Gram stains and examined for evidence of bacteria. Male nos. 99496 and 99495 showed Gram-positive cocci on the surfaces of the ulcers. Male no. 99467 was negative for bacteria. The superficial bacteria observed with the tissue Gram stain are consistent with secondary contamination of wounds suggesting the skin lesions resulted from trauma and were not the result of bacterial infection.

Remaining histologic changes were considered to be incidental findings or related to some aspect of experimental manipulation other than application of the test substance. There was no test substance-related alteration in the prevalence, severity, or histologic character of those incidental tissue alterations.

5. DISCUSSION

Relationships were suspected between gross necropsy, organ weight, clinical pathology, and histopathology observations, as presented in Text Table 3. These proposed relationships were based on subjective interpretation rather than a statistical analysis of correlation. These relationships; however, did not have a histologically evident correlate that can be pointed to as causative.

Text Table 3. Correlations of Selected Observations

Necropsy	Organ Weight	Clinical Pathology	Histopathology
-	↓ Thymus weight	↓ lymphocyte count	-

- = no correlate

The multiple changes noted in the hematogram and leukogram were investigated by cytologic evaluation of the bone marrow slides collected at necropsy. The complete results of that examination are found in the bone marrow cytology report (see Appendix J). That evaluation showed: "...no meaningful differences in cellular morphology or granulocytic or erythroid maturation in any of the examined groups. The proportion of total erythroid precursors was slightly to minimally higher and the ME ratios were correspondingly slightly to minimally lower in males administered 50 mg/kg/day of test article, and in males and females administered 150 mg/kg/day of test article compared to the sham and vehicle controls. The proportions of total granulocytic precursors were slightly lower in the 50 and 150 mg/kg/day males compared to sham and vehicle controls. The slightly higher proportion of total erythroid cells in the bone marrow may correspond to the higher percent and absolute reticulocyte counts in the peripheral blood in the 150 mg/kg/day males and minimally higher percent reticulocyte counts in the 150 mg/kg/day females." Statistically significant lower RBC, WBC, and eosinophil counts with no concomitant change in bone marrow cellularity suggest loss of blood cells post-maturation.

6. CONCLUSIONS

Repeated application of extract, light paraffinic distillate solvent over a minimum 90-day period to male and female Sprague Dawley rats resulted in hematologic, serum chemistry, and organ weight changes. Changes were noted in all 3 bone marrow-derived blood cell lines, erythrocytes, leukocytes, and platelets, as well as in absolute and/or relative organ weights for spleen, liver, thymus, pituitary, heart, and thyroid/parathyroids in the 150 mg/kg/day group. Changes in hematology, serum chemistry, and organ weight parameters were also observed in some animals in the 50 mg/kg/day group. Lower eosinophil counts (absolute and relative) were noted in the 5 mg/kg/day group. Changes in hematology that were considered adverse included lower hemoglobin and hematocrit values and lower RBC, WBC, lymphocyte, eosinophil, and platelet counts and higher RDW and HDW. Serum chemistry changes that were considered adverse included

higher cholesterol, SDH, and BUN values and lower ALT and triglycerides values. Higher liver and spleen weights (absolute and relative to body and brain weights) and lower pituitary (absolute and relative to brain weight) and thymus weights (absolute and relative to body and brain weights) were considered adverse changes, but it is unclear if the higher heart weight relative to final body weight and thyroid/parathyroids weights relative to brain weight were adverse or nonadverse as there was no corresponding increase in absolute weights for either organ or higher weights relative to brain weight for the heart or relative to final body weight for the thyroid/parathyroids.

WIL-402022
American Petroleum Institute

Extract, Light Paraffinic Distillate Solvent

7. REPORT SUBMISSION

WIL-402022 Pathology Report

Report Submitted By:



Study Pathologist

03 Aug 2012
Date

FINAL REPORT



Contents: Volume 2 of 5
Appendices J - N

Study Title: A 90-Day Repeat-Dose Dermal Toxicity
Study in Conjunction with a Micronucleus
Assay Utilizing Extract, Light Paraffinic
Distillate Solvent in Sprague Dawley Rats

Laboratory Project ID: WIL-402022

Author: [REDACTED]

Test Guidelines: OPPTS Guideline 870.3250
40 CFR 798.2250 and 798.5395
OECD Guidelines 411 and 474

Study Completion Date: 8 August 2012

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1220 L Street, NW
Washington, DC 20005

Total Number of Pages: 1413

APPENDIX J

Bone Marrow Cytology Report ([REDACTED])

WIL Research Study Number: 402022

Title: A 90-Day Repeat-Dose Dermal Toxicity Study in Conjunction with a Micronucleus Assay Utilizing Extract, Light Paraffinic Distillate Solvent in Sprague Dawley Rats

EVALUATION OF BONE MARROW CYTOLOGY

Introduction

Study WIL-402022 was a dermal toxicity study in Sprague Dawley rats, conducted at WIL Research, 1407 George Road, Ashland, OH 44805. The objectives of the study were to 1) evaluate the toxicity potential of repeated dermal exposures of Extract, light paraffinic distillate solvent for 90 days and determine the effects on males and female rats, 2) verify/expand the existing data pertaining to polycyclic aromatic compounds (PAC) and the prediction of toxicity following exposure to high-boiling substances based on their PAC content, and 3) to assess the potential of extract, light paraffinic distillate solvent to induce micronuclei in polychromatic erythrocytes and normochromic erythrocytes in rat bone marrow following the 90-day repeated dose treatment. In the toxicity portion of the study ten male and ten female Crl:CD(SD) rats were administered vehicle (Group 2), or test article at 5, 50, or 150 mg/kg/day (Groups 3, 4, and 5, respectively). Additionally, ten male and ten females served as sham controls (Group 1) or positive controls and received 60 mg/kg/day of cyclophosphamide (Group 6).

Bone marrow cytology samples were collected at the primary necropsy and were examined for Groups 1 through 5. Bone marrow samples from animals administered 60 mg/kg/day of cyclophosphamide (Group 6) were not examined. Cell morphology and a full differential of the bone marrow smears was performed on approximately 400 – 500 nucleated cells. Means, standard deviations, percentage of cell types, and Myeloid (Granulocytic): Erythroid (ME) ratios were calculated using Microsoft[®] Excel 2010. Megakaryocytes were evaluated for cellularity and morphology. The bone marrow slides collected at the terminal interval were generally adequate for evaluation, although excess diluent contributed to artifacts, including low cellularity, cell swelling and lysis in multiple slides.

Bone Marrow Cytology

There were no meaningful differences in cellular morphology or granulocytic or erythroid maturation in any of the examined groups.

The proportion of total erythroid precursors was slightly to minimally higher and the ME ratios were correspondingly slightly to minimally lower in males administered 50 mg/kg/day of test article, and in males and females administered 150 mg/kg/day of test article compared to the sham and vehicle controls. The proportions of total granulocytic precursors were slightly lower in the 50 and 150 mg/kg/day males compared to sham and vehicle controls.

The slightly higher proportion of total erythroid cells in the bone marrow may correspond to the higher percent and absolute reticulocyte counts in the peripheral blood in the 150 mg/kg/day males and minimally higher percent reticulocyte counts in the 150 mg/kg/day females.

Cytological observations included the presence of pleomorphic bacteria, increased lysis, cell swelling and/or fat, decreased cellularity, and excess diluent. Although these observations were more prevalent in females in general, they were noted in control and test article-treated groups and were considered most likely to be due to technical artifacts and not test article administration. Overall cellularity and megakaryocyte density are more reliably assessed from histopathology sections. There were no alterations in bone marrow noted in the microscopic pathology evaluation, which is consistent with the likelihood that decreased cellularity in some bone marrow cytology slides was due to overdilution and technical artifacts. Several slides could not be numerically evaluated due to the inadequate number of intact nucleated cells.

Conclusions

Study WIL-402022 was a dermal toxicity study in Sprague Dawley rats, conducted at WIL Research, 1407 George Road, Ashland, OH 44805.

There were no meaningful differences in bone marrow cellular morphology or granulocytic or erythrocytic maturation in any of the examined groups. The proportion of total erythroid precursors was slightly to minimally higher and the ME ratios were correspondingly slightly to minimally lower in males administered 50 mg/kg/day of test article, and in males and females administered 150 mg/kg/day of test article compared to the sham and vehicle controls. The proportions of total granulocytic precursors were slightly lower in the 50 and 150 mg/kg/day males compared to sham and vehicle controls.

The slightly higher proportion of total erythroid cells in the bone marrow may correspond to the higher percent and absolute reticulocyte counts in the peripheral blood in the 150 mg/kg/day males and minimally higher percent reticulocyte counts in the 150 mg/kg/day females.

Bone marrow samples from animals administered 60 mg/kg/day of cyclophosphamide (Group 6) were not examined.

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02 AUG 2012

Clinical Pathologist

Date

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Study Number: WIL-402022

Males: Summary of Differential Bone Marrow Values
Terminal Interval

	Group 1			Group 2			Group 3			Group 4			Group 5		
	Sham control			Vehicle control			5 mg/kg/day			50 mg/kg/day			150 mg/kg/day		
	MEAN	S.D.	N	MEAN	S.D.	N	MEAN	S.D.	N	MEAN	S.D.	N	MEAN	S.D.	N
Myeloblast	0.0	0.09	10	0.0	0.00	10	0.0	0.07	8	0.0	0.08	9	0.0	0.08	9
Promyelocyte	0.7	0.37	10	0.1	0.12	10	0.1	0.11	8	0.2	0.30	9	0.2	0.22	9
Myelocyte Neutrophil	2.4	1.05	10	2.5	1.13	10	1.4	0.75	8	2.0	0.67	9	1.4	0.60	9
Metamyelocyte Neutrophil	5.6	1.46	10	5.4	0.93	10	5.0	0.84	8	5.0	1.77	9	4.4	1.49	9
Band Neutrophil	8.9	1.87	10	10.4	3.02	10	10.9	2.32	8	9.2	3.10	9	11.2	2.77	9
Segmented Neutrophil	10.9	6.97	10	20.0	2.06	10	19.2	4.41	8	16.9	3.67	9	15.6	3.44	9
Eosinophil	7.3	1.54	10	5.0	2.62	10	4.4	1.95	8	3.9	0.71	9	3.4	0.60	9
Basophil	0.0	0.15	10	0.0	0.07	10	0.1	0.16	8	0.1	0.25	9	0.0	0.00	9
Myeloid Mitotic Figures	0.0	0.22	10	0.2	0.24	10	0.2	0.14	8	0.1	0.12	9	0.2	0.19	9
TOTAL GRANULOCYTIC CELLS	35.8	6.37	10	43.6	5.82	10	41.2	5.18	8	37.4	5.72	9	36.5	5.49	9
Rubriblast	0.0	0.00	10	0.0	0.07	10	0.0	0.07	8	0.0	0.00	9	0.0	0.00	9
Prorubricyte	0.4	0.30	10	0.5	0.36	10	0.3	0.11	8	0.4	0.43	9	0.6	0.58	9
Rubricyte - Basophilic	8.0	1.29	10	8.2	2.75	10	6.5	2.14	8	9.2	2.64	9	11.0	6.06	9
Rubricyte - Polychromatophilic	21.3	3.76	10	13.4	1.66	10	12.2	1.94	8	15.8	4.88	9	15.5	4.67	9
Metarubricyte	5.1	1.52	10	6.4	1.69	10	7.7	2.43	8	7.0	2.00	9	6.9	1.50	9
Erythroid Mitotic Figures	0.7	0.45	10	0.5	0.23	10	0.4	0.24	8	0.7	0.42	9	0.6	0.68	9
TOTAL ERYTHROID CELLS	35.6	3.93	10	29.0	3.64	10	27.2	3.80	8	33.1	8.01	9	34.6	9.69	9
Lymphoid	28.7	6.19	10	27.1	3.91	10	31.2	5.84	8	29.0	4.62	9	28.4	12.37	9
Monocyte	0.0	0.09	10	0.0	0.00	10	0.0	0.00	8	0.0	0.07	9	0.0	0.00	9
Plasma Cell	0.0	0.27	10	0.3	0.21	10	0.3	0.24	8	0.5	0.29	9	0.3	0.29	9
Mast Cell	0.0	0.00	10	0.0	0.07	10	0.1	0.11	8	0.0	0.08	9	0.2	0.29	9
Myeloid: Erythroid (M:E) Ratio	1.0	0.35	10	1.5	0.38	10	1.5	0.28	8	1.2	0.48	9	1.1	0.37	9

N - Number of Animals

S.D. - Standard Deviation

Means are expressed as percentage of total cells

	Group 1			Group 2			Group 3			Group 4			Group 5		
	Sham control			Vehicle control			5 mg/kg/day			50 mg/kg/day			150 mg/kg/day		
	MEAN	S.D.	N	MEAN	S.D.	N	MEAN	S.D.	N	MEAN	S.D.	N	MEAN	S.D.	N
Myeloblast	0.0	0.00	9	0.0	0.06	10	0.0	0.00	8	0.0	0.07	9	0.1	0.11	7
Promyelocyte	0.0	0.08	9	0.2	0.25	10	0.2	0.25	8	0.1	0.22	9	0.1	0.11	7
Myelocyte Neutrophil	1.9	0.56	9	1.7	0.67	10	1.4	0.66	8	1.3	0.93	9	1.7	0.56	7
Metamyelocyte Neutrophil	4.2	0.79	9	3.8	1.07	10	4.0	0.56	8	3.8	1.15	9	3.3	0.74	7
Band Neutrophil	9.6	2.28	9	9.3	2.29	10	9.0	3.38	8	8.8	1.54	9	9.5	2.85	7
Segmented Neutrophil	17.1	5.59	9	17.3	3.68	10	19.6	4.13	8	16.3	4.42	9	16.1	4.25	7
Eosinophil	6.1	1.21	9	6.6	1.41	10	5.5	1.15	8	5.0	1.46	9	5.1	1.49	7
Basophil	0.0	0.00	9	0.0	0.00	10	0.1	0.15	8	0.0	0.07	9	0.0	0.00	7
Myeloid Mitotic Figures	0.2	0.15	9	0.1	0.11	10	0.1	0.17	8	0.2	0.25	9	0.1	0.11	7
TOTAL GRANULOCYTIC CELLS	39.0	6.85	9	39.0	6.07	10	39.9	7.28	8	35.7	6.58	9	35.8	6.98	7
Rubriblast	0.0	0.08	9	0.0	0.00	10	0.0	0.00	8	0.0	0.00	9	0.0	0.00	7
Prorubricyte	0.4	0.33	9	0.5	0.53	10	0.4	0.47	8	0.4	0.57	9	0.5	0.51	7
Rubricyte - Basophilic	6.9	2.30	9	6.5	3.04	10	6.1	1.81	8	6.2	2.16	9	9.4	3.02	7
Rubricyte - Polychromatophilic	15.2	3.20	9	14.5	2.94	10	14.2	3.77	8	15.1	3.56	9	18.9	3.71	7
Metarubricyte	7.8	1.94	9	6.7	2.10	10	7.0	2.63	8	7.1	2.04	9	6.1	2.95	7
Erythroid Mitotic Figures	0.7	0.43	9	0.5	0.35	10	0.6	0.47	8	0.5	0.40	9	1.1	0.83	7
TOTAL ERYTHROID CELLS	31.0	6.26	9	28.8	4.55	10	28.3	5.49	8	29.3	6.33	9	36.0	7.51	7
Lymphoid	29.5	8.96	9	31.7	6.24	10	31.3	5.49	8	34.4	6.55	9	27.9	6.63	7
Monocyte	0.0	0.00	9	0.0	0.08	10	0.0	0.00	8	0.0	0.08	9	0.0	0.00	7
Plasma Cell	0.4	0.38	9	0.5	0.44	10	0.5	0.38	8	0.6	0.31	9	0.3	0.47	7
Mast Cell	0.0	0.00	9	0.0	0.00	10	0.0	0.00	8	0.0	0.00	9	0.0	0.08	7
Myeloid: Erythroid (M:E) Ratio	1.3	0.36	9	1.4	0.41	10	1.5	0.54	8	1.3	0.48	9	1.1	0.37	7

N - Number of Animals
S.D. - Standard Deviation

Means are expressed as percentage of total cells

Bone Marrow Differential Count

Animal No. 99466 Group 1 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	3	0.7	1.9	
Myelocyte Neutrophil	11	2.4	6.8	
Metamyelocyte Neutrophil	25	5.6	15.5	
Band Neutrophil	40	8.9	24.8	
Segmented Neutrophil	49	10.9	30.4	
Eosinophil	33	7.3	20.5	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	161	35.8	100	
Rubriblast	0	0.0		0.0
Prorubricyte	2	0.4		1.3
Rubricyte - Basophilic	36	8.0		22.5
Rubricyte - Polychromatophilic	96	21.3		60.0
Metarubricyte	23	5.1		14.4
Erythroid Mitotic Figures	3	0.7		1.9
TOTAL ERYTHROID CELLS	160	35.6		100
Lymphoid	129	28.7		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	450			
M:E RATIO		1.0		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99472 Group 1 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	9	2.0	4.9	
Metamyelocyte Neutrophil	27	6.0	14.8	
Band Neutrophil	42	9.3	23.0	
Segmented Neutrophil	86	19.0	47.0	
Eosinophil	17	3.8	9.3	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	2	0.4	1.1	
TOTAL GRANULOCYTIC CELLS	183	40.4	100	
Rubriblast	0	0.0		0.0
Prorubricyte	4	0.9		3.5
Rubricyte - Basophilic	39	8.6		34.2
Rubricyte - Polychromatophilic	48	10.6		42.1
Metarubricyte	23	5.1		20.2
Erythroid Mitotic Figures	0	0.0		0.0
TOTAL ERYTHROID CELLS	114	25.2		100
Lymphoid	153	33.8		
Monocyte	1	0.2		
Plasma Cell	2	0.4		
Mast Cell	0	0.0		
TOTAL CELL COUNT	453			
M:E RATIO		1.6		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99474 Group 1 Sex M Study No. WIL-402022
 Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	2	0.5	0.8	
Myelocyte Neutrophil	5	1.2	2.0	
Metamyelocyte Neutrophil	28	6.6	11.4	
Band Neutrophil	30	7.1	12.2	
Segmented Neutrophil	156	36.8	63.4	
Eosinophil	25	5.9	10.2	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	246	58.0	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	27	6.4		25.5
Rubricyte - Polychromatophilic	51	12.0		48.1
Metarubricyte	28	6.6		26.4
Erythroid Mitotic Figures	0	0.0		0.0
TOTAL ERYTHROID CELLS	106	25.0		100
Lymphoid	71	16.7		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	424			
M:E RATIO		2.3		

Megakaryocytes Present

Remarks Slides had pleomorphic bacteria

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99491 Group 1 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	2	0.5	1.0	
Myelocyte Neutrophil	7	1.6	3.5	
Metamyelocyte Neutrophil	35	7.9	17.4	
Band Neutrophil	55	12.4	27.4	
Segmented Neutrophil	79	17.8	39.3	
Eosinophil	21	4.7	10.4	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	2	0.5	1.0	
TOTAL GRANULOCYTIC CELLS	201	45.4	100	
Rubriblast	0	0.0		0.0
Prorubricyte	2	0.5		1.8
Rubricyte - Basophilic	29	6.5		25.4
Rubricyte - Polychromatophilic	52	11.7		45.6
Metarubricyte	30	6.8		26.3
Erythroid Mitotic Figures	1	0.2		0.9
TOTAL ERYTHROID CELLS	114	25.7		100
Lymphoid	123	27.8		
Monocyte	1	0.2		
Plasma Cell	4	0.9		
Mast Cell	0	0.0		
TOTAL CELL COUNT	443			
M:E RATIO		1.8		

Megakaryocytes Present

Remarks Slides had increased lysis

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99496 Group 1 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	3	0.6	1.5	
Myelocyte Neutrophil	10	2.1	5.1	
Metamyelocyte Neutrophil	23	4.9	11.6	
Band Neutrophil	42	9.0	21.2	
Segmented Neutrophil	96	20.5	48.5	
Eosinophil	22	4.7	11.1	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	2	0.4	1.0	
TOTAL GRANULOCYTIC CELLS	198	42.2	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	28	6.0		17.9
Rubricyte - Polychromatophilic	87	18.6		55.8
Metarubricyte	35	7.5		22.4
Erythroid Mitotic Figures	6	1.3		3.8
TOTAL ERYTHROID CELLS	156	33.3		100
Lymphoid	114	24.3		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	469			
M:E RATIO		1.3		

Megakaryocytes Present

Remarks _____

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99504 Group 1 Sex M Study No. WIL-402022
 Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	11	2.2	5.1	
Metamyelocyte Neutrophil	38	7.6	17.5	
Band Neutrophil	50	10.0	23.0	
Segmented Neutrophil	100	20.0	46.1	
Eosinophil	18	3.6	8.3	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	217	43.4	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	37	7.4		28.9
Rubricyte - Polychromatophilic	51	10.2		39.8
Metarubricyte	34	6.8		26.6
Erythroid Mitotic Figures	6	1.2		4.7
TOTAL ERYTHROID CELLS	128	25.6		100
Lymphoid	154	30.8		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	500			
M:E RATIO		1.7		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99505 Group 1 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	1	0.2	0.5	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	15	3.0	7.2	
Metamyelocyte Neutrophil	32	6.5	15.4	
Band Neutrophil	61	12.4	29.3	
Segmented Neutrophil	84	17.1	40.4	
Eosinophil	13	2.6	6.3	
Basophil	2	0.4	1.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	208	42.3	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.7
Rubricyte - Basophilic	40	8.1		27.2
Rubricyte - Polychromatophilic	59	12.0		40.1
Metarubricyte	43	8.7		29.3
Erythroid Mitotic Figures	4	0.8		2.7
TOTAL ERYTHROID CELLS	147	29.9		100
Lymphoid	137	27.8		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	492			
M:E RATIO		1.4		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99507 Group 1 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	5	1.0	2.5	
Myelocyte Neutrophil	21	4.4	10.4	
Metamyelocyte Neutrophil	30	6.3	14.9	
Band Neutrophil	51	10.7	25.2	
Segmented Neutrophil	71	14.9	35.1	
Eosinophil	21	4.4	10.4	
Basophil	1	0.2	0.5	
Myeloid Mitotic Figures	2	0.4	1.0	
TOTAL GRANULOCYTIC CELLS	202	42.3	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	33	6.9		22.4
Rubricyte - Polychromatophilic	73	15.3		49.7
Metarubricyte	38	8.0		25.9
Erythroid Mitotic Figures	3	0.6		2.0
TOTAL ERYTHROID CELLS	147	30.8		100
Lymphoid	126	26.4		
Monocyte	0	0.0		
Plasma Cell	2	0.4		
Mast Cell	0	0.0		
TOTAL CELL COUNT	477			
M:E RATIO		1.4		

Megakaryocytes Present

Remarks _____

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99509 Group 1 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.6	
Myelocyte Neutrophil	5	1.0	3.0	
Metamyelocyte Neutrophil	13	2.7	7.7	
Band Neutrophil	48	10.0	28.4	
Segmented Neutrophil	66	13.8	39.1	
Eosinophil	34	7.1	20.1	
Basophil	1	0.2	0.6	
Myeloid Mitotic Figures	1	0.2	0.6	
TOTAL GRANULOCYTIC CELLS	169	35.3	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	20	4.2		17.4
Rubricyte - Polychromatophilic	50	10.4		43.5
Metarubricyte	43	9.0		37.4
Erythroid Mitotic Figures	2	0.4		1.7
TOTAL ERYTHROID CELLS	115	24.0		100
Lymphoid	193	40.3		
Monocyte	0	0.0		
Plasma Cell	2	0.4		
Mast Cell	0	0.0		
TOTAL CELL COUNT	479			
M:E RATIO		1.5		

Megakaryocytes Present

Remarks Slides had slightly low cellularity

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99515 Group 1 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	1	0.2	0.5	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	4	1.0	2.1	
Metamyelocyte Neutrophil	24	5.9	12.5	
Band Neutrophil	53	12.9	27.6	
Segmented Neutrophil	84	20.5	43.8	
Eosinophil	25	6.1	13.0	
Basophil	1	0.2	0.5	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	192	46.8	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.9
Rubricyte - Basophilic	31	7.6		27.2
Rubricyte - Polychromatophilic	60	14.6		52.6
Metarubricyte	19	4.6		16.7
Erythroid Mitotic Figures	3	0.7		2.6
TOTAL ERYTHROID CELLS	114	27.8		100
Lymphoid	102	24.9		
Monocyte	0	0.0		
Plasma Cell	2	0.5		
Mast Cell	0	0.0		
TOTAL CELL COUNT	410			
M:E RATIO		1.7		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99467 Group 2 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.7	
Myelocyte Neutrophil	6	1.4	4.2	
Metamyelocyte Neutrophil	16	3.7	11.3	
Band Neutrophil	26	5.9	18.3	
Segmented Neutrophil	78	17.8	54.9	
Eosinophil	15	3.4	10.6	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	142	32.4	100	
Rubriblast	1	0.2		0.7
Prorubricyte	2	0.5		1.4
Rubricyte - Basophilic	46	10.5		32.2
Rubricyte - Polychromatophilic	65	14.8		45.5
Metarubricyte	25	5.7		17.5
Erythroid Mitotic Figures	4	0.9		2.8
TOTAL ERYTHROID CELLS	143	32.6		100
Lymphoid	151	34.5		
Monocyte	0	0.0		
Plasma Cell	2	0.5		
Mast Cell	0	0.0		
TOTAL CELL COUNT	438			
M:E RATIO		1.0		

Megakaryocytes Present

Remarks _____

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99471 Group 2 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	11	2.4	6.0	
Metamyelocyte Neutrophil	25	5.5	13.7	
Band Neutrophil	41	9.1	22.5	
Segmented Neutrophil	85	18.8	46.7	
Eosinophil	20	4.4	11.0	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	182	40.3	100	
Rubriblast	0	0.0		0.0
Prorubricyte	4	0.9		2.6
Rubricyte - Basophilic	59	13.1		38.1
Rubricyte - Polychromatophilic	72	15.9		46.5
Metarubricyte	19	4.2		12.3
Erythroid Mitotic Figures	1	0.2		0.6
TOTAL ERYTHROID CELLS	155	34.3		100
Lymphoid	113	25.0		
Monocyte	0	0.0		
Plasma Cell	2	0.4		
Mast Cell	0	0.0		
TOTAL CELL COUNT	452			
M:E RATIO		1.2		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99473 Group 2 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.5	
Myelocyte Neutrophil	15	3.4	7.9	
Metamyelocyte Neutrophil	20	4.5	10.5	
Band Neutrophil	43	9.7	22.5	
Segmented Neutrophil	92	20.7	48.2	
Eosinophil	19	4.3	9.9	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.5	
TOTAL GRANULOCYTIC CELLS	191	42.9	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.8
Rubricyte - Basophilic	33	7.4		27.3
Rubricyte - Polychromatophilic	48	10.8		39.7
Metarubricyte	38	8.5		31.4
Erythroid Mitotic Figures	1	0.2		0.8
TOTAL ERYTHROID CELLS	121	27.2		100
Lymphoid	132	29.7		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	445			
M:E RATIO		1.6		

Megakaryocytes Present

Remarks Slides had excess diluent

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99498 Group 2 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	12	2.5	5.8	
Metamyelocyte Neutrophil	31	6.4	15.0	
Band Neutrophil	54	11.1	26.1	
Segmented Neutrophil	88	18.0	42.5	
Eosinophil	22	4.5	10.6	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	207	42.4	100	
Rubriblast	0	0.0		0.0
Prorubricyte	2	0.4		1.5
Rubricyte - Basophilic	40	8.2		30.3
Rubricyte - Polychromatophilic	59	12.1		44.7
Metarubricyte	29	5.9		22.0
Erythroid Mitotic Figures	2	0.4		1.5
TOTAL ERYTHROID CELLS	132	27.0		100
Lymphoid	147	30.1		
Monocyte	0	0.0		
Plasma Cell	2	0.4		
Mast Cell	0	0.0		
TOTAL CELL COUNT	488			
M:E RATIO		1.6		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99502 Group 2 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	5	1.1	2.8	
Metamyelocyte Neutrophil	25	5.7	13.8	
Band Neutrophil	39	8.8	21.5	
Segmented Neutrophil	99	22.4	54.7	
Eosinophil	13	2.9	7.2	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	181	41.0	100	
Rubriblast	0	0.0		0.0
Prorubricyte	3	0.7		2.3
Rubricyte - Basophilic	47	10.6		35.6
Rubricyte - Polychromatophilic	63	14.3		47.7
Metarubricyte	17	3.8		12.9
Erythroid Mitotic Figures	2	0.5		1.5
TOTAL ERYTHROID CELLS	132	29.9		100
Lymphoid	127	28.7		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	1	0.2		
TOTAL CELL COUNT	442			
M:E RATIO		1.4		

Megakaryocytes Present

Remarks _____

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99503 Group 2 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.5	
Myelocyte Neutrophil	16	3.9	8.2	
Metamyelocyte Neutrophil	26	6.3	13.3	
Band Neutrophil	62	15.1	31.8	
Segmented Neutrophil	76	18.5	39.0	
Eosinophil	14	3.4	7.2	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	195	47.6	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	27	6.6		22.5
Rubricyte - Polychromatophilic	58	14.1		48.3
Metarubricyte	33	8.0		27.5
Erythroid Mitotic Figures	2	0.5		1.7
TOTAL ERYTHROID CELLS	120	29.3		100
Lymphoid	93	22.7		
Monocyte	0	0.0		
Plasma Cell	2	0.5		
Mast Cell	0	0.0		
TOTAL CELL COUNT	410			
M:E RATIO		1.6		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99506 Group 2 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.4	
Myelocyte Neutrophil	14	3.1	6.1	
Metamyelocyte Neutrophil	30	6.6	13.1	
Band Neutrophil	49	10.8	21.4	
Segmented Neutrophil	81	17.8	35.4	
Eosinophil	52	11.5	22.7	
Basophil	1	0.2	0.4	
Myeloid Mitotic Figures	1	0.2	0.4	
TOTAL GRANULOCYTIC CELLS	229	50.4	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.8
Rubricyte - Basophilic	26	5.7		21.0
Rubricyte - Polychromatophilic	58	12.8		46.8
Metarubricyte	37	8.1		29.8
Erythroid Mitotic Figures	2	0.4		1.6
TOTAL ERYTHROID CELLS	124	27.3		100
Lymphoid	98	21.6		
Monocyte	0	0.0		
Plasma Cell	3	0.7		
Mast Cell		0.0		
TOTAL CELL COUNT	454			
M:E RATIO		1.8		

Megakaryocytes Present

Remarks _____

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99516 Group 2 Sex M Study No. WIL-402022
 Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.5	
Myelocyte Neutrophil	17	4.1	8.3	
Metamyelocyte Neutrophil	20	4.8	9.7	
Band Neutrophil	43	10.4	20.9	
Segmented Neutrophil	91	21.9	44.2	
Eosinophil	32	7.7	15.5	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	2	0.5	1.0	
TOTAL GRANULOCYTIC CELLS	206	49.6	100	
Rubriblast	0	0.0		0.0
Prorubricyte	4	1.0		3.7
Rubricyte - Basophilic	32	7.7		29.4
Rubricyte - Polychromatophilic	50	12.0		45.9
Metarubricyte	21	5.1		19.3
Erythroid Mitotic Figures	2	0.5		1.8
TOTAL ERYTHROID CELLS	109	26.3		100
Lymphoid	99	23.9		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	415			
M:E RATIO		1.9		

Megakaryocytes Present

Remarks Slides had low cellularity, increased lysis and cell swelling

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99518 Group 2 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	11	2.5	5.0	
Metamyelocyte Neutrophil	22	5.0	10.0	
Band Neutrophil	69	15.6	31.2	
Segmented Neutrophil	103	23.4	46.6	
Eosinophil	16	3.6	7.2	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	221	50.1	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	15	3.4		15.0
Rubricyte - Polychromatophilic	53	12.0		53.0
Metarubricyte	30	6.8		30.0
Erythroid Mitotic Figures	2	0.5		2.0
TOTAL ERYTHROID CELLS	100	22.7		100
Lymphoid	120	27.2		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	441			
M:E RATIO		2.2		

Megakaryocytes Present

Remarks Slides had low cellularity, slightly increased lysis and cell swelling

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99519 Group 2 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.6	
Myelocyte Neutrophil	4	0.9	2.2	
Metamyelocyte Neutrophil	25	5.4	13.8	
Band Neutrophil	36	7.8	19.9	
Segmented Neutrophil	93	20.2	51.4	
Eosinophil	19	4.1	10.5	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	3	0.7	1.7	
TOTAL GRANULOCYTIC CELLS	181	39.3	100	
Rubriblast	0	0.0		0.0
Prorubricyte	4	0.9		2.6
Rubricyte - Basophilic	42	9.1		27.3
Rubricyte - Polychromatophilic	69	15.0		44.8
Metarubricyte	35	7.6		22.7
Erythroid Mitotic Figures	4	0.9		2.6
TOTAL ERYTHROID CELLS	154	33.4		100
Lymphoid	126	27.3		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	461			
M:E RATIO		1.2		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99494 Group 3 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	1	0.2	0.5	
Promyelocyte	1	0.2	0.5	
Myelocyte Neutrophil	6	1.3	2.9	
Metamyelocyte Neutrophil	19	4.0	9.3	
Band Neutrophil	55	11.5	26.8	
Segmented Neutrophil	105	22.0	51.2	
Eosinophil	17	3.6	8.3	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.5	
TOTAL GRANULOCYTIC CELLS	205	43.0	100	
Rubriblast	1	0.2		0.9
Prorubricyte	1	0.2		0.9
Rubricyte - Basophilic	17	3.6		14.9
Rubricyte - Polychromatophilic	53	11.1		46.5
Metarubricyte	42	8.8		36.8
Erythroid Mitotic Figures	0	0.0		0.0
TOTAL ERYTHROID CELLS	114	23.9		100
Lymphoid	156	32.7		
Monocyte	0	0.0		
Plasma Cell	2	0.4		
Mast Cell	0	0.0		
TOTAL CELL COUNT	477			
M:E RATIO		1.8		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99511 Group 3 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	8	1.8	3.8	
Metamyelocyte Neutrophil	21	4.7	10.0	
Band Neutrophil	36	8.0	17.1	
Segmented Neutrophil	123	27.3	58.3	
Eosinophil	21	4.7	10.0	
Basophil	2	0.4	0.9	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	211	46.9	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.8
Rubricyte - Basophilic	27	6.0		20.6
Rubricyte - Polychromatophilic	59	13.1		45.0
Metarubricyte	42	9.3		32.1
Erythroid Mitotic Figures	2	0.4		1.5
TOTAL ERYTHROID CELLS	131	29.1		100
Lymphoid	108	24.0		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	450			
M:E RATIO		1.6		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99524 Group 3 Sex M Study No. WIL-402022
 Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.5	
Myelocyte Neutrophil	7	1.4	3.4	
Metamyelocyte Neutrophil	23	4.6	11.2	
Band Neutrophil	47	9.4	22.8	
Segmented Neutrophil	88	17.7	42.7	
Eosinophil	39	7.8	18.9	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.5	
TOTAL GRANULOCYTIC CELLS	206	41.4	100	
Rubriblast	0	0.0		0.0
Prorubricyte	2	0.4		1.3
Rubricyte - Basophilic	37	7.4		24.0
Rubricyte - Polychromatophilic	58	11.6		37.7
Metarubricyte	54	10.8		35.1
Erythroid Mitotic Figures	3	0.6		1.9
TOTAL ERYTHROID CELLS	154	30.9		100
Lymphoid	134	26.9		
Monocyte	0	0.0		
Plasma Cell	4	0.8		
Mast Cell	0	0.0		
TOTAL CELL COUNT	498			
M:E RATIO		1.3		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99465 Group 3 Sex M Study No. WIL-402022
 Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.6	
Myelocyte Neutrophil	7	1.5	4.2	
Metamyelocyte Neutrophil	27	5.9	16.1	
Band Neutrophil	43	9.4	25.6	
Segmented Neutrophil	82	17.9	48.8	
Eosinophil	6	1.3	3.6	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	2	0.4	1.2	
TOTAL GRANULOCYTIC CELLS	168	36.7	100	
Rubriblast	0	0.0		0.0
Prorubricyte	2	0.4		1.8
Rubricyte - Basophilic	25	5.5		22.9
Rubricyte - Polychromatophilic	51	11.1		46.8
Metarubricyte	29	6.3		26.6
Erythroid Mitotic Figures	2	0.4		1.8
TOTAL ERYTHROID CELLS	109	23.8		100
Lymphoid	180	39.3		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	458			
M:E RATIO		1.5		

Megakaryocytes Present

Remarks Slides had low cellularity, increased fat and lysis

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99479 Group 3 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	6	1.3	3.4	
Metamyelocyte Neutrophil	18	3.9	10.3	
Band Neutrophil	68	14.7	38.9	
Segmented Neutrophil	67	14.5	38.3	
Eosinophil	15	3.2	8.6	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.6	
TOTAL GRANULOCYTIC CELLS	175	37.9	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.9
Rubricyte - Basophilic	30	6.5		28.3
Rubricyte - Polychromatophilic	52	11.3		49.1
Metarubricyte	20	4.3		18.9
Erythroid Mitotic Figures	3	0.6		2.8
TOTAL ERYTHROID CELLS	106	22.9		100
Lymphoid	180	39.0		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	462			
M:E RATIO		1.7		

Megakaryocytes Present

Remarks Slides had increased lysis

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99483 Group 3 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	3	0.7	1.6	
Metamyelocyte Neutrophil	24	5.5	12.6	
Band Neutrophil	44	10.1	23.0	
Segmented Neutrophil	93	21.3	48.7	
Eosinophil	25	5.7	13.1	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	2	0.5	1.0	
TOTAL GRANULOCYTIC CELLS	191	43.8	100	
Rubriblast	0	0.0		0.0
Prorubricyte	2	0.5		1.6
Rubricyte - Basophilic	19	4.4		15.3
Rubricyte - Polychromatophilic	61	14.0		49.2
Metarubricyte	41	9.4		33.1
Erythroid Mitotic Figures	1	0.2		0.8
TOTAL ERYTHROID CELLS	124	28.4		100
Lymphoid	118	27.1		
Monocyte	0	0.0		
Plasma Cell	2	0.5		
Mast Cell	1	0.2		
TOTAL CELL COUNT	436			
M:E RATIO		1.5		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99489 Group 3 Sex M Study No. WIL-402022
 Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	1	0.2	0.7	
Metamyelocyte Neutrophil	22	5.0	15.3	
Band Neutrophil	44	10.0	30.6	
Segmented Neutrophil	60	13.6	41.7	
Eosinophil	16	3.6	11.1	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.7	
TOTAL GRANULOCYTIC CELLS	144	32.6	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.7
Rubricyte - Basophilic	39	8.8		26.5
Rubricyte - Polychromatophilic	70	15.8		47.6
Metarubricyte	36	8.1		24.5
Erythroid Mitotic Figures	1	0.2		0.7
TOTAL ERYTHROID CELLS	147	33.3		100
Lymphoid	149	33.7		
Monocyte	0	0.0		
Plasma Cell	2	0.5		
Mast Cell	0	0.0		
TOTAL CELL COUNT	442			
M:E RATIO		1.0		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99490 Group 3 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	12	2.8	5.8	
Metamyelocyte Neutrophil	27	6.2	13.0	
Band Neutrophil	60	13.8	29.0	
Segmented Neutrophil	84	19.3	40.6	
Eosinophil	23	5.3	11.1	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.5	
TOTAL GRANULOCYTIC CELLS	207	47.5	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.9
Rubricyte - Basophilic	43	9.9		39.4
Rubricyte - Polychromatophilic	43	9.9		39.4
Metarubricyte	19	4.4		17.4
Erythroid Mitotic Figures	3	0.7		2.8
TOTAL ERYTHROID CELLS	109	25.0		100
Lymphoid	118	27.1		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	1	0.2		
TOTAL CELL COUNT	436			
M:E RATIO		1.9		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99495 Group 3 Sex M Study No. WIL-402022
 Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	14	3.4	6.2	
Metamyelocyte Neutrophil	17	4.1	7.5	
Band Neutrophil	63	15.1	27.8	
Segmented Neutrophil	101	24.2	44.5	
Eosinophil	28	6.7	12.3	
Basophil	3	0.7	1.3	
Myeloid Mitotic Figures	1	0.2	0.4	
TOTAL GRANULOCYTIC CELLS	227	54.4	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	10	2.4		19.2
Rubricyte - Polychromatophilic	32	7.7		61.5
Metarubricyte	9	2.2		17.3
Erythroid Mitotic Figures	1	0.2		1.9
TOTAL ERYTHROID CELLS	52	12.5		100
Lymphoid	138	33.1		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	417			
M:E RATIO		4.4		

Megakaryocytes Present

Remarks Slides had cell swelling and increased lysis, especially of erythroid precursors.
Not included in mean and standard deviation due to probable artifacts.

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99528 Group 3 Sex M Study No. WIL-402022
 Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast				
Promyelocyte				
Myelocyte Neutrophil				
Metamyelocyte Neutrophil				
Band Neutrophil				
Segmented Neutrophil				
Eosinophil				
Basophil				
Myeloid Mitotic Figures				
TOTAL GRANULOCYTIC CELLS				
Rubriblast				
Prorubricyte				
Rubricyte - Basophilic				
Rubricyte - Polychromatophilic				
Metarubricyte				
Erythroid Mitotic Figures				
TOTAL ERYTHROID CELLS				
Lymphoid				
Monocyte				
Plasma Cell				
Mast Cell				
TOTAL CELL COUNT				
M:E RATIO				

Megakaryocytes _____

Remarks Slides were not adequate for evaluation due to overdilution

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99464 Group 4 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	6	1.3	4.1	
Metamyelocyte Neutrophil	27	5.7	18.2	
Band Neutrophil	47	9.9	31.8	
Segmented Neutrophil	54	11.4	36.5	
Eosinophil	14	3.0	9.5	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	148	31.2	100	
Rubriblast	0	0.0		0.0
Prorubricyte	3	0.6		1.4
Rubricyte - Basophilic	61	12.9		28.4
Rubricyte - Polychromatophilic	107	22.6		49.8
Metarubricyte	39	8.2		18.1
Erythroid Mitotic Figures	5	1.1		2.3
TOTAL ERYTHROID CELLS	215	45.4		100
Lymphoid	110	23.2		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	474			
M:E RATIO		0.7		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99469 Group 4 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	8	1.7	4.5	
Metamyelocyte Neutrophil	25	5.4	14.0	
Band Neutrophil	31	6.7	17.4	
Segmented Neutrophil	99	21.4	55.6	
Eosinophil	15	3.2	8.4	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	178	38.5	100	
Rubriblast	0	0.0		0.0
Prorubricyte	2	0.4		1.7
Rubricyte - Basophilic	36	7.8		30.3
Rubricyte - Polychromatophilic	56	12.1		47.1
Metarubricyte	24	5.2		20.2
Erythroid Mitotic Figures	1	0.2		0.8
TOTAL ERYTHROID CELLS	119	25.8		100
Lymphoid	164	35.5		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	462			
M:E RATIO		1.5		

Megakaryocytes Present

Remarks _____

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99480 Group 4 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.5	
Myelocyte Neutrophil	9	2.0	4.3	
Metamyelocyte Neutrophil	27	6.1	12.9	
Band Neutrophil	71	15.9	33.8	
Segmented Neutrophil	78	17.5	37.1	
Eosinophil	24	5.4	11.4	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	210	47.1	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	24	5.4		24.7
Rubricyte - Polychromatophilic	52	11.7		53.6
Metarubricyte	20	4.5		20.6
Erythroid Mitotic Figures	1	0.2		1.0
TOTAL ERYTHROID CELLS	97	21.7		100
Lymphoid	137	30.7		
Monocyte	0	0.0		
Plasma Cell	2	0.4		
Mast Cell	0	0.0		
TOTAL CELL COUNT	446			
M:E RATIO		2.2		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99485 Group 4 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	8	1.8	4.2	
Metamyelocyte Neutrophil	37	8.5	19.6	
Band Neutrophil	35	8.0	18.5	
Segmented Neutrophil	91	20.9	48.1	
Eosinophil	17	3.9	9.0	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.5	
TOTAL GRANULOCYTIC CELLS	189	43.4	100	
Rubriblast	0	0.0		0.0
Prorubricyte	4	0.9		3.3
Rubricyte - Basophilic	30	6.9		24.8
Rubricyte - Polychromatophilic	52	12.0		43.0
Metarubricyte	33	7.6		27.3
Erythroid Mitotic Figures	2	0.5		1.7
TOTAL ERYTHROID CELLS	121	27.8		100
Lymphoid	123	28.3		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	1	0.2		
TOTAL CELL COUNT	435			
M:E RATIO		1.6		

Megakaryocytes Present

Remarks Slides had slightly increased lysis and excess diluent

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99486 Group 4 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	10	2.4	6.6	
Metamyelocyte Neutrophil	22	5.3	14.5	
Band Neutrophil	47	11.3	30.9	
Segmented Neutrophil	54	12.9	35.5	
Eosinophil	18	4.3	11.8	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.7	
TOTAL GRANULOCYTIC CELLS	152	36.5	100	
Rubriblast	0	0.0		0.0
Prorubricyte	5	1.2		4.1
Rubricyte - Basophilic	43	10.3		35.2
Rubricyte - Polychromatophilic	56	13.4		45.9
Metarubricyte	16	3.8		13.1
Erythroid Mitotic Figures	2	0.5		1.6
TOTAL ERYTHROID CELLS	122	29.3		100
Lymphoid	140	33.6		
Monocyte	0	0.0		
Plasma Cell	3	0.7		
Mast Cell	0	0.0		
TOTAL CELL COUNT	417			
M:E RATIO		1.2		

Megakaryocytes Present

Remarks Slides had increased lysis

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99500 Group 4 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	2	0.4	1.2	
Myelocyte Neutrophil	9	1.7	5.3	
Metamyelocyte Neutrophil	20	3.8	11.8	
Band Neutrophil	43	8.2	25.3	
Segmented Neutrophil	73	13.9	42.9	
Eosinophil	19	3.6	11.2	
Basophil	4	0.8	2.4	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	170	32.4	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	47	9.0		24.2
Rubricyte - Polychromatophilic	102	19.4		52.6
Metarubricyte	43	8.2		22.2
Erythroid Mitotic Figures	2	0.4		1.0
TOTAL ERYTHROID CELLS	194	37.0		100
Lymphoid	157	29.9		
Monocyte	0	0.0		
Plasma Cell	4	0.8		
Mast Cell	0	0.0		
TOTAL CELL COUNT	525			
M:E RATIO		0.9		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99512 Group 4 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	1	0.2	0.6	
Promyelocyte	2	0.5	1.2	
Myelocyte Neutrophil	15	3.5	8.8	
Metamyelocyte Neutrophil	15	3.5	8.8	
Band Neutrophil	44	10.2	25.9	
Segmented Neutrophil	77	17.9	45.3	
Eosinophil	15	3.5	8.8	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.6	
TOTAL GRANULOCYTIC CELLS	170	39.4	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.8
Rubricyte - Basophilic	38	8.8		29.5
Rubricyte - Polychromatophilic	47	10.9		36.4
Metarubricyte	39	9.0		30.2
Erythroid Mitotic Figures	4	0.9		3.1
TOTAL ERYTHROID CELLS	129	29.9		100
Lymphoid	130	30.2		
Monocyte	0	0.0		
Plasma Cell	2	0.5		
Mast Cell	0	0.0		
TOTAL CELL COUNT	431			
M:E RATIO		1.3		

Megakaryocytes Present

Remarks Slides had low cellularity

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99513 Group 4 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	9	2.0	6.7	
Metamyelocyte Neutrophil	11	2.4	8.1	
Band Neutrophil	25	5.5	18.5	
Segmented Neutrophil	71	15.6	52.6	
Eosinophil	19	4.2	14.1	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	135	29.6	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	38	8.3		20.1
Rubricyte - Polychromatophilic	106	23.2		56.1
Metarubricyte	42	9.2		22.2
Erythroid Mitotic Figures	3	0.7		1.6
TOTAL ERYTHROID CELLS	189	41.4		100
Lymphoid	130	28.5		
Monocyte	0	0.0		
Plasma Cell	2	0.4		
Mast Cell	0	0.0		
TOTAL CELL COUNT	456			
M:E RATIO		0.7		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99525 Group 4 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	4	0.8	2.2	
Myelocyte Neutrophil	6	1.2	3.2	
Metamyelocyte Neutrophil	21	4.4	11.4	
Band Neutrophil	35	7.3	18.9	
Segmented Neutrophil	99	20.5	53.5	
Eosinophil	19	3.9	10.3	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.5	
TOTAL GRANULOCYTIC CELLS	185	38.4	100	
Rubriblast	0	0.0		0.0
Prorubricyte	2	0.4		1.0
Rubricyte - Basophilic	65	13.5		34.0
Rubricyte - Polychromatophilic	81	16.8		42.4
Metarubricyte	36	7.5		18.8
Erythroid Mitotic Figures	7	1.5		3.7
TOTAL ERYTHROID CELLS	191	39.6		100
Lymphoid	100	20.7		
Monocyte	1	0.2		
Plasma Cell	5	1.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	482			
M:E RATIO		1.0		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99510 Group 4 Sex M Study No. WIL-402022
 Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast				
Promyelocyte				
Myelocyte Neutrophil				
Metamyelocyte Neutrophil				
Band Neutrophil				
Segmented Neutrophil				
Eosinophil				
Basophil				
Myeloid Mitotic Figures				
TOTAL GRANULOCYTIC CELLS				
Rubriblast				
Prorubricyte				
Rubricyte - Basophilic				
Rubricyte - Polychromatophilic				
Metarubricyte				
Erythroid Mitotic Figures				
TOTAL ERYTHROID CELLS				
Lymphoid				
Monocyte				
Plasma Cell				
Mast Cell				
TOTAL CELL COUNT				
M:E RATIO				

Megakaryocytes _____

Remarks Slides were not adequate for evaluation due to overdilution

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99468 Group 5 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.5	
Myelocyte Neutrophil	9	2.1	4.8	
Metamyelocyte Neutrophil	21	4.8	11.2	
Band Neutrophil	76	17.5	40.6	
Segmented Neutrophil	64	14.7	34.2	
Eosinophil	14	3.2	7.5	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	2	0.5	1.1	
TOTAL GRANULOCYTIC CELLS	187	43.0	100	
Rubriblast	0	0.0		0.0
Prorubricyte	5	1.1		2.9
Rubricyte - Basophilic	55	12.6		31.8
Rubricyte - Polychromatophilic	85	19.5		49.1
Metarubricyte	27	6.2		15.6
Erythroid Mitotic Figures	1	0.2		0.6
TOTAL ERYTHROID CELLS	173	39.8		100
Lymphoid	75	17.2		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	435			
M:E RATIO		1.1		

Megakaryocytes Present

Remarks Slides had low cellularity, increased cell swelling and lysis and excess diluent

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99482 Group 5 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	3	0.7	2.1	
Myelocyte Neutrophil	5	1.1	3.5	
Metamyelocyte Neutrophil	28	6.2	19.6	
Band Neutrophil	43	9.5	30.1	
Segmented Neutrophil	49	10.8	34.3	
Eosinophil	15	3.3	10.5	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	143	31.6	100	
Rubriblast	0	0.0		0.0
Prorubricyte	5	1.1		2.3
Rubricyte - Basophilic	106	23.5		49.5
Rubricyte - Polychromatophilic	74	16.4		34.6
Metarubricyte	28	6.2		13.1
Erythroid Mitotic Figures	1	0.2		0.5
TOTAL ERYTHROID CELLS	214	47.3		100
Lymphoid	90	19.9		
Monocyte	0	0.0		
Plasma Cell	2	0.4		
Mast Cell	3	0.7		
TOTAL CELL COUNT	452			
M:E RATIO		0.7		

Megakaryocytes Present

Remarks Slides had increased cell swelling and lysis

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99487 Group 5 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	6	1.4	3.3	
Metamyelocyte Neutrophil	15	3.4	8.2	
Band Neutrophil	56	12.8	30.4	
Segmented Neutrophil	93	21.3	50.5	
Eosinophil	12	2.7	6.5	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	2	0.5	1.1	
TOTAL GRANULOCYTIC CELLS	184	42.1	100	
Rubriblast	0	0.0		0.0
Prorubricyte	3	0.7		1.6
Rubricyte - Basophilic	57	13.0		30.8
Rubricyte - Polychromatophilic	95	21.7		51.4
Metarubricyte	20	4.6		10.8
Erythroid Mitotic Figures	10	2.3		5.4
TOTAL ERYTHROID CELLS	185	42.3		100
Lymphoid	66	15.1		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	1	0.2		
TOTAL CELL COUNT	437			
M:E RATIO		1.0		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99499 Group 5 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	2	0.4	1.2	
Myelocyte Neutrophil	12	2.6	7.1	
Metamyelocyte Neutrophil	21	4.6	12.4	
Band Neutrophil	41	8.9	24.3	
Segmented Neutrophil	80	17.4	47.3	
Eosinophil	12	2.6	7.1	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.6	
TOTAL GRANULOCYTIC CELLS	169	36.7	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	58	12.6		35.8
Rubricyte - Polychromatophilic	71	15.4		43.8
Metarubricyte	32	6.9		19.8
Erythroid Mitotic Figures	1	0.2		0.6
TOTAL ERYTHROID CELLS	162	35.1		100
Lymphoid	127	27.5		
Monocyte	0	0.0		
Plasma Cell	3	0.7		
Mast Cell	0	0.0		
TOTAL CELL COUNT	461			
M:E RATIO		1.0		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99501 Group 5 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.7	
Myelocyte Neutrophil	2	0.5	1.4	
Metamyelocyte Neutrophil	14	3.3	9.9	
Band Neutrophil	42	9.8	29.6	
Segmented Neutrophil	65	15.2	45.8	
Eosinophil	17	4.0	12.0	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.7	
TOTAL GRANULOCYTIC CELLS	142	33.3	100	
Rubriblast	0	0.0		0.0
Prorubricyte	5	1.2		2.7
Rubricyte - Basophilic	55	12.9		30.1
Rubricyte - Polychromatophilic	83	19.4		45.4
Metarubricyte	37	8.7		20.2
Erythroid Mitotic Figures	3	0.7		1.6
TOTAL ERYTHROID CELLS	183	42.9		100
Lymphoid	102	23.9		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	427			
M:E RATIO		0.8		

Megakaryocytes Present

Remarks _____

E - Erythroid

G - Granulocytic

M - Myeloid

Bone Marrow Differential Count

Animal No. 99517 Group 5 Sex M Study No. WIL-402022
 Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	7	1.5	4.5	
Metamyelocyte Neutrophil	27	5.8	17.2	
Band Neutrophil	44	9.5	28.0	
Segmented Neutrophil	64	13.9	40.8	
Eosinophil	15	3.2	9.6	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	157	34.0	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	46	10.0		38.0
Rubricyte - Polychromatophilic	46	10.0		38.0
Metarubricyte	27	5.8		22.3
Erythroid Mitotic Figures	2	0.4		1.7
TOTAL ERYTHROID CELLS	121	26.2		100
Lymphoid	184	39.8		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	462			
M:E RATIO		1.3		

Megakaryocytes Present

Remarks Slides had low cellularity

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99521 Group 5 Sex M Study No. WIL-402022
 Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.7	
Myelocyte Neutrophil	7	1.5	4.6	
Metamyelocyte Neutrophil	11	2.3	7.2	
Band Neutrophil	55	11.5	36.2	
Segmented Neutrophil	61	12.7	40.1	
Eosinophil	17	3.5	11.2	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	152	31.7	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	12	2.5		15.2
Rubricyte - Polychromatophilic	34	7.1		43.0
Metarubricyte	33	6.9		41.8
Erythroid Mitotic Figures	0	0.0		0.0
TOTAL ERYTHROID CELLS	79	16.5		100
Lymphoid	247	51.6		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	1	0.2		
TOTAL CELL COUNT	479			
M:E RATIO		1.9		

Megakaryocytes Present

Remarks Slides had increased lysis

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99522 Group 5 Sex M Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.7	
Myelocyte Neutrophil	6	1.2	3.9	
Metamyelocyte Neutrophil	14	2.9	9.2	
Band Neutrophil	44	9.0	28.8	
Segmented Neutrophil	70	14.3	45.8	
Eosinophil	18	3.7	11.8	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	153	31.2	100	
Rubriblast	0	0.0		0.0
Prorubricyte	6	1.2		4.2
Rubricyte - Basophilic	23	4.7		16.0
Rubricyte - Polychromatophilic	76	15.5		52.8
Metarubricyte	36	7.3		25.0
Erythroid Mitotic Figures	3	0.6		2.1
TOTAL ERYTHROID CELLS	144	29.3		100
Lymphoid	192	39.1		
Monocyte	0	0.0		
Plasma Cell	2	0.4		
Mast Cell	0	0.0		
TOTAL CELL COUNT	491			
M:E RATIO		1.1		

Megakaryocytes Present

Remarks Slides had slightly low cellularity

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99523 Group 5 Sex M Study No. WIL-402022
 Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	1	0.2	0.5	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	5	1.2	2.6	
Metamyelocyte Neutrophil	26	6.2	13.8	
Band Neutrophil	52	12.4	27.5	
Segmented Neutrophil	85	20.3	45.0	
Eosinophil	19	4.5	10.1	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.5	
TOTAL GRANULOCYTIC CELLS	189	45.2	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	31	7.4		23.3
Rubricyte - Polychromatophilic	59	14.1		44.4
Metarubricyte	40	9.6		30.1
Erythroid Mitotic Figures	3	0.7		2.3
TOTAL ERYTHROID CELLS	133	31.8		100
Lymphoid	90	21.5		
Monocyte	0	0.0		
Plasma Cell	3	0.7		
Mast Cell	3	0.7		
TOTAL CELL COUNT	418			
M:E RATIO		1.4		

Megakaryocytes Present

Remarks Slides had slightly low cellularity, increased lysis, and excess diluent

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99569 Group 1 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	9	2.2	4.1	
Metamyelocyte Neutrophil	20	4.8	9.0	
Band Neutrophil	54	12.9	24.4	
Segmented Neutrophil	106	25.4	48.0	
Eosinophil	31	7.4	14.0	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.5	
TOTAL GRANULOCYTIC CELLS	221	53.0	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.9
Rubricyte - Basophilic	25	6.0		23.4
Rubricyte - Polychromatophilic	39	9.4		36.4
Metarubricyte	38	9.1		35.5
Erythroid Mitotic Figures	4	1.0		3.7
TOTAL ERYTHROID CELLS	107	25.7		100
Lymphoid	88	21.1		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	417			
M:E RATIO		2.1		

Megakaryocytes Present

Remarks Slides had low cellularity

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99579 Group 1 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	5	1.0	2.8	
Metamyelocyte Neutrophil	25	5.2	14.2	
Band Neutrophil	48	10.0	27.3	
Segmented Neutrophil	63	13.1	35.8	
Eosinophil	35	7.3	19.9	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	176	36.5	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	33	6.8		23.4
Rubricyte - Polychromatophilic	66	13.7		46.8
Metarubricyte	39	8.1		27.7
Erythroid Mitotic Figures	3	0.6		2.1
TOTAL ERYTHROID CELLS	141	29.3		100
Lymphoid	160	33.2		
Monocyte	0	0.0		
Plasma Cell	5	1.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	482			
M:E RATIO		1.2		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99586 Group 1 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	7	1.7	4.3	
Metamyelocyte Neutrophil	19	4.5	11.7	
Band Neutrophil	32	7.6	19.6	
Segmented Neutrophil	81	19.2	49.7	
Eosinophil	24	5.7	14.7	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	163	38.7	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	28	6.7		22.6
Rubricyte - Polychromatophilic	63	15.0		50.8
Metarubricyte	29	6.9		23.4
Erythroid Mitotic Figures	4	1.0		3.2
TOTAL ERYTHROID CELLS	124	29.5		100
Lymphoid	130	30.9		
Monocyte	0	0.0		
Plasma Cell	4	1.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	421			
M:E RATIO		1.3		

Megakaryocytes Present

Remarks

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99593 Group 1 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	6	1.5	3.6	
Metamyelocyte Neutrophil	19	4.6	11.3	
Band Neutrophil	41	10.0	24.4	
Segmented Neutrophil	84	20.5	50.0	
Eosinophil	17	4.2	10.1	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.6	
TOTAL GRANULOCYTIC CELLS	168	41.1	100	
Rubriblast	1	0.2		0.6
Prorubricyte	3	0.7		1.7
Rubricyte - Basophilic	49	12.0		27.5
Rubricyte - Polychromatophilic	80	19.6		44.9
Metarubricyte	41	10.0		23.0
Erythroid Mitotic Figures	4	1.0		2.2
TOTAL ERYTHROID CELLS	178	43.5		100
Lymphoid	63	15.4		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	409			
M:E RATIO		0.9		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99535 Group 1 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.7	
Myelocyte Neutrophil	13	3.0	8.6	
Metamyelocyte Neutrophil	13	3.0	8.6	
Band Neutrophil	55	12.8	36.2	
Segmented Neutrophil	41	9.5	27.0	
Eosinophil	28	6.5	18.4	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.7	
TOTAL GRANULOCYTIC CELLS	152	35.3	100	
Rubriblast	0	0.0		0.0
Prorubricyte	4	0.9		4.1
Rubricyte - Basophilic	16	3.7		16.3
Rubricyte - Polychromatophilic	56	13.0		57.1
Metarubricyte	22	5.1		22.4
Erythroid Mitotic Figures	0	0.0		0.0
TOTAL ERYTHROID CELLS	98	22.8		100
Lymphoid	179	41.6		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	430			
M:E RATIO		1.6		

Megakaryocytes Present

Remarks Slides had low cellularity and excess diluent

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99541 Group 1 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	7	1.7	4.5	
Metamyelocyte Neutrophil	12	2.9	7.7	
Band Neutrophil	29	6.9	18.6	
Segmented Neutrophil	83	19.8	53.2	
Eosinophil	24	5.7	15.4	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.6	
TOTAL GRANULOCYTIC CELLS	156	37.2	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.7
Rubricyte - Basophilic	31	7.4		22.3
Rubricyte - Polychromatophilic	76	18.1		54.7
Metarubricyte	25	6.0		18.0
Erythroid Mitotic Figures	6	1.4		4.3
TOTAL ERYTHROID CELLS	139	33.2		100
Lymphoid	123	29.4		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	419			
M:E RATIO		1.1		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99544 Group 1 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	9	2.0	4.3	
Metamyelocyte Neutrophil	18	3.9	8.5	
Band Neutrophil	48	10.4	22.7	
Segmented Neutrophil	101	22.0	47.9	
Eosinophil	33	7.2	15.6	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	2	0.4	0.9	
TOTAL GRANULOCYTIC CELLS	211	45.9	100	
Rubriblast	0	0.0		0.0
Prorubricyte	3	0.7		2.0
Rubricyte - Basophilic	36	7.8		24.0
Rubricyte - Polychromatophilic	65	14.1		43.3
Metarubricyte	43	9.3		28.7
Erythroid Mitotic Figures	3	0.7		2.0
TOTAL ERYTHROID CELLS	150	32.6		100
Lymphoid	98	21.3		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	460			
M:E RATIO		1.4		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99547 Group 1 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	10	2.0	6.5	
Metamyelocyte Neutrophil	22	4.5	14.3	
Band Neutrophil	42	8.6	27.3	
Segmented Neutrophil	48	9.8	31.2	
Eosinophil	32	6.6	20.8	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	154	31.6	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.6
Rubricyte - Basophilic	33	6.8		18.6
Rubricyte - Polychromatophilic	91	18.6		51.4
Metarubricyte	49	10.0		27.7
Erythroid Mitotic Figures	3	0.6		1.7
TOTAL ERYTHROID CELLS	177	36.3		100
Lymphoid	153	31.4		
Monocyte	0	0.0		
Plasma Cell	4	0.8		
Mast Cell	0	0.0		
TOTAL CELL COUNT	488			
M:E RATIO		0.9		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99559 Group 1 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	10	2.2	6.8	
Metamyelocyte Neutrophil	18	3.9	12.2	
Band Neutrophil	32	7.0	21.8	
Segmented Neutrophil	66	14.3	44.9	
Eosinophil	20	4.3	13.6	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.7	
TOTAL GRANULOCYTIC CELLS	147	32.0	100	
Rubriblast	0	0.0		0.0
Prorubricyte	2	0.4		1.6
Rubricyte - Basophilic	22	4.8		18.0
Rubricyte - Polychromatophilic	71	15.4		58.2
Metarubricyte	26	5.7		21.3
Erythroid Mitotic Figures	1	0.2		0.8
TOTAL ERYTHROID CELLS	122	26.5		100
Lymphoid	190	41.3		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	460			
M:E RATIO		1.2		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99580 Group 1 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast				
Promyelocyte				
Myelocyte Neutrophil				
Metamyelocyte Neutrophil				
Band Neutrophil				
Segmented Neutrophil				
Eosinophil				
Basophil				
Myeloid Mitotic Figures				
TOTAL GRANULOCYTIC CELLS				
Rubriblast				
Prorubricyte				
Rubricyte - Basophilic				
Rubricyte - Polychromatophilic				
Metarubricyte				
Erythroid Mitotic Figures				
TOTAL ERYTHROID CELLS				
Lymphoid				
Monocyte				
Plasma Cell				
Mast Cell				
TOTAL CELL COUNT				
M:E RATIO				

Megakaryocytes _____

Remarks Slides were not adequate for evaluation due to low cellularity, increased fat and cell lysis and excess diluent

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99574 Group 2 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.5	
Myelocyte Neutrophil	6	1.3	3.2	
Metamyelocyte Neutrophil	18	4.0	9.7	
Band Neutrophil	45	10.0	24.2	
Segmented Neutrophil	84	18.7	45.2	
Eosinophil	32	7.1	17.2	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	186	41.3	100	
Rubriblast	0	0.0		0.0
Prorubricyte	8	1.8		7.2
Rubricyte - Basophilic	20	4.4		18.0
Rubricyte - Polychromatophilic	49	10.9		44.1
Metarubricyte	32	7.1		28.8
Erythroid Mitotic Figures	2	0.4		1.8
TOTAL ERYTHROID CELLS	111	24.7		100
Lymphoid	149	33.1		
Monocyte	0	0.0		
Plasma Cell	4	0.9		
Mast Cell	0	0.0		
TOTAL CELL COUNT	450			
M:E RATIO		1.7		

Megakaryocytes Present

Remarks Slides had low cellularity

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99575 Group 2 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	2	0.5	1.2	
Myelocyte Neutrophil	8	1.9	5.0	
Metamyelocyte Neutrophil	21	5.0	13.0	
Band Neutrophil	29	6.9	18.0	
Segmented Neutrophil	78	18.6	48.4	
Eosinophil	23	5.5	14.3	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	161	38.4	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	39	9.3		24.1
Rubricyte - Polychromatophilic	83	19.8		51.2
Metarubricyte	38	9.1		23.5
Erythroid Mitotic Figures	2	0.5		1.2
TOTAL ERYTHROID CELLS	162	38.7		100
Lymphoid	92	22.0		
Monocyte	1	0.2		
Plasma Cell	3	0.7		
Mast Cell	0	0.0		
TOTAL CELL COUNT	419			
M:E RATIO		1.0		

Megakaryocytes Present

Remarks

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99576 Group 2 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	9	2.0	3.8	
Metamyelocyte Neutrophil	22	4.9	9.2	
Band Neutrophil	66	14.8	27.6	
Segmented Neutrophil	108	24.2	45.2	
Eosinophil	33	7.4	13.8	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.4	
TOTAL GRANULOCYTIC CELLS	239	53.6	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	15	3.4		15.3
Rubricyte - Polychromatophilic	60	13.5		61.2
Metarubricyte	19	4.3		19.4
Erythroid Mitotic Figures	4	0.9		4.1
TOTAL ERYTHROID CELLS	98	22.0		100
Lymphoid	109	24.4		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	446			
M:E RATIO		2.4		

Megakaryocytes Present

Remarks Slides had increased cell swelling and lysis, especially of erythroid precursors

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99578 Group 2 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	7	1.6	5.0	
Metamyelocyte Neutrophil	9	2.1	6.4	
Band Neutrophil	30	7.1	21.4	
Segmented Neutrophil	72	16.9	51.4	
Eosinophil	22	5.2	15.7	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	140	32.9	100	
Rubriblast	0	0.0		0.0
Prorubricyte	2	0.5		1.7
Rubricyte - Basophilic	22	5.2		18.5
Rubricyte - Polychromatophilic	60	14.1		50.4
Metarubricyte	34	8.0		28.6
Erythroid Mitotic Figures	1	0.2		0.8
TOTAL ERYTHROID CELLS	119	28.0		100
Lymphoid	164	38.6		
Monocyte	0	0.0		
Plasma Cell	2	0.5		
Mast Cell	0	0.0		
TOTAL CELL COUNT	425			
M:E RATIO		1.2		

Megakaryocytes Present

Remarks Slides had low cellularity and excess diluent

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99585 Group 2 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	2	0.5	1.4	
Metamyelocyte Neutrophil	12	2.8	8.4	
Band Neutrophil	42	9.8	29.4	
Segmented Neutrophil	60	14.0	42.0	
Eosinophil	26	6.1	18.2	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.7	
TOTAL GRANULOCYTIC CELLS	143	33.4	100	
Rubriblast	0	0.0		0.0
Prorubricyte	3	0.7		2.8
Rubricyte - Basophilic	21	4.9		19.6
Rubricyte - Polychromatophilic	43	10.0		40.2
Metarubricyte	40	9.3		37.4
Erythroid Mitotic Figures	0	0.0		0.0
TOTAL ERYTHROID CELLS	107	25.0		100
Lymphoid	178	41.6		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	428			
M:E RATIO		1.3		

Megakaryocytes Present

Remarks Slides had hemodilution, low cellularity and increased lysis

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99534 Group 2 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	2	0.5	1.1	
Myelocyte Neutrophil	9	2.1	5.1	
Metamyelocyte Neutrophil	16	3.7	9.0	
Band Neutrophil	37	8.7	20.9	
Segmented Neutrophil	86	20.1	48.6	
Eosinophil	26	6.1	14.7	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.6	
TOTAL GRANULOCYTIC CELLS	177	41.5	100	
Rubriblast	0	0.0		0.0
Prorubricyte	4	0.9		3.2
Rubricyte - Basophilic	31	7.3		24.8
Rubricyte - Polychromatophilic	64	15.0		51.2
Metarubricyte	26	6.1		20.8
Erythroid Mitotic Figures	0	0.0		0.0
TOTAL ERYTHROID CELLS	125	29.3		100
Lymphoid	123	28.8		
Monocyte	0	0.0		
Plasma Cell	2	0.5		
Mast Cell	0	0.0		
TOTAL CELL COUNT	427			
M:E RATIO		1.4		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99561 Group 2 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	1	0.2	0.6	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	7	1.4	4.1	
Metamyelocyte Neutrophil	21	4.3	12.2	
Band Neutrophil	40	8.1	23.3	
Segmented Neutrophil	66	13.4	38.4	
Eosinophil	37	7.5	21.5	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	172	35.0	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.7
Rubricyte - Basophilic	46	9.3		31.3
Rubricyte - Polychromatophilic	67	13.6		45.6
Metarubricyte	30	6.1		20.4
Erythroid Mitotic Figures	3	0.6		2.0
TOTAL ERYTHROID CELLS	147	29.9		100
Lymphoid	173	35.2		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	492			
M:E RATIO		1.2		

Megakaryocytes Present

Remarks Slides had low cellularity, excess diluent, and pleomorphic bacteria

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99562 Group 2 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	13	3.0	8.7	
Metamyelocyte Neutrophil	12	2.8	8.0	
Band Neutrophil	41	9.4	27.3	
Segmented Neutrophil	50	11.5	33.3	
Eosinophil	34	7.8	22.7	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	150	34.6	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.8
Rubricyte - Basophilic	24	5.5		19.2
Rubricyte - Polychromatophilic	74	17.1		59.2
Metarubricyte	22	5.1		17.6
Erythroid Mitotic Figures	4	0.9		3.2
TOTAL ERYTHROID CELLS	125	28.8		100
Lymphoid	154	35.5		
Monocyte	0	0.0		
Plasma Cell	5	1.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	434			
M:E RATIO		1.2		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99563 Group 2 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.6	
Myelocyte Neutrophil	10	2.2	5.8	
Metamyelocyte Neutrophil	23	5.1	13.4	
Band Neutrophil	34	7.6	19.8	
Segmented Neutrophil	85	18.9	49.4	
Eosinophil	19	4.2	11.0	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	172	38.2	100	
Rubriblast	0	0.0		0.0
Prorubricyte	2	0.4		1.4
Rubricyte - Basophilic	57	12.7		41.3
Rubricyte - Polychromatophilic	62	13.8		44.9
Metarubricyte	15	3.3		10.9
Erythroid Mitotic Figures	2	0.4		1.4
TOTAL ERYTHROID CELLS	138	30.7		100
Lymphoid	135	30.0		
Monocyte	0	0.0		
Plasma Cell	5	1.1		
Mast Cell	0	0.0		
TOTAL CELL COUNT	450			
M:E RATIO		1.2		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99572 Group 2 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	3	0.7	1.7	
Myelocyte Neutrophil	6	1.4	3.4	
Metamyelocyte Neutrophil	13	3.0	7.3	
Band Neutrophil	45	10.2	25.1	
Segmented Neutrophil	73	16.6	40.8	
Eosinophil	39	8.9	21.8	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	179	40.7	100	
Rubriblast	0	0.0		0.0
Prorubricyte	3	0.7		2.2
Rubricyte - Basophilic	15	3.4		10.9
Rubricyte - Polychromatophilic	76	17.3		55.5
Metarubricyte	39	8.9		28.5
Erythroid Mitotic Figures	4	0.9		2.9
TOTAL ERYTHROID CELLS	137	31.1		100
Lymphoid	121	27.5		
Monocyte	0	0.0		
Plasma Cell	3	0.7		
Mast Cell	0	0.0		
TOTAL CELL COUNT	440			
M:E RATIO		1.3		

Megakaryocytes Present

Remarks Slides had excess diluent

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99566 Group 3 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	4	0.9	2.8	
Metamyelocyte Neutrophil	16	3.5	11.0	
Band Neutrophil	26	5.7	17.9	
Segmented Neutrophil	73	16.1	50.3	
Eosinophil	24	5.3	16.6	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	2	0.4	1.4	
TOTAL GRANULOCYTIC CELLS	145	32.0	100	
Rubriblast	0	0.0		0.0
Prorubricyte	3	0.7		1.9
Rubricyte - Basophilic	34	7.5		21.1
Rubricyte - Polychromatophilic	68	15.0		42.2
Metarubricyte	52	11.5		32.3
Erythroid Mitotic Figures	4	0.9		2.5
TOTAL ERYTHROID CELLS	161	35.5		100
Lymphoid	146	32.2		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	453			
M:E RATIO		0.9		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99568 Group 3 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	7	1.6	4.4	
Metamyelocyte Neutrophil	21	4.7	13.2	
Band Neutrophil	31	7.0	19.5	
Segmented Neutrophil	73	16.4	45.9	
Eosinophil	27	6.1	17.0	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	159	35.8	100	
Rubriblast	0	0.0		0.0
Prorubricyte	3	0.7		2.7
Rubricyte - Basophilic	29	6.5		25.9
Rubricyte - Polychromatophilic	51	11.5		45.5
Metarubricyte	29	6.5		25.9
Erythroid Mitotic Figures	0	0.0		0.0
TOTAL ERYTHROID CELLS	112	25.2		100
Lymphoid	168	37.8		
Monocyte	0	0.0		
Plasma Cell	5	1.1		
Mast Cell	0	0.0		
TOTAL CELL COUNT	444			
M:E RATIO		1.4		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99582 Group 3 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	12	2.5	4.7	
Metamyelocyte Neutrophil	15	3.2	5.9	
Band Neutrophil	63	13.3	24.7	
Segmented Neutrophil	126	26.5	49.4	
Eosinophil	36	7.6	14.1	
Basophil	2	0.4	0.8	
Myeloid Mitotic Figures	1	0.2	0.4	
TOTAL GRANULOCYTIC CELLS	255	53.7	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	12	2.5		12.2
Rubricyte - Polychromatophilic	47	9.9		48.0
Metarubricyte	38	8.0		38.8
Erythroid Mitotic Figures	1	0.2		1.0
TOTAL ERYTHROID CELLS	98	20.6		100
Lymphoid	119	25.1		
Monocyte	0	0.0		
Plasma Cell	3	0.6		
Mast Cell	0	0.0		
TOTAL CELL COUNT	475			
M:E RATIO		2.6		

Megakaryocytes Present

Remarks Slides had low cellularity, excess diluent, and increased cell swelling and lysis

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99591 Group 3 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.6	
Myelocyte Neutrophil	3	0.7	1.8	
Metamyelocyte Neutrophil	20	4.7	12.3	
Band Neutrophil	35	8.2	21.5	
Segmented Neutrophil	79	18.5	48.5	
Eosinophil	25	5.8	15.3	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	163	38.1	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		1.0
Rubricyte - Basophilic	26	6.1		26.0
Rubricyte - Polychromatophilic	56	13.1		56.0
Metarubricyte	17	4.0		17.0
Erythroid Mitotic Figures	0	0.0		0.0
TOTAL ERYTHROID CELLS	100	23.4		100
Lymphoid	165	38.6		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	428			
M:E RATIO		1.6		

Megakaryocytes Present

Remarks Slides had very low cellularity and excess diluent

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99592 Group 3 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	2	0.4	0.9	
Myelocyte Neutrophil	6	1.3	2.8	
Metamyelocyte Neutrophil	19	4.2	8.8	
Band Neutrophil	68	14.9	31.5	
Segmented Neutrophil	101	22.1	46.8	
Eosinophil	20	4.4	9.3	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	216	47.4	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	22	4.8		18.5
Rubricyte - Polychromatophilic	48	10.5		40.3
Metarubricyte	44	9.6		37.0
Erythroid Mitotic Figures	5	1.1		4.2
TOTAL ERYTHROID CELLS	119	26.1		100
Lymphoid	118	25.9		
Monocyte	0	0.0		
Plasma Cell	3	0.7		
Mast Cell	0	0.0		
TOTAL CELL COUNT	456			
M:E RATIO		1.8		

Megakaryocytes Present

Remarks Slides had increased lysis

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99530 Group 3 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	4	0.9	2.5	
Metamyelocyte Neutrophil	18	4.2	11.2	
Band Neutrophil	39	9.2	24.2	
Segmented Neutrophil	84	19.8	52.2	
Eosinophil	16	3.8	9.9	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	161	38.0	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.8
Rubricyte - Basophilic	36	8.5		30.3
Rubricyte - Polychromatophilic	61	14.4		51.3
Metarubricyte	19	4.5		16.0
Erythroid Mitotic Figures	2	0.5		1.7
TOTAL ERYTHROID CELLS	119	28.1		100
Lymphoid	142	33.5		
Monocyte	0	0.0		
Plasma Cell	2	0.5		
Mast Cell	0	0.0		
TOTAL CELL COUNT	424			
M:E RATIO		1.4		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99532 Group 3 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	3	0.7	1.9	
Myelocyte Neutrophil	10	2.2	6.5	
Metamyelocyte Neutrophil	17	3.7	11.0	
Band Neutrophil	34	7.4	21.9	
Segmented Neutrophil	66	14.3	42.6	
Eosinophil	25	5.4	16.1	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	155	33.7	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.6
Rubricyte - Basophilic	27	5.9		17.3
Rubricyte - Polychromatophilic	90	19.6		57.7
Metarubricyte	33	7.2		21.2
Erythroid Mitotic Figures	5	1.1		3.2
TOTAL ERYTHROID CELLS	156	33.9		100
Lymphoid	148	32.2		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	460			
M:E RATIO		1.0		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99555 Group 3 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.6	
Myelocyte Neutrophil	4	0.9	2.3	
Metamyelocyte Neutrophil	16	3.7	9.1	
Band Neutrophil	26	6.0	14.9	
Segmented Neutrophil	101	23.3	57.7	
Eosinophil	26	6.0	14.9	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.6	
TOTAL GRANULOCYTIC CELLS	175	40.4	100	
Rubriblast	0	0.0		0.0
Prorubricyte	6	1.4		4.1
Rubricyte - Basophilic	30	6.9		20.5
Rubricyte - Polychromatophilic	85	19.6		58.2
Metarubricyte	21	4.8		14.4
Erythroid Mitotic Figures	4	0.9		2.7
TOTAL ERYTHROID CELLS	146	33.7		100
Lymphoid	108	24.9		
Monocyte	0	0.0		
Plasma Cell	4	0.9		
Mast Cell	0	0.0		
TOTAL CELL COUNT	433			
M:E RATIO		1.2		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99571 Group 3 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast				
Promyelocyte				
Myelocyte Neutrophil				
Metamyelocyte Neutrophil				
Band Neutrophil				
Segmented Neutrophil				
Eosinophil				
Basophil				
Myeloid Mitotic Figures				
TOTAL GRANULOCYTIC CELLS				
Rubriblast				
Prorubricyte				
Rubricyte - Basophilic				
Rubricyte - Polychromatophilic				
Metarubricyte				
Erythroid Mitotic Figures				
TOTAL ERYTHROID CELLS				
Lymphoid				
Monocyte				
Plasma Cell				
Mast Cell				
TOTAL CELL COUNT				
M:E RATIO				

Megakaryocytes _____

Remarks Slides were not adequate for evaluation due to inadequate number of cells

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99556 Group 3 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast				
Promyelocyte				
Myelocyte Neutrophil				
Metamyelocyte Neutrophil				
Band Neutrophil				
Segmented Neutrophil				
Eosinophil				
Basophil				
Myeloid Mitotic Figures				
TOTAL GRANULOCYTIC CELLS				
Rubriblast				
Prorubricyte				
Rubricyte - Basophilic				
Rubricyte - Polychromatophilic				
Metarubricyte				
Erythroid Mitotic Figures				
TOTAL ERYTHROID CELLS				
Lymphoid				
Monocyte				
Plasma Cell				
Mast Cell				
TOTAL CELL COUNT				
M:E RATIO				

Megakaryocytes _____

Remarks Slides were not adequate for evaluation due to extremely low cellularity and increased lysis. Slides consisted mostly of peripheral blood. Pleomorphic bacteria were present.

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99560 Group 4 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	2	0.5	1.2	
Metamyelocyte Neutrophil	16	3.6	9.6	
Band Neutrophil	35	7.9	21.1	
Segmented Neutrophil	93	21.0	56.0	
Eosinophil	20	4.5	12.0	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	166	37.6	100	
Rubriblast	0	0.0		0.0
Prorubricyte	1	0.2		0.8
Rubricyte - Basophilic	19	4.3		16.0
Rubricyte - Polychromatophilic	72	16.3		60.5
Metarubricyte	26	5.9		21.8
Erythroid Mitotic Figures	1	0.2		0.8
TOTAL ERYTHROID CELLS	119	26.9		100
Lymphoid	155	35.1		
Monocyte	0	0.0		
Plasma Cell	2	0.5		
Mast Cell	0	0.0		
TOTAL CELL COUNT	442			
M:E RATIO		1.4		

Megakaryocytes Present

Remarks Slides had increased lysis

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99564 Group 4 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	1	0.2	0.7	
Promyelocyte	2	0.4	1.4	
Myelocyte Neutrophil	3	0.6	2.1	
Metamyelocyte Neutrophil	14	3.0	9.7	
Band Neutrophil	37	8.0	25.5	
Segmented Neutrophil	67	14.4	46.2	
Eosinophil	20	4.3	13.8	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.7	
TOTAL GRANULOCYTIC CELLS	145	31.3	100	
Rubriblast	0	0.0		0.0
Prorubricyte	5	1.1		3.4
Rubricyte - Basophilic	40	8.6		27.4
Rubricyte - Polychromatophilic	57	12.3		39.0
Metarubricyte	40	8.6		27.4
Erythroid Mitotic Figures	4	0.9		2.7
TOTAL ERYTHROID CELLS	146	31.5		100
Lymphoid	167	36.0		
Monocyte	0	0.0		
Plasma Cell	6	1.3		
Mast Cell	0	0.0		
TOTAL CELL COUNT	464			
M:E RATIO		1.0		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99567 Group 4 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	3	0.7	2.1	
Metamyelocyte Neutrophil	11	2.5	7.7	
Band Neutrophil	33	7.6	23.1	
Segmented Neutrophil	73	16.9	51.0	
Eosinophil	21	4.9	14.7	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	2	0.5	1.4	
TOTAL GRANULOCYTIC CELLS	143	33.1	100	
Rubriblast	0	0.0		0.0
Prorubricyte	7	1.6		4.0
Rubricyte - Basophilic	40	9.3		22.6
Rubricyte - Polychromatophilic	76	17.6		42.9
Metarubricyte	48	11.1		27.1
Erythroid Mitotic Figures	6	1.4		3.4
TOTAL ERYTHROID CELLS	177	41.0		100
Lymphoid	109	25.2		
Monocyte	0	0.0		
Plasma Cell	3	0.7		
Mast Cell	0	0.0		
TOTAL CELL COUNT	432			
M:E RATIO		0.8		

Megakaryocytes Present

Remarks Slides had low cellularity, increased lysis and excess diluent

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99584 Group 4 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.5	
Myelocyte Neutrophil	13	2.9	6.0	
Metamyelocyte Neutrophil	20	4.4	9.2	
Band Neutrophil	50	11.0	22.9	
Segmented Neutrophil	109	24.1	50.0	
Eosinophil	25	5.5	11.5	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	218	48.1	100	
Rubriblast	0	0.0		0.0
Prorubricyte	2	0.4		2.1
Rubricyte - Basophilic	19	4.2		19.8
Rubricyte - Polychromatophilic	50	11.0		52.1
Metarubricyte	24	5.3		25.0
Erythroid Mitotic Figures	1	0.2		1.0
TOTAL ERYTHROID CELLS	96	21.2		100
Lymphoid	137	30.2		
Monocyte	0	0.0		
Plasma Cell	2	0.4		
Mast Cell	0	0.0		
TOTAL CELL COUNT	453			
M:E RATIO		2.3		

Megakaryocytes Present

Remarks Slides had low cellularity, increased fat and lysis and were slightly overdiluted

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99590 Group 4 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	5	1.2	3.3	
Metamyelocyte Neutrophil	21	5.2	13.9	
Band Neutrophil	36	8.8	23.8	
Segmented Neutrophil	55	13.5	36.4	
Eosinophil	33	8.1	21.9	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.7	
TOTAL GRANULOCYTIC CELLS	151	37.1	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	14	3.4		15.9
Rubricyte - Polychromatophilic	47	11.5		53.4
Metarubricyte	26	6.4		29.5
Erythroid Mitotic Figures	1	0.2		1.1
TOTAL ERYTHROID CELLS	88	21.6		100
Lymphoid	166	40.8		
Monocyte	1	0.2		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	407			
M:E RATIO		1.7		

Megakaryocytes Present

Remarks Slides had low cellularity, increased lysis and were slightly overdiluted

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99538 Group 4 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	13	2.9	7.0	
Metamyelocyte Neutrophil	18	4.0	9.7	
Band Neutrophil	45	10.0	24.3	
Segmented Neutrophil	85	18.9	45.9	
Eosinophil	24	5.3	13.0	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	185	41.2	100	
Rubriblast	0	0.0		0.0
Prorubricyte	2	0.4		1.7
Rubricyte - Basophilic	31	6.9		25.8
Rubricyte - Polychromatophilic	65	14.5		54.2
Metarubricyte	21	4.7		17.5
Erythroid Mitotic Figures	1	0.2		0.8
TOTAL ERYTHROID CELLS	120	26.7		100
Lymphoid	141	31.4		
Monocyte	0	0.0		
Plasma Cell	3	0.7		
Mast Cell	0	0.0		
TOTAL CELL COUNT	449			
M:E RATIO		1.5		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99546 Group 4 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	6	1.4	4.0	
Metamyelocyte Neutrophil	23	5.3	15.3	
Band Neutrophil	41	9.4	27.3	
Segmented Neutrophil	66	15.1	44.0	
Eosinophil	11	2.5	7.3	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	3	0.7	2.0	
TOTAL GRANULOCYTIC CELLS	150	34.3	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	24	5.5		16.0
Rubricyte - Polychromatophilic	95	21.7		63.3
Metarubricyte	30	6.9		20.0
Erythroid Mitotic Figures	1	0.2		0.7
TOTAL ERYTHROID CELLS	150	34.3		100
Lymphoid	135	30.9		
Monocyte	0	0.0		
Plasma Cell	2	0.5		
Mast Cell	0	0.0		
TOTAL CELL COUNT	437			
M:E RATIO		1.0		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99552 Group 4 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	3	0.6	2.3	
Myelocyte Neutrophil	7	1.3	5.3	
Metamyelocyte Neutrophil	10	1.9	7.6	
Band Neutrophil	33	6.2	25.2	
Segmented Neutrophil	51	9.6	38.9	
Eosinophil	27	5.1	20.6	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	131	24.5	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	28	5.2		19.0
Rubricyte - Polychromatophilic	70	13.1		47.6
Metarubricyte	47	8.8		32.0
Erythroid Mitotic Figures	2	0.4		1.4
TOTAL ERYTHROID CELLS	147	27.5		100
Lymphoid	254	47.6		
Monocyte	0	0.0		
Plasma Cell	2	0.4		
Mast Cell	0	0.0		
TOTAL CELL COUNT	534			
M:E RATIO		0.9		

Megakaryocytes Present

Remarks Slides had very low cellularity, increased lysis and excess diluent

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99553 Group 4 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	3	0.6	1.9	
Metamyelocyte Neutrophil	20	4.3	12.7	
Band Neutrophil	48	10.4	30.6	
Segmented Neutrophil	62	13.4	39.5	
Eosinophil	21	4.5	13.4	
Basophil	1	0.2	0.6	
Myeloid Mitotic Figures	2	0.4	1.3	
TOTAL GRANULOCYTIC CELLS	157	34.0	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	39	8.4		25.5
Rubricyte - Polychromatophilic	83	18.0		54.2
Metarubricyte	29	6.3		19.0
Erythroid Mitotic Figures	2	0.4		1.3
TOTAL ERYTHROID CELLS	153	33.1		100
Lymphoid	150	32.5		
Monocyte	0	0.0		
Plasma Cell	2	0.4		
Mast Cell	0	0.0		
TOTAL CELL COUNT	462			
M:E RATIO		1.0		

Megakaryocytes Present

Remarks Slides had slightly low cellularity and were slightly overdiluted

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99533 Group 4 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast				
Promyelocyte				
Myelocyte Neutrophil				
Metamyelocyte Neutrophil				
Band Neutrophil				
Segmented Neutrophil				
Eosinophil				
Basophil				
Myeloid Mitotic Figures				
TOTAL GRANULOCYTIC CELLS				
Rubriblast				
Prorubricyte				
Rubricyte - Basophilic				
Rubricyte - Polychromatophilic				
Metarubricyte				
Erythroid Mitotic Figures				
TOTAL ERYTHROID CELLS				
Lymphoid				
Monocyte				
Plasma Cell				
Mast Cell				
TOTAL CELL COUNT				
M:E RATIO				

Megakaryocytes _____

Remarks Slides were not adequate for evaluation and consisted mostly of peripheral blood

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99557 Group 5 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	4	1.0	3.5	
Metamyelocyte Neutrophil	11	2.6	9.6	
Band Neutrophil	32	7.7	28.1	
Segmented Neutrophil	50	12.0	43.9	
Eosinophil	17	4.1	14.9	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	114	27.3	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	48	11.5		25.1
Rubricyte - Polychromatophilic	92	22.1		48.2
Metarubricyte	50	12.0		26.2
Erythroid Mitotic Figures	1	0.2		0.5
TOTAL ERYTHROID CELLS	191	45.8		100
Lymphoid	109	26.1		
Monocyte	0	0.0		
Plasma Cell	3	0.7		
Mast Cell	0	0.0		
TOTAL CELL COUNT	417			
M:E RATIO		0.6		

Megakaryocytes Present

Remarks

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99577 Group 5 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	9	2.1	8.4	
Metamyelocyte Neutrophil	10	2.3	9.3	
Band Neutrophil	26	6.1	24.3	
Segmented Neutrophil	41	9.6	38.3	
Eosinophil	21	4.9	19.6	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	107	25.0	100	
Rubriblast	0	0.0		0.0
Prorubricyte	4	0.9		2.2
Rubricyte - Basophilic	40	9.3		21.9
Rubricyte - Polychromatophilic	101	23.6		55.2
Metarubricyte	32	7.5		17.5
Erythroid Mitotic Figures	6	1.4		3.3
TOTAL ERYTHROID CELLS	183	42.8		100
Lymphoid	138	32.2		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	428			
M:E RATIO		0.6		

Megakaryocytes Present

Remarks Slides had low cellularity, increased lysis and excess diluent. Pleomorphic bacteria were present

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99581 Group 5 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	1	0.2	0.6	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	6	1.3	3.5	
Metamyelocyte Neutrophil	15	3.2	8.7	
Band Neutrophil	40	8.6	23.3	
Segmented Neutrophil	82	17.7	47.7	
Eosinophil	28	6.0	16.3	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	172	37.1	100	
Rubriblast	0	0.0		0.0
Prorubricyte	6	1.3		3.5
Rubricyte - Basophilic	65	14.0		37.6
Rubricyte - Polychromatophilic	70	15.1		40.5
Metarubricyte	27	5.8		15.6
Erythroid Mitotic Figures	5	1.1		2.9
TOTAL ERYTHROID CELLS	173	37.3		100
Lymphoid	119	25.6		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	464			
M:E RATIO		1.0		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99531 Group 5 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	10	2.0	5.3	
Metamyelocyte Neutrophil	20	4.0	10.6	
Band Neutrophil	64	12.9	33.9	
Segmented Neutrophil	74	14.9	39.2	
Eosinophil	21	4.2	11.1	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	189	38.0	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	24	4.8		20.5
Rubricyte - Polychromatophilic	73	14.7		62.4
Metarubricyte	18	3.6		15.4
Erythroid Mitotic Figures	2	0.4		1.7
TOTAL ERYTHROID CELLS	117	23.5		100
Lymphoid	191	38.4		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	1	0.2		
TOTAL CELL COUNT	498			
M:E RATIO		1.6		

Megakaryocytes Present

Remarks Slides had low cellularity, increased lysis and excess diluent

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99536 Group 5 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	1	0.2	0.5	
Myelocyte Neutrophil	6	1.4	3.2	
Metamyelocyte Neutrophil	19	4.5	10.2	
Band Neutrophil	59	13.9	31.6	
Segmented Neutrophil	72	16.9	38.5	
Eosinophil	29	6.8	15.5	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.5	
TOTAL GRANULOCYTIC CELLS	187	44.0	100	
Rubriblast	0	0.0		0.0
Prorubricyte	2	0.5		1.2
Rubricyte - Basophilic	45	10.6		27.8
Rubricyte - Polychromatophilic	94	22.1		58.0
Metarubricyte	17	4.0		10.5
Erythroid Mitotic Figures	4	0.9		2.5
TOTAL ERYTHROID CELLS	162	38.1		100
Lymphoid	71	16.7		
Monocyte	0	0.0		
Plasma Cell	5	1.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	425			
M:E RATIO		1.2		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99548 Group 5 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	1	0.2	0.6	
Promyelocyte	1	0.2	0.6	
Myelocyte Neutrophil	11	2.5	6.5	
Metamyelocyte Neutrophil	14	3.2	8.3	
Band Neutrophil	40	9.3	23.7	
Segmented Neutrophil	90	20.8	53.3	
Eosinophil	12	2.8	7.1	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	0	0.0	0.0	
TOTAL GRANULOCYTIC CELLS	169	39.1	100	
Rubriblast	0	0.0		0.0
Prorubricyte	2	0.5		1.4
Rubricyte - Basophilic	36	8.3		24.7
Rubricyte - Polychromatophilic	70	16.2		47.9
Metarubricyte	26	6.0		17.8
Erythroid Mitotic Figures	12	2.8		8.2
TOTAL ERYTHROID CELLS	146	33.8		100
Lymphoid	117	27.1		
Monocyte	0	0.0		
Plasma Cell	0	0.0		
Mast Cell	0	0.0		
TOTAL CELL COUNT	432			
M:E RATIO		1.2		

Megakaryocytes Present

Remarks Slides had slightly low cellularity and excess diluent

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99554 Group 5 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast	0	0.0	0.0	
Promyelocyte	0	0.0	0.0	
Myelocyte Neutrophil	6	1.4	3.4	
Metamyelocyte Neutrophil	14	3.2	8.0	
Band Neutrophil	35	8.0	19.9	
Segmented Neutrophil	91	20.8	51.7	
Eosinophil	29	6.6	16.5	
Basophil	0	0.0	0.0	
Myeloid Mitotic Figures	1	0.2	0.6	
TOTAL GRANULOCYTIC CELLS	176	40.2	100	
Rubriblast	0	0.0		0.0
Prorubricyte	0	0.0		0.0
Rubricyte - Basophilic	31	7.1		23.1
Rubricyte - Polychromatophilic	81	18.5		60.4
Metarubricyte	17	3.9		12.7
Erythroid Mitotic Figures	5	1.1		3.7
TOTAL ERYTHROID CELLS	134	30.6		100
Lymphoid	127	29.0		
Monocyte	0	0.0		
Plasma Cell	1	0.2		
Mast Cell	0	0.0		
TOTAL CELL COUNT	438			
M:E RATIO		1.3		

Megakaryocytes Present

Remarks Slides had increased lysis and excess diluent

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99558 Group 5 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast				
Promyelocyte				
Myelocyte Neutrophil				
Metamyelocyte Neutrophil				
Band Neutrophil				
Segmented Neutrophil				
Eosinophil				
Basophil				
Myeloid Mitotic Figures				
TOTAL GRANULOCYTIC CELLS				
Rubriblast				
Prorubricyte				
Rubricyte - Basophilic				
Rubricyte - Polychromatophilic				
Metarubricyte				
Erythroid Mitotic Figures				
TOTAL ERYTHROID CELLS				
Lymphoid				
Monocyte				
Plasma Cell				
Mast Cell				
TOTAL CELL COUNT				
M:E RATIO				

Megakaryocytes _____

Remarks Slides consisted mostly of peripheral blood. Not adequate for evaluation

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. 99588 Group 5 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast				
Promyelocyte				
Myelocyte Neutrophil				
Metamyelocyte Neutrophil				
Band Neutrophil				
Segmented Neutrophil				
Eosinophil				
Basophil				
Myeloid Mitotic Figures				
TOTAL GRANULOCYTIC CELLS				
Rubriblast				
Prorubricyte				
Rubricyte - Basophilic				
Rubricyte - Polychromatophilic				
Metarubricyte				
Erythroid Mitotic Figures				
TOTAL ERYTHROID CELLS				
Lymphoid				
Monocyte				
Plasma Cell				
Mast Cell				
TOTAL CELL COUNT				
M:E RATIO				

Megakaryocytes _____

Remarks Slides were not adequate for evaluation due to inadequate number of cells

E - Erythroid
 G - Granulocytic
 M - Myeloid

Bone Marrow Differential Count

Animal No. 99540 Group 5 Sex F Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast				
Promyelocyte				
Myelocyte Neutrophil				
Metamyelocyte Neutrophil				
Band Neutrophil				
Segmented Neutrophil				
Eosinophil				
Basophil				
Myeloid Mitotic Figures				
TOTAL GRANULOCYTIC CELLS				
Rubriblast				
Prorubricyte				
Rubricyte - Basophilic				
Rubricyte - Polychromatophilic				
Metarubricyte				
Erythroid Mitotic Figures				
TOTAL ERYTHROID CELLS				
Lymphoid				
Monocyte				
Plasma Cell				
Mast Cell				
TOTAL CELL COUNT				
M:E RATIO				

Megakaryocytes _____

Remarks Slides consisted mostly of peripheral blood and were not adequate for evaluation.

Slides had excess diluent

E - Erythroid
G - Granulocytic
M - Myeloid

Bone Marrow Differential Count

Animal No. _____ Group _____ Sex _____ Study No. WIL-402022

Species Rat Sampling Date NA Study Interval Terminal

	Total	% of Total	% of G	% of E
Myeloblast		#DIV/0!	#DIV/0!	
Promyelocyte		#DIV/0!	#DIV/0!	
Myelocyte Neutrophil		#DIV/0!	#DIV/0!	
Metamyelocyte Neutrophil		#DIV/0!	#DIV/0!	
Band Neutrophil		#DIV/0!	#DIV/0!	
Segmented Neutrophil		#DIV/0!	#DIV/0!	
Eosinophil		#DIV/0!	#DIV/0!	
Basophil		#DIV/0!	#DIV/0!	
Myeloid Mitotic Figures		#DIV/0!	#DIV/0!	
TOTAL GRANULOCYTIC CELLS	0	#DIV/0!	#DIV/0!	
Rubriblast		#DIV/0!		#DIV/0!
Prorubricyte		#DIV/0!		#DIV/0!
Rubricyte - Basophilic		#DIV/0!		#DIV/0!
Rubricyte - Polychromatophilic		#DIV/0!		#DIV/0!
Metarubricyte		#DIV/0!		#DIV/0!
Erythroid Mitotic Figures		#DIV/0!		#DIV/0!
TOTAL ERYTHROID CELLS	0	#DIV/0!		#DIV/0!
Lymphoid		#DIV/0!		
Monocyte		#DIV/0!		
Plasma Cell		#DIV/0!		
Mast Cell		#DIV/0!		
TOTAL CELL COUNT	0			
M:E RATIO		#DIV/0!		

Megakaryocytes Present

Remarks _____

E - Erythroid
 G - Granulocytic
 M - Myeloid

Study Number: WIL-402022

Males: Summary of Maturation Values by Cell Type
Terminal Interval

	Group 1			Group 2			Group 3			Group 4			Group 5		
	Sham control			Vehicle control			5 mg/kg/day			50 mg/kg/day			150 mg/kg/day		
	MEAN	S.D.	N	MEAN	S.D.	N	MEAN	S.D.	N	MEAN	S.D.	N	MEAN	S.D.	N
	% OF G			% OF G			% OF G			% OF G			% OF G		
Myeloblast	0.1	0.21	10	0.0	0.00	10	0.1	0.17	8	0.1	0.20	9	0.1	0.18	9
Promyelocyte	0.8	0.89	10	0.3	0.28	10	0.2	0.27	8	0.6	0.78	9	0.6	0.68	9
Myelocyte Neutrophil	5.0	2.61	10	5.6	2.14	10	3.2	1.56	8	5.3	1.75	9	4.0	1.59	9
Metamyelocyte Neutrophil	13.9	3.05	10	12.4	1.89	10	12.2	2.50	8	13.3	3.85	9	12.1	4.16	9
Band Neutrophil	24.2	4.98	10	23.6	4.62	10	26.7	6.44	8	24.6	6.48	9	30.6	4.91	9
Segmented Neutrophil	43.3	8.99	10	46.4	6.38	10	46.3	6.67	8	45.3	7.75	9	42.6	5.70	9
Eosinophil	12.0	4.74	10	11.2	4.74	10	10.6	4.40	8	10.5	1.82	9	9.6	2.06	9
Basophil	0.3	0.35	10	0.0	0.14	10	0.1	0.34	8	0.3	0.78	9	0.0	0.00	9
Myeloid Mitotic Figures	0.5	0.51	10	0.4	0.56	10	0.6	0.37	8	0.3	0.31	9	0.4	0.46	9
TOTAL GRANULOCYTIC CELLS	100		10	100		10	100		8	100		9	100		9
	% OF E			% OF E			% OF E			% OF E			% OF E		
Rubriblast	0.0	0.00	10	0.1	0.22	10	0.1	0.31	8	0.0	0.00	9	0.0	0.00	9
Prorubricyte	0.8	1.14	10	1.6	1.21	10	1.1	0.42	8	1.4	1.47	9	1.5	1.59	9
Rubricyte - Basophilic	24.9	5.06	10	27.9	6.94	10	24.0	7.87	8	27.9	4.92	9	30.1	10.86	9
Rubricyte - Polychromatophilic	47.7	6.81	10	46.3	3.35	10	45.2	4.32	8	47.4	6.26	9	44.7	5.92	9
Metarubricyte	24.5	6.57	10	22.5	7.05	10	28.1	7.36	8	21.4	5.02	9	22.1	9.48	9
Erythroid Mitotic Figures	2.0	1.52	10	1.7	0.67	10	1.5	1.00	8	1.9	0.97	9	1.6	1.62	9
TOTAL ERYTHROID CELLS	100		10	100		10	100		8	100		9	100		9

N - Number of Animals
S.D. - Standard Deviation
G - Granulocytic
E - Erythroid

Means are expressed as percentage of cell types

	Group 1			Group 2			Group 3			Group 4			Group 5		
	Sham control			Vehicle control			5 mg/kg/day			50 mg/kg/day			150 mg/kg/day		
	MEAN	S.D.	N	MEAN	S.D.	N	MEAN	S.D.	N	MEAN	S.D.	N	MEAN	S.D.	N
	% OF G			% OF G			% OF G			% OF G			% OF G		
Myeloblast	0.0	0.00	9	0.1	0.18	10	0.0	0.00	8	0.1	0.23	9	0.2	0.29	7
Promyelocyte	0.1	0.22	9	0.5	0.63	10	0.5	0.68	8	0.5	0.83	9	0.2	0.28	7
Myelocyte Neutrophil	5.0	1.84	9	4.5	1.92	10	3.5	1.57	8	3.7	2.05	9	4.8	2.00	7
Metamyelocyte Neutrophil	10.8	2.49	9	9.7	2.42	10	10.3	2.31	8	10.6	2.73	9	9.2	0.97	7
Band Neutrophil	24.7	5.25	9	23.7	3.71	10	22.0	5.02	8	24.9	2.78	9	26.4	4.99	7
Segmented Neutrophil	43.1	9.34	9	44.3	5.65	10	49.2	4.53	8	45.3	6.39	9	44.6	6.35	7
Eosinophil	15.8	3.35	9	17.1	3.90	10	14.1	2.96	8	14.2	4.49	9	14.4	4.10	7
Basophil	0.0	0.00	9	0.0	0.00	10	0.1	0.28	8	0.1	0.21	9	0.0	0.00	7
Myeloid Mitotic Figures	0.4	0.36	9	0.2	0.28	10	0.3	0.49	8	0.7	0.75	9	0.2	0.27	7
TOTAL GRANULOCYTIC CELLS	100		9	100		10	100		8	100		9	100		7
	% OF E			% OF E			% OF E			% OF E			% OF E		
Rubriblast	0.1	0.19	9	0.0	0.00	10	0.0	0.00	8	0.0	0.00	9	0.0	0.00	7
Prorubricyte	1.3	1.27	9	2.0	2.13	10	1.4	1.42	8	1.3	1.55	9	1.2	1.32	7
Rubricyte - Basophilic	21.8	3.49	9	22.3	8.68	10	21.5	5.73	8	20.9	4.59	9	25.8	5.70	7
Rubricyte - Polychromatophilic	49.3	7.09	9	50.4	6.82	10	49.9	6.99	8	51.9	7.76	9	53.2	7.95	7
Metarubricyte	25.3	5.16	9	23.6	7.45	10	25.3	9.71	8	24.4	5.05	9	16.5	4.98	7
Erythroid Mitotic Figures	2.2	1.37	9	1.8	1.35	10	1.9	1.52	8	1.5	0.94	9	3.3	2.43	7
TOTAL ERYTHROID CELLS	100		9	100		10	100		8	100		9	100		7

N - Number of Animals
S.D. - Standard Deviation
G - Granulocytic
E - Erythroid

Means are expressed as percentage of cell types

APPENDIX K

Ophthalmic Examinations

([REDACTED]
[REDACTED] -

**OPHTHALMIC EXAMINATION STATEMENT FOR
STUDY WIL-402022**

Ophthalmic examinations were performed at WIL Research Laboratories, LLC during the pretest phase for all animals on 4/11/11. All findings observed during ophthalmic examinations for the above mentioned study are typical in prevalence and appearance for the species and strain or breed of animal examined. Examinations were performed by [REDACTED]. All the ophthalmological diagnoses rendered by [REDACTED], presented in this appendix, and the individual tables included in this report were accurately transcribed by the WIL Research Laboratories, LLC technical staff.

[REDACTED]

4/11/11
Date

**OPHTHALMIC EXAMINATION STATEMENT FOR
STUDY WIL-402022**

Ophthalmic examinations were performed at WIL Research Laboratories, LLC during the in-life phase; ophthalmic examinations were performed on all males and females in the untreated, 0, 5, 50 and 150 mg/kg/day ^① and ~~60 mg/kg-CPS~~ groups on 7/15/11. Examinations were performed by [REDACTED] [REDACTED]. All the ophthalmological diagnoses rendered by [REDACTED] presented in this appendix, and the individual tables included in this report were accurately transcribed by the WIL Research Laboratories, LLC technical staff.

All findings observed during ophthalmic examinations for the above mentioned study are typical in prevalence and appearance for the species and strain or breed of animals examined. Ophthalmic findings were reviewed and there were no significant differences within or among dose groups or when compared to the pretest ophthalmic examinations to suggest a test article-related effect.

[REDACTED]

7-15-11
Date

① Eye exams were not performed on these animals, disregard
'and 60 mg/kg-CPS' [REDACTED] J.D.H

APPENDIX L

Historical Control Data for Micronucleus Evaluation (WIL Research Skokie)

Formerly known as Midwest BioResearch, LLC



HISTORICAL CONTROL RESULTS FOR 2009 – 2010

***IN VIVO* BONE MARROW MICRONUCLEUS TEST IN RATS**

REPORT

Midwest BioResearch Study Number: MBR11-265

Author: [REDACTED]

TESTING FACILITY

MIDWEST BIORESEARCH, LLC
A SUBSIDIARY OF WIL RESEARCH LABORATORIES, LLC
8025 LAMON AVENUE
SKOKIE, ILLINOIS 60077

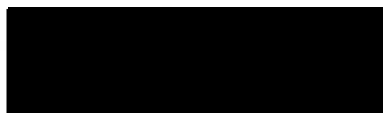
Midwest BioResearch, LLC – Confidential Information

Report
Page 1 of 20

1.0 COMPLIANCE STATEMENT

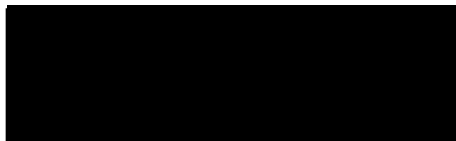
This analysis was conducted in compliance with Food and Drug Administration (FDA) Good Laboratory Practice (GLP) regulations 21 CFR, Part 58 and applicable MBR Standard Operating Procedures (SOPs); and in general compliance with the International Conference on Harmonisation (ICH) guidelines S2A and S2B and with the Organisation for Economic Co-operation and Development (OECD) guideline number 474.

2.0 COMPLIANCE AND REPORT APPROVAL SIGNATURES



Date: 15 June 2011

Author
Midwest BioResearch, LLC



for

Date: 15 July 2011

Assistant Director, Genetic Toxicology
Midwest BioResearch, LLC

3.0 QUALITY ASSURANCE STATEMENT

Date(s) of Inspection	Critical Phase Inspected (Study-Based)	Date Observations Reported to:	
		Author	MBR Management
06-Jul-2011	Report and raw data	07-Jul-2011	11-Jul-2011

This study was inspected in accordance with the standard operating procedures of Midwest BioResearch, LLC. Quality Assurance observations, derived from the inspections of the raw data and report are documented and have been reported to the Author. A quarterly internal facility inspection is conducted by the Quality Assurance Unit. Reports of all Quality Assurance inspections are submitted to management.

This report accurately reflects the data generated during the study. The methods and procedures used in the study were those specified in the standard operating procedures of Midwest BioResearch, LLC.

[Redacted Signature]

Date 14 July 2011

Quality Assurance Associate
Midwest BioResearch, LLC

4.0 ABSTRACT

This report is an analysis of data from all GLP *in vivo* bone marrow micronucleus studies in rats finalized at Midwest BioResearch, LLC, from 2009 through 2010. The purpose of this report is to establish historical control data ranges for GLP assays and to illustrate typical results obtained from this analysis.

Vehicle and/or negative control data from all GLP *in vivo* rat bone marrow micronucleus studies (24 and 48 hours) were pooled and analyzed. Positive control data were similarly treated. Data and analyses, including mean, standard deviations and other statistical results, are summarized in this report. Method information typically employed in the performance of this assay (and in accordance with MBR SOPs) is presented.

Historical control ranges to be used to evaluate the acceptability of vehicle and positive control data from future GLP *in vivo* rat bone marrow micronucleus studies are presented in Table 1, below.

Table 1. Historical Control Data for Rat Bone Marrow Micronucleus from GLP Studies Finalized from 2009 through 2010

Vehicle Control

	Ratio of PCE/Total Erythrocytes		%MN PCEs	
	Males	Females	Males	Females
Mean	0.57	0.56	0.12	0.11
SD	0.10	0.09	0.09	0.07
Range	0.30-0.80	0.34-0.81	0.00-0.30	0.00-0.30
N	82	67	82	67

Positive Control (Cyclophosphamide, 60 mg/kg)

	Ratio of PCE/Total Erythrocytes		%MN PCEs	
	Males	Females	Males	Females
Mean	0.42	0.37	2.64	1.36
SD	0.13	0.11	1.00	0.57
Range	0.10-0.76	0.12-0.64	0.75-4.90	0.50-3.25
N	67	62	67	62

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6.0 INTRODUCTION

The *in vivo* micronucleus test is an assay which detects damage to chromosomes or the mitotic apparatus (Schmid, 1975). Micronuclei are small structures consisting of acentric chromosome fragments or intact whole chromosomes that lag behind at the anaphase stage of cell division. They are readily visible in both polychromatic (PCE) and normochromatic (NCE) erythrocytes. An increase in the incidence of micronucleated PCEs in treated animals is an indication that the test article has affected the chromosomal integrity of the progenitor cells.

This report analyzed the vehicle and positive control data obtained from GLP assays finalized at Midwest BioResearch, LLC (Skokie, IL) from 2009 through 2010 for the purpose of establishing historical control and ranges for evaluating the acceptability of data obtained in future studies.

7.0 MATERIALS AND METHODS

7.1 Test Article

7.1.1 Vehicle Control Articles

Vehicle control articles used in the studies included in this analysis were a) 0.5% Methylcellulose, b) Deionized water, c) 0.5% Carboxymethylcellulose, d) 5% (w/w) 2-hydroxypropyl-B-cyclodextrin in deionized water, e) 10% DMSO: 10% (v/v) Cremophore EL: 80% saline, f) 40% Mannitol (w/w), 40% PVPVA64, 10% Poloxamer 407, 10% TPGS (w/w); prepared at 30 mg/mL in 98% peanut oil, 1% Span 80, 1% Polysorbate 20, g) 0.5% low viscosity carboxymethylcellulose in deionized water, h) 22% hydroxypropyl-B-cyclodextrin in water, i) filtered air, j) phosphate buffered saline, and k) Propylene Glycol:Phosphate Buffered Saline (50:50, v:v).

Data for all vehicle controls (harvest 24 and/or 48 hours post-dose) were pooled for analysis.

7.1.2 Positive Control Article

The positive control article used in all studies was cyclophosphamide monohydrate (CP; [CAS No. 6055-19-2]).

7.2 Dose Administration—Frequency, Route and Dose Volume

Vehicles controls were administered according to the same dosing regimen as each respective test article. In each study, the positive control (cyclophosphamide) was administered as a single dose (60 mg/kg) by oral gavage at a dose volume of 10 mL/kg on the final day of test article dosing.

The specific study designs are presented in Table 2.

8.0 TEST SYSTEM

8.1 Species, Age, Weight and Sex

Male and female (nulliparous, nongravid) Sprague-Dawley [CrI:CD[®](SD)] rats or Wistar Han [CrI:WI (Han)] rats were used in the studies. Animals were acclimated at least for five days.

8.1.1 Identification

Each animal was identified with unique identification number. Cage cards displaying the study number, animal number, group and sex were affixed to each cage.

8.1.2 Randomization and Assignment to Dosage Groups

Healthy animals with body weights within $\pm 20\%$ of the group mean weight were selected for inclusion in the study. Rats were assigned to groups using an in-house computer randomization program based on pretreatment body weight.

8.1.3 Housing and Diet

All housing and care of the animals conformed to the protocol for each study.

8.2 Species Rationale

Sprague-Dawley and Wistar Han rats have been shown to be sensitive to the toxic effects of a variety of drugs and chemicals and there is a large historical biological database in the published literature and at the testing facility. Therefore, they are the preferred species for bone marrow micronucleus studies, particularly when used as the rodent species for general toxicity testing.

9.0 EXPERIMENTAL METHODS

The study design for administering the vehicle is in Table 2 below.

Table 2. Study Design: Vehicle Controls

Study No.	Treatment	Dose Route	Dosing Duration	Dosing Frequency	Dose Volume (mL/kg)	Animals with Bone Marrow Harvested 24 Hours after last dosing		Animals with Bone Marrow Harvested 48 Hours after last dosing	
						Males	Females	Males	Females
MBR08-140	Methylcellulose (0.5%)	Oral gavage	3 Days	Once Daily	10	5	5	NA	NA
MBR08-311	Deionized Water	Oral gavage	3 Days	Once Daily	10	5	5	NA	NA
MBR08-347	Phosphate Buffered Saline	Oral gavage	3 Days	Once Daily	10	5	NA	NA	NA
MBR08-347	Propylene Glycol:Phosphate Buffered Saline (50:50, v:v)	Oral gavage	3 Days	Once Daily	10	5	NA	NA	NA
MBR09-177	0.5% Carboxymethylcellulose	Oral gavage	3 Days	Twice Daily	10	5	5	NA	NA
MBR09-204	Deionized Water	Oral gavage	1 Day	Once Daily	10	6	6	NA	NA
MBR09-313	5% (w/w) 2-hydroxypropyl-B-cyclodextrin in deionized water	Oral gavage	3 Days	Once Daily	10	5	5	NA	NA
MBR09-247	Deionized Water	Oral gavage	1 Days	Single Dose	10	6	6	NA	NA
MBR10-163	10% DMSO: 10% (v/v) Cremophore EL: 80% saline	Oral gavage	1 Days	Single Dose	20	5	5	5	5
MBR10-188	40% Mannitol (w/w), 40% PVPVA64, 10% Poloxamer 407, 10% TPGS (w/w); prepared at 30 mg/mL in 98% peanut oil, 1% Span 80, 1% Polysorbate 20	Oral gavage	3 Days	Once Daily	10	5	5	NA	NA
MBR10-245	0.5% low viscosity carboxymethylcellulose in deionized water	Oral gavage	3 Days	Once Daily	10	5	5	NA	NA

NA – Not applicable.

Table 2 (continued). Study Design: Vehicle Controls

Study No.	Treatment	Dose Route	Dosing Duration	Dosing Frequency	Dose Volume (mL/kg)	Animals with Bone Marrow Harvested 24 Hours after last dosing		Animals with Bone Marrow Harvested 48 Hours after last dosing	
						Males	Females	Males	Females
MBR10-242	0.5% low viscosity carboxymethylcellulose in deionized water	Oral gavage	3 Days	Once Daily	10	5	5	NA	NA
MBR10-225	22% hydroxypropyl-B-cyclodextrin in water	Oral gavage	3 Days	Once Daily	10	5	5	NA	NA
MBR10-212	Filtered Air	Inhalation	3 Days	6 hours per day	0 ^a	5	5	NA	NA
NA – Not applicable ^a Units in ppm Positive control treatment was standard for all studies: animals were administered cyclophosphamide (6 mg/mL) in water once by oral gavage at a dose volume of 10 mL/kg for a dose of 60 mg/kg. Twenty-four (24) or 48 hours later, animals were terminated and bone marrow was collected.									

9.1 In-Life Observations

Animals were checked for survival, moribundity or other overt clinical signs of toxicity during the treatment period and prior to termination. Body weights were recorded prior to treatment and at termination.

9.2 Bone Marrow Collection

Bone marrow was collected from anesthetized animals (five/sex/group in the main study animals) at approximately 24 hours, or 24 and 48 hours following the single or last dose, study specific (24 hours following a single dose for positive control animals). Using a syringe containing heat-inactivated fetal bovine serum, the bone marrow was flushed from one femur and combined in a centrifuge tube (one tube per animal). After centrifugation to pellet the cells and remove excess fetal bovine serum, the cells were resuspended in fetal bovine serum and dropped onto clean slides. Two slides per animal were prepared. Slides were air-dried, fixed for twenty minutes in methanol and then transferred to MBR for staining and evaluation.

9.3 Terminal Sacrifice

Animals were euthanized with CO₂ and discarded without necropsy after bone marrow harvest.

9.4 Processing and Scoring of Bone Marrow Slides

The coded slides were stained with acridine orange solution then arranged in numerical order prior to microscopic analysis. Two separate counts were made for each slide: 1) a total of 1000 erythrocytes, (both PCEs and NCEs) per animal were counted and PCE/total erythrocytes determined; and 2) number of micronucleated PCEs from a total of 2000 PCEs were scored per animal.

9.5 Micronuclei Analysis

Micronuclei are bright yellow or green and generally round, although they are occasionally almond or ring-shaped. Micronuclei have sharp borders and are generally between 1/20th and 1/5th of the size of a PCE. Cells are scored as micronucleated whether they have one micronucleus or > 1, which can sometimes occur. Staining with acridine orange permits the differentiation by color of PCEs (orange), and NCEs, (grayish-green).

9.6 Statistical Analysis

The mean and standard deviation was calculated for this analysis.

Mean counts and the standard deviation were calculated as follows:

Mean = $\frac{\sum x_n}{n}$ Where x = the individual values and n = the number of values.

Standard Deviation = SD = $\sqrt{\frac{\sum (x - \bar{x})^2}{n - 1}}$

10.0 DATA ACQUISITION AND ELECTRONIC RECORDS

Microsoft Excel 2010 (Redmond, WA) was used to prepare all tables.

11.0 MAINTENANCE OF RAW DATA AND RECORDS

All raw data and reports are maintained by MBR in accordance with applicable SOPs for a period of at least one year.

12.0 RESULTS

Mean values for the pooled vehicle and positive controls are presented in Table 1. Individual values are presented in Appendix 1, Tables 1 and 2.

13.0 CONCLUSION

Vehicle and positive control data from GLP *in vivo* Rat Bone Marrow Micronucleus assays conducted by MBR from 2009 through 2010 were analyzed to prepare historical control tables and to demonstrate results obtained by this laboratory. Data presented in the summary tables will be used to evaluate the acceptability of vehicle and positive control data from future *in vivo* rat bone marrow micronucleus assays.

14.0 REFERENCES

Schmid W. The micronucleus test. *Mutation Research* 1975 Feb;31(1):9-15.

Heddle JA, Hite M, Kirkhart B, Mavournin K, MacGregor JT, Newell GW and Salamone MF. The induction of micronuclei as a measure of genotoxicity. A report of the U.S. Environmental Protection Agency Gene-Tox Program. *Mutation Research* 1983 Sep;123(1):61-118.

APPENDIX 1. INDIVIDUAL DATA

Appendix 1, Table 1. Individual Data – Vehicle Control (2009-2010)

Studies	Animal No. (Males)	% MN PCEs	RATIO PCE/TE	Studies	Animal No. (Females)	% MN PCEs	RATIO PCE/TE
MBR08-140	201	0.05	0.58	MBR08-140	231	0.10	0.62
MBR08-140	202	0.20	0.63	MBR08-140	232	0.25	0.55
MBR08-140	203	0.30	0.45	MBR08-140	233	0.05	0.34
MBR08-140	204	0.05	0.55	MBR08-140	234	0.05	0.70
MBR08-140	205	0.00	0.64	MBR08-140	235	0.05	0.44
MBR08-311	221	0.15	0.57	MBR08-311	251	0.00	0.53
MBR08-311	222	0.10	0.66	MBR08-311	252	0.10	0.67
MBR08-311	223	0.10	0.61	MBR08-311	253	0.05	0.59
MBR08-311	224	0.05	0.71	MBR08-311	254	0.10	0.43
MBR08-311	225	0.10	0.77	MBR08-311	255	0.05	0.66
MBR08-347	401	0.05	0.56	MBR08-347	NA	NA	NA
MBR08-347	402	0.15	0.73	MBR08-347	NA	NA	NA
MBR08-347	403	0.05	0.66	MBR08-347	NA	NA	NA
MBR08-347	404	0.05	0.60	MBR08-347	NA	NA	NA
MBR08-347	405	0.15	0.71	MBR08-347	NA	NA	NA
MBR08-347	672	0.00	0.56	MBR08-347	NA	NA	NA
MBR08-347	673	0.05	0.60	MBR08-347	NA	NA	NA
MBR08-347	674	0.05	0.59	MBR08-347	NA	NA	NA
MBR08-347	675	0.05	0.64	MBR08-347	NA	NA	NA
MBR08-347	676	0.00	0.65	MBR08-347	NA	NA	NA
MBR08-347	406	0.10	0.60	MBR08-347	NA	NA	NA
MBR08-347	407	0.05	0.51	MBR08-347	NA	NA	NA
MBR08-347	408	0.00	0.59	MBR08-347	NA	NA	NA
MBR08-347	409	0.00	0.53	MBR08-347	NA	NA	NA
MBR08-347	410	0.05	0.53	MBR08-347	NA	NA	NA
Abbreviations: MN PCEs – Micronucleated polychromatic erythrocytes; NCEs – Normochromatic erythrocytes; TE – Total erythrocytes (PCEs + NCEs).							

(continued)

Appendix 1, Table 1. Individual Data – Vehicle Control (2009-2010) (continued)

Studies	Animal No. (Males)	% MN PCEs	RATIO PCE/TE	Studies	Animal No. (Females)	% MN PCEs	RATIO PCE/TE
MBR09-177	49620	0.20	0.64	MBR09-177	49655	0.00	0.54
MBR09-177	49623	0.25	0.55	MBR09-177	49669	0.00	0.62
MBR09-177	49632	0.15	0.67	MBR09-177	49671	0.30	0.58
MBR09-177	49643	0.25	0.53	MBR09-177	49673	0.15	0.48
MBR09-177	49646	0.20	0.53	MBR09-177	49677	0.10	0.65
MBR09-204	44918	0.10	0.46	MBR09-204	44928	0.10	0.69
MBR09-204	44919	0.00	0.30	MBR09-204	44930	0.15	0.60
MBR09-204	44922	0.00	0.60	MBR09-204	44935	0.10	0.35
MBR09-204	44923	0.30	0.47	MBR09-204	44938	0.05	0.61
MBR09-204	44924	0.10	0.51	MBR09-204	44940	0.15	0.60
MBR09-204	44925	0.10	0.52	MBR09-204	44942	0.10	0.62
MBR09-313	67356	0.25	0.61	MBR09-313	67411	0.10	0.55
MBR09-313	67368	0.20	0.69	MBR09-313	67422	0.10	0.52
MBR09-313	67373	0.15	0.52	MBR09-313	67425	0.10	0.49
MBR09-313	67376	0.25	0.59	MBR09-313	67433	0.05	0.53
MBR09-313	67396	0.15	0.61	MBR09-313	67447	0.15	0.52
MBR09-247	51323	0.30	0.72	MBR09-247	51335	0.05	0.48
MBR09-247	51325	0.25	0.74	MBR09-247	51342	0.05	0.45
MBR09-247	51326	0.05	0.68	MBR09-247	51343	0.10	0.59
MBR09-247	51328	0.10	0.59	MBR09-247	51344	0.25	0.60
MBR09-247	51329	0.10	0.56	MBR09-247	51345	0.10	0.72
MBR09-247	51330	0.15	0.61	MBR09-247	51346	0.30	0.62
Abbreviations: MN PCEs – Micronucleated Polychromatic erythrocytes; NCEs – Normochromatic Erythrocytes; TE – Total erythrocytes (PCEs + NCEs).							(continued)



Appendix 1, Table 1. Individual Data – Vehicle Control (2009-2010) (continued)

Studies	Animal No. (Males)	% MN PCEs	RATIO PCE/TE	Studies	Animal No. (Females)	% MN PCEs	RATIO PCE/TE
MBR10-163	69044	0.15	0.34	MBR10-163	69145	0.10	0.49
MBR10-163	69045	0.20	0.77	MBR10-163	69152	0.20	0.67
MBR10-163	69054	0.20	0.65	MBR10-163	69155	0.15	0.64
MBR10-163	69075	0.10	0.80	MBR10-163	69188	0.25	0.55
MBR10-163	69084	0.20	0.63	MBR10-163	69198	0.10	0.66
MBR10-163	69115	0.25	0.75	MBR10-163	69203	0.15	0.59
MBR10-163	69116	0.30	0.57	MBR10-163	69208	0.25	0.55
MBR10-163	69118	0.10	0.38	MBR10-163	69210	0.10	0.72
MBR10-163	69122	0.00	0.39	MBR10-163	69222	0.15	0.48
MBR10-163	69125	0.15	0.57	MBR10-163	69224	0.15	0.52
MBR10-188	75410	0.15	0.73	MBR10-188	75449	0.05	0.66
MBR10-188	75413	0.25	0.73	MBR10-188	75451	0.00	0.52
MBR10-188	75430	0.25	0.58	MBR10-188	75456	0.15	0.51
MBR10-188	75435	0.30	0.45	MBR10-188	75462	0.15	0.48
MBR10-188	75439	0.10	0.60	MBR10-188	75466	0.10	0.59
MBR10-245	81588	0.00	0.65	MBR10-245	81615	0.15	0.53
MBR10-245	81591	0.00	0.46	MBR10-245	81618	0.00	0.61
MBR10-245	81592	0.10	0.64	MBR10-245	81623	0.00	0.71
MBR10-245	81606	0.00	0.50	MBR10-245	81625	0.10	0.59
MBR10-245	81608	0.10	0.46	MBR10-245	81640	0.10	0.50
MBR10-242	80859	0.05	0.48	MBR10-242	80898	0.00	0.81
MBR10-242	80864	0.10	0.48	MBR10-242	80902	0.00	0.54
MBR10-242	80870	0.00	0.50	MBR10-242	80907	0.00	0.56
MBR10-242	80879	0.10	0.45	MBR10-242	80913	0.10	0.55
MBR10-242	80881	0.15	0.44	MBR10-242	80919	0.05	0.51
Abbreviations: MN PCEs – Micronucleated polychromatic erythrocytes; NCEs – Normochromatic erythrocytes; TE – Total erythrocytes (PCEs + NCEs).				(continued)			

Appendix 1, Table 1. Individual Data – Vehicle Control (2009-2010) (continued)

Studies	Animal No. (Males)	% MN PCEs	RATIO PCE/TE	Studies	Animal No. (Females)	% MN PCEs	RATIO PCE/TE
MBR10-225	78097	0.10	0.42	MBR10-225	78133	0.20	0.43
MBR10-225	78101	0.05	0.40	MBR10-225	78139	0.20	0.49
MBR10-225	78066	0.20	0.54	MBR10-225	78116	0.05	0.35
MBR10-225	78073	0.10	0.49	MBR10-225	78117	0.20	0.56
MBR10-255	78091	0.20	0.67	MBR10-255	78123	0.10	0.37
MBR10-212	8832	0.10	0.60	MBR10-212	8871	0.05	0.46
MBR10-212	8851	0.10	0.53	MBR10-212	8877	0.10	0.51
MBR10-212	8857	0.05	0.56	MBR10-212	8882	0.05	0.44
MBR10-212	8858	0.10	0.51	MBR10-212	8884	0.10	0.58
MBR10-212	8859	0.20	0.48	MBR10-212	8890	0.10	0.59
Abbreviations: MN PCEs – Micronucleated polychromatic erythrocytes; NCEs – Normochromatic erythrocytes; TE – Total erythrocytes (PCEs + NCEs).							(continued)

Appendix 1, Table 2. Individual Data – Positive Control (2009-2010)

Studies	Animal No. (Males)	% MN PCEs	RATIO PCE/TE	Studies	Animal No. (Females)	% MN PCEs	RATIO PCE/TE
MBR08-140	225	1.75	0.44	MBR08-140	255	1.10	0.39
MBR08-140	226	1.95	0.40	MBR08-140	256	0.80	0.42
MBR08-140	227	2.10	0.23	MBR08-140	257	1.45	0.62
MBR08-140	228	1.85	0.76	MBR08-140	258	1.50	0.47
MBR08-140	229	3.15	0.74	MBR08-140	259	1.05	0.32
MBR08-311	281	3.55	0.52	MBR08-311	287	1.65	0.43
MBR08-311	282	2.60	0.66	MBR08-311	288	1.30	0.41
MBR08-311	283	3.50	0.63	MBR08-311	289	1.15	0.42
MBR08-311	284	4.90	0.56	MBR08-311	290	0.55	0.34
MBR08-311	285	2.95	0.44	MBR08-311	291	1.70	0.35
MBR08-347	426	3.15	0.33	MBR08-347	NA	NA	NA
MBR08-347	427	3.90	0.32	MBR08-347	NA	NA	NA
MBR08-347	428	2.50	0.33	MBR08-347	NA	NA	NA
MBR08-347	429	3.90	0.34	MBR08-347	NA	NA	NA
MBR08-347	430	2.55	0.35	MBR08-347	NA	NA	NA
MBR09-177	49624	2.40	0.38	MBR09-177	49657	1.50	0.46
MBR09-177	49629	3.20	0.46	MBR09-177	49660	1.55	0.33
MBR09-177	49630	4.55	0.41	MBR09-177	49666	2.20	0.44
MBR09-177	49631	2.85	0.46	MBR09-177	49675	2.60	0.38
MBR09-177	49639	4.25	0.39	MBR09-177	49678	1.75	0.40
MBR09-204	44914	2.75	0.36	MBR09-204	44927	1.50	0.36
MBR09-204	44916	2.20	0.32	MBR09-204	44931	0.50	0.44
MBR09-204	44917	3.05	0.27	MBR09-204	44933	2.25	0.52
MBR09-204	44920	2.40	0.38	MBR09-204	44934	2.10	0.24
MBR09-204	44921	1.45	0.46	MBR09-204	44939	0.65	0.44
MBR09-204	44926	0.75	0.18	MBR09-204	44943	0.60	0.38
Abbreviations: MN PCEs – Micronucleated polychromatic erythrocytes; NA – Not applicable; NCEs – Normochromatic Erythrocytes; TE – Total erythrocytes (PCEs + NCEs). (continued)							

Appendix 1, Table 2. Individual Data – Positive Control (2009-2010) (continued)

Studies	Animal No. (Males)	% MN PCEs	RATIO PCE/TE	Studies	Animal No. (Females)	% MN PCEs	RATIO PCE/TE
MBR09-313	67357	2.20	0.62	MBR09-313	67413	0.90	0.37
MBR09-313	67358	3.45	0.37	MBR09-313	67416	1.25	0.39
MBR09-313	67362	2.85	0.41	MBR09-313	67418	1.10	0.39
MBR09-313	67365	4.25	0.35	MBR09-313	67427	1.10	0.34
MBR09-313	67367	3.35	0.36	MBR09-313	67434	1.15	0.33
MBR09-247	51319	2.00	0.58	MBR09-247	51332	1.85	0.25
MBR09-247	51320	2.70	0.59	MBR09-247	51333	1.85	0.40
MBR09-247	51321	2.65	0.53	MBR09-247	51336	1.75	0.38
MBR09-247	51324	2.35	0.50	MBR09-247	51337	1.55	0.55
MBR09-247	51327	1.95	0.42	MBR09-247	51338	0.75	0.48
MBR09-247	51331	2.40	0.45	MBR09-247	51341	1.05	0.45
MBR10-163	69067	4.30	0.51	MBR10-163	69215	0.85	0.16
MBR10-163	69062	3.40	0.39	MBR10-163	69186	0.90	0.28
MBR10-163	69074	3.80	0.49	MBR10-163	69176	2.75	0.28
MBR10-163	69082	3.10	0.48	MBR10-163	69147	3.25	0.58
MBR10-163	69117	3.60	0.44	MBR10-163	69137	1.15	0.38
MBR10-188	75412	4.25	0.56	MBR10-188	75457	1.60	0.16
MBR10-188	75416	2.80	0.55	MBR10-188	75464	1.00	0.40
MBR10-188	75418	3.90	0.56	MBR10-188	75470	2.20	0.36
MBR10-188	75422	4.35	0.38	MBR10-188	75472	1.60	0.12
MBR10-188	75431	2.50	0.52	MBR10-188	75474	2.30	0.33
Abbreviations: MN PCEs – Micronucleated polychromatic erythrocytes; NCEs – Normochromatic erythrocytes; TE – Total erythrocytes (PCEs + NCEs).							(continued)

Appendix 1, Table 2. Individual Data – Positive Control (2009-2010) (continued)

Studies	Animal No. (Males)	% MN PCEs	RATIO PCE/TE	Studies	Animal No. (Females)	% MN PCEs	RATIO PCE/TE
MBR10-245	81581	1.20	0.18	MBR10-245	81614	1.00	0.55
MBR10-245	81585	2.85	0.49	MBR10-245	81627	1.20	0.29
MBR10-245	81593	1.55	0.29	MBR10-245	81631	0.60	0.21
MBR10-245	81594	1.75	0.31	MBR10-245	81637	0.70	0.37
MBR10-245	81596	1.55	0.39	MBR10-245	81644	1.05	0.48
MBR10-242	80860	1.50	0.35	MBR10-242	80894	1.05	0.28
MBR10-242	80861	1.45	0.19	MBR10-242	80896	1.10	0.64
MBR10-242	80862	1.15	0.10	MBR10-242	80903	0.70	0.12
MBR10-242	80868	1.20	0.31	MBR10-242	80915	0.60	0.20
MBR10-242	80869	1.35	0.23	MBR10-242	80918	1.35	0.31
MBR10-225	78092	1.90	0.42	MBR10-225	78136	1.35	0.51
MBR10-225	78098	2.50	0.36	MBR10-225	78140	1.10	0.46
MBR10-225	78100	3.45	0.49	MBR10-225	78152	1.00	0.26
MBR10-225	78080	3.10	0.38	MBR10-225	78128	1.00	0.30
MBR10-255	78086	2.85	0.30	MBR10-255	78131	0.80	0.43
MBR10-212	8836	1.25	0.42	MBR10-212	8865	2.00	0.34
MBR10-212	8837	1.10	0.29	MBR10-212	8875	1.60	0.26
MBR10-212	8838	1.45	0.41	MBR10-212	8878	1.50	0.34
MBR10-212	8849	1.35	0.30	MBR10-212	8880	1.70	0.41
MBR10-212	8853	1.75	0.42	MBR10-212	8891	1.40	0.37

Abbreviations: MN PCEs – Micronucleated polychromatic erythrocytes; NA – Not applicable; NCEs – Normochromatic erythrocytes; TE – Total erythrocytes (PCEs + NCEs).

(continued)

APPENDIX M

Micronucleus Assay Report (WIL Research Skokie)

Formerly known as Midwest BioResearch, LLC



BONE MARROW MICRONUCLEUS TEST IN RATS

CONTRIBUTING SCIENTIST REPORT

Midwest BioResearch Study Number: MBR11-192

WIL Research Study Number: WIL-402022

Principal Investigator: [REDACTED]

COMPLIANCE STATEMENT

This study was conducted in compliance with US Environmental Protection Agency (EPA) TSCA (40 CFR Part 792) and the Organisation for Economic Cooperation and Development (OECD) Principles of Good Laboratory Practice C(97)186 (Final). This study was in general accordance with the EPA Health Effects Test Guideline OPPTS 798.5395, Mammalian Erythrocyte Micronucleus test, August 1998; and OECD Guideline Number 474. The study was also performed according to the protocol and any amendments and Midwest BioResearch SOPs. There were no known circumstances or errors that affected the quality or integrity of the analyses. The Principal Investigator certifies that the results presented accurately represent the raw data.

COMPLIANCE APPROVAL SIGNATURES

[REDACTED]

Date 12 Jun 2012

Principal Investigator
Midwest BioResearch, LLC

[REDACTED]

Date 12 June 2012

Assistant Director, Genetic Toxicology
Midwest BioResearch, LLC

Midwest BioResearch, LLC – Confidential Information



INTRODUCTION

This report summarizes the results of the analysis of rat bone marrow samples collected in the study “A 90-Day Repeat-Dose Dermal Toxicity Study in Conjunction with a Micronucleus Assay Utilizing Extract, Light Paraffinic Distillate Solvent in Sprague Dawley Rats” (WIL Research Laboratories Study No. WIL-402022). The objective was to assess the potential of extract, light paraffinic distillate solvent to induce micronuclei in polychromatic erythrocytes (PCEs) and normochromatic erythrocytes (NCEs) in rat bone marrow following dermal treatment once daily, 5 days a week for a minimum of 90 days. This assay evaluates compounds for *in vivo* clastogenic activity and/or disruption of the mitotic apparatus.

The in-life phase of the study was conducted at WIL Research Laboratories, LLC (WIL) in Ashland, OH (test facility). Analysis of bone marrow slides was conducted at Midwest BioResearch, LLC (MBR, a subsidiary of WIL Research), 8025 Lamon Ave., Skokie, IL (test site). Slide analysis was initiated on 21-Jul-2011 and completed on 26-Aug-2011.

STUDY DESIGN

The vehicle (acetone) and extract, light paraffinic distillate solvent were administered dermally once daily, 5 days a week for a minimum of 90 days to male and female Crl:CD(SD) rats with the first day of dosing defined as Study Day 0. The positive control article (cyclophosphamide; lot number to be included in the study records at WIL) was administered orally via gavage as a single dose. Bone marrow was harvested approximately 24 hours after the final dose.



TREATMENT GROUPS

Group	Treatment	Dose Level (mg/kg/day)	Dose Concentration (mg/mL)	Dose Volume (mL/kg)	Animals with Bone Marrow Harvested 24 hours After Final Dosing	
					Males	Females
1	Sham	NA	NA	NA	5	5
2	Acetone	0	0	1.5	5	5
3	Test Substance ^a	5	3.3	1.5	5	5
4	Test Substance ^a	50	33.3	1.5	5	5
5	Test Substance ^a	150	100.0	1.5	5	5
6	Positive	60	6	10	5	5

^a The test substance is extract, light paraffinic distillate solvent

MICRONUCLEI ANALYSIS

Prior to analysis, the coded slides were stained with acridine orange solution. Three separate counts were made for each slide: 1) a total of 1000 erythrocytes, (both polychromatic erythrocytes (PCEs) and normochromatic erythrocytes (NCEs) per animal were counted and PCE/total erythrocytes (TE) determined; 2) number of micronucleated PCEs from a total of 2000 PCEs were scored per animal; and 3) number of micronucleated NCEs from a total of 2000 NCEs were scored per animal. Micronucleated PCE, micronucleated NCE, and PCE:TE ratio results were compared across groups for the test article and vehicle treatments, the sham control and vehicle treatments, and for the positive control and vehicle treatments using analysis of variance (ANOVA) (Snedecor and Cochran, 1980) with statistical significance set at a 95% confidence level ($p \leq 0.05$). A statistical difference ($p \leq 0.05$) observed in the ANOVA, was followed by a comparison of the vehicle control group to each test article treated group by Dunnett's test (Dunnett, 1964).

DATA AND RECORDS

All data were recorded manually and transcribed into Excel 2010 (Microsoft Corp., Redmond, WA) for table preparation and data calculations. KaleidaGraph version 4.03 (Synergy Software; Reading, PA) was used to conduct statistical analysis of PCE:TE data, percent micronucleated PCE data, and percent micronucleated NCE data for this bone marrow micronucleus study.

The slides and all data and reports generated at MBR will be shipped to WIL Research Laboratories, LLC (to the attention of the Study Director) upon finalization of the MBR Contributing Scientist Report.



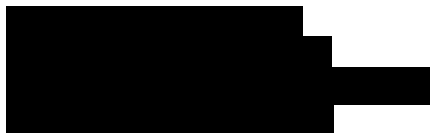
PERSONNEL

Principal Investigator:

Study Scientist:

Management:

Study Director:



RESULTS

Extract, light paraffinic distillate solvent produced a statistically significant ($p \leq 0.05$) increase in the mean percentage of micronucleated polychromatic erythrocytes (%MN-PCEs) at the highest dose level, 150 mg/kg/day, in male rats. A statistically significant increase in the mean %MN-PCEs was also observed at the middle dose level, 50 mg/kg/day, in female rats,. However, a dose response was not observed as the highest dose level, 150 mg/kg/day, did not exhibit a statistically significant increase in %MN-PCEs. Thus, the results in female rats met the criteria for an equivocal response.

Extract, light paraffinic distillate solvent did not produce a statistically significant increase in the mean percentage of micronucleated normochromatic erythrocytes (%MN-NCEs) compared to the vehicle control. In addition, extract, light paraffinic distillate solvent did not produce a statistically significant change in the mean ratio of polychromatic to total erythrocytes (PCE:TE ratio) relative to the vehicle control. The group mean values for both %MN-PCEs and PCE:TE ratios for the vehicle and positive control groups were within the values previously obtained by Midwest BioResearch (Report MBR11-265).

Extract, light paraffinic distillate solvent met the criteria for a positive response in male rats and an equivocal response in female rats for the induction of bone marrow micronuclei in polychromatic erythrocytes under the conditions of this assay.



INDIVIDUAL AND MEAN DATA

Male, Micronuclei Analysis

TREATMENT	ANIMAL No.	MN PCEs/ 2000 PCEs	% MN PCEs	MN NCEs/ 2000 NCEs	% MN NCEs
Acetone (Vehicle)	99467	2	0.10	1	0.05
	99471	0	0.00	0	0.00
	99473	0	0.00	0	0.00
	99498	3	0.15	0	0.00
	99502	3	0.15	3	0.15
Mean ± SD		0.08 ± 0.08		0.04 ± 0.07	
Sham	99466	2	0.10	0	0.00
	99472	1	0.05	0	0.00
	99474	0	0.00	0	0.00
	99491	4	0.20	3	0.15
	99496	1	0.05	2	0.10
Mean ± SD		0.08 ± 0.08		0.05 ± 0.07	
Extract, light paraffinic distillate solvent (5 mg/kg/day)	99465	3	0.15	1	0.05
	99479	0	0.00	0	0.00
	99483	0	0.00	0	0.00
	99489	0	0.00	0	0.00
	99490	2	0.10	1	0.05
Mean ± SD		0.05 ± 0.07		0.02 ± 0.03	
Extract, light paraffinic distillate solvent (50 mg/kg/day)	99464	0	0.00	0	0.00
	99469	0	0.00	0	0.00
	99480	0	0.00	0	0.00
	99485	0	0.00	0	0.00
	99486	0	0.00	0	0.00
Mean ± SD		0.00 ± 0.00		0.00 ± 0.00	
Extract, light paraffinic distillate solvent (150 mg/kg/day)	99468	13	0.65	0	0.00
	99482	4	0.20	6	0.30
	99487	7	0.35	1	0.05
	99499	2	0.10	1	0.05
	99501	4	0.20	0	0.00
Mean ± SD		0.30 ± 0.22*		0.08 ± 0.13	
Cyclophosphamide (60 mg/kg)	99475	16	0.80	0	0.00
	99477	25	1.25	0	0.00
	99478	23	1.15	0	0.00
	99484	22	1.10	0	0.00
	99488	23	1.15	2	0.10
Mean ± SD		1.09 ± 0.17*		0.02 ± 0.04	

MN = Micronucleated

TE = Total erythrocytes (PCE + NCE)

*Statistically different than vehicle control $p \leq 0.05$

NCE = Normochromatic Erythrocyte

PCE = Polychromatic Erythrocyte

Mean = $\frac{\sum x_n}{n}$ Where x = the individual values; n = the number of values

SD = Standard Deviation = $\sqrt{\frac{\sum (x - \bar{x})^2}{n - 1}}$



Female, Micronuclei Analysis

TREATMENT	ANIMAL No.	MN PCEs/ 2000 PCEs	% MN PCEs	MN NCEs/ 2000 NCEs	% MN NCEs
Acetone (Vehicle)	99534	2	0.10	0	0.00
	99561	2	0.10	0	0.00
	99562	0	0.00	0	0.00
	99563	4	0.20	0	0.00
	99575	0	0.00	0	0.00
Mean ± SD			0.08 ± 0.08		0.00 ± 0.00
Sham	99535	1	0.05	1	0.05
	99541	1	0.05	0	0.00
	99544	2	0.10	0	0.00
	99547	4	0.20	1	0.05
	99559	2	0.10	0	0.00
Mean ± SD			0.10 ± 0.06		0.02 ± 0.03
Extract, light paraffinic distillate solvent (5 mg/kg/day)	99530	0	0.00	1	0.05
	99532	1	0.05	0	0.00
	99555	4	0.20	0	0.00
	99556	1	0.05	0	0.00
	99566	1	0.05	0	0.00
Mean ± SD			0.07 ± 0.08		0.01 ± 0.02
Extract, light paraffinic distillate solvent (50 mg/kg/day)	99533	8	0.40	0	0.00
	99538	3	0.15	1	0.05
	99546	9	0.45	1	0.05
	99552	3	0.15	0	0.00
	99553	5	0.25	0	0.00
Mean ± SD			0.28 ± 0.14*		0.02 ± 0.03
Extract, light paraffinic distillate solvent (150 mg/kg/day)	99531	4	0.20	0	0.00
	99536	1	0.05	1	0.05
	99540	4	0.20	0	0.00
	99548	1	0.05	0	0.00
	99554	0	0.00	0	0.00
Mean ± SD			0.10 ± 0.09		0.01 ± 0.02
Cyclophosphamide (60 mg/kg)	99549	21	1.05	0	0.00
	99542	20	1.00	0	0.00
	99539	20	1.00	0	0.00
	99537	13	0.65	0	0.00
	99529	10	0.50	0	0.00
Mean ± SD			0.84 ± 0.25*		0.00 ± 0.00

MN = Micronucleated

TE = Total erythrocytes (PCE + NCE)

NCE = Normochromatic Erythrocyte

PCE = Polychromatic Erythrocyte

*Statistically different than vehicle control $p \leq 0.05$

^a PCE:TE ratio < 20% of mean vehicle control ratio; animal not included in mean or statistics.

Mean = $\frac{\sum x_n}{n}$ Where x = the individual values; n = the number of values

SD = Standard Deviation = $\sqrt{\frac{\sum (x - \bar{x})^2}{n - 1}}$



Male and Female: Ratio of Polychromatic Erythrocytes to Total Erythrocytes in Bone Marrow

TREATMENT	MALES				FEMALES			
	Animal No.	PCEs	NCEs	PCE:TE Ratio	Animal No.	PCEs	NCEs	PCE:TE Ratio
Acetone (Vehicle)	99467	306	694	0.31	99534	392	608	0.39
	99471	353	647	0.35	99561	620	380	0.62
	99473	602	398	0.60	99562	517	483	0.52
	99498	625	375	0.63	99563	452	548	0.45
	99502	444	556	0.44	99575	390	610	0.39
Mean ± SD	0.47 ± 0.14				0.47 ± 0.10			
Sham	99466	379	621	0.38	99535	385	615	0.39
	99472	415	585	0.42	99541	514	486	0.51
	99474	483	517	0.48	99544	523	477	0.52
	99491	385	615	0.39	99547	725	275	0.73
	99496	540	460	0.54	99559	429	571	0.43
Mean ± SD	0.44 ± 0.07				0.52 ± 0.13			
Extract, light paraffinic distillate solvent (5 mg/kg/day)	99465	448	552	0.45	99530	489	511	0.49
	99479	454	546	0.45	99532	555	445	0.56
	99483	578	422	0.58	99555	417	583	0.42
	99489	392	608	0.39	99556	500	500	0.50
	99490	583	417	0.58	99566	645	355	0.65
Mean ± SD	0.49 ± 0.09				0.52 ± 0.08			
Extract, light paraffinic distillate solvent (50 mg/kg/day)	99464	312	688	0.31	99533	332	668	0.33
	99469	842	158	0.84	99538	528	472	0.53
	99480	328	672	0.33	99546	566	434	0.57
	99485	338	662	0.34	99552	501	499	0.50
	99486	511	489	0.51	99553	583	417	0.58
Mean ± SD	0.47 ± 0.23				0.50 ± 0.10			
Extract, light paraffinic distillate solvent (150 mg/kg/day)	99468	656	344	0.66	99531	514	486	0.51
	99482	339	661	0.34	99536	395	605	0.40
	99487	570	430	0.57	99540	669	331	0.67
	99499	392	608	0.39	99548	434	566	0.43
	99501	523	477	0.52	99554	455	545	0.46
Mean ± SD	0.50 ± 0.13				0.49 ± 0.11			
Cyclophosphamide (60 mg/kg)	99475	230	770	0.23	99549	680	320	0.68
	99477	159	841	0.16	99542	270	730	0.27
	99478	230	770	0.23	99539	644	356	0.64
	99484	549	451	0.55	99537	404	596	0.40
	99488	420	580	0.42	99529	324	676	0.32
Mean ± SD	0.32 ± 0.16				0.46 ± 0.19			

TE = Total erythrocytes (PCE + NCE)

NCE = Normochromatic Erythrocyte

PCE = Polychromatic Erythrocyte

* Statistically different than vehicle control $p \leq 0.05$

^a PCE:TE ratio < 20% of mean vehicle control ratio; animal not included in mean or statistics.

Mean = $\frac{\sum x_n}{n}$ Where x = the individual values; n = the number of values

SD = Standard Deviation = $\sqrt{\frac{\sum (x - \bar{x})^2}{n - 1}}$



QUALITY ASSURANCE STATEMENT

Date(s) of Inspection	Critical Phase Inspected (Study-Based)	Date Observations Reported to:		
		Principal Investigator	Management	Study Director
19-Aug-2011	Slide staining	22-Aug-2011	25-Aug-2011	29-Aug-2011
01-Oct-2011	Raw data and report	06-Oct-2011	07-Jun-2012	08-Jun-2012

The portions of this study conducted at Midwest BioResearch, LLC were inspected in accordance with the standard operating procedures of Midwest BioResearch, LLC, and the sponsor's protocol and any protocol amendment(s). Quality Assurance observations, derived from the inspections during the portions of this study conducted at Midwest BioResearch, LLC and from the inspections of the raw data and report generated by Midwest BioResearch, LLC are documented and have been reported to the Midwest BioResearch, LLC Principal Investigator. A quarterly internal facility inspection is conducted by the Midwest BioResearch, LLC Quality Assurance Unit. Reports of all Quality Assurance inspections are submitted to Midwest BioResearch, LLC management.

This report accurately reflects the data generated during the portions of this study conducted at Midwest BioResearch, LLC. The methods and procedures used in the study were those specified in the protocol, any protocol amendment(s), and the standard operating procedures of Midwest BioResearch, LLC.

Date: 12-Jun-2012

Director, Quality Assurance
Midwest BioResearch, LLC

APPENDIX N

Individual Animal Data

TABLE A1
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL SURVIVAL AND DISPOSITION

ANIMAL	SEX	GROUP	TYPE OF DEATH	AGE IN WEEKS A	DATE OF DEATH	DAYS ON STUDY
99466	M	UNTREATED	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99472	M	UNTREATED	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99474	M	UNTREATED	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99491	M	UNTREATED	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99496	M	UNTREATED	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99504	M	UNTREATED	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99505	M	UNTREATED	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99507	M	UNTREATED	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99509	M	UNTREATED	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99515	M	UNTREATED	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99467	M	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99471	M	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99473	M	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99498	M	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99502	M	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99503	M	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99506	M	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99516	M	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99518	M	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99519	M	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99465	M	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99479	M	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99483	M	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99489	M	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99490	M	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99494	M	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99495	M	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99511	M	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90

A = CALCULATED TO THE NEAREST WHOLE WEEK USING THE MEAN AGE IN WEEKS AT INITIATION OF DOSING (8)

TABLE A1
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL SURVIVAL AND DISPOSITION

ANIMAL	SEX	GROUP	TYPE OF DEATH	AGE IN WEEKS A	DATE OF DEATH	DAYS ON STUDY
99524	M	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99528	M	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99464	M	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99469	M	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99480	M	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99485	M	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99486	M	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99500	M	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99510	M	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99512	M	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99513	M	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99525	M	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99468	M	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99482	M	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99487	M	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99499	M	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99501	M	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99517	M	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99521	M	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99522	M	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99523	M	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99526	M	150 MG/KG/DAY	FOUND DEAD	13	28-MAY-11	40
99475	M	60 MG/KG CPS	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99477	M	60 MG/KG CPS	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99478	M	60 MG/KG CPS	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99484	M	60 MG/KG CPS	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99488	M	60 MG/KG CPS	SCHEDULED EUTHANASIA	20	17-JUL-11	90

A = CALCULATED TO THE NEAREST WHOLE WEEK USING THE MEAN AGE IN WEEKS AT INITIATION OF DOSING (8)

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A1
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL SURVIVAL AND DISPOSITION

PAGE 3

ANIMAL SEX		GROUP		TYPE OF DEATH	AGE IN WEEKS A	DATE OF DEATH	DAYS ON STUDY
99497	M	60 MG/KG	CPS	SCHEDULED EUTHANASIA	20	17-JUL-11	90

A = CALCULATED TO THE NEAREST WHOLE WEEK USING THE MEAN AGE IN WEEKS AT INITIATION OF DOSING (8)

TABLE A1
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL SURVIVAL AND DISPOSITION

ANIMAL	SEX	GROUP	TYPE OF DEATH	AGE IN WEEKS A	DATE OF DEATH	DAYS ON STUDY
99535	F	UNTREATED	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99541	F	UNTREATED	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99544	F	UNTREATED	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99547	F	UNTREATED	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99559	F	UNTREATED	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99569	F	UNTREATED	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99579	F	UNTREATED	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99580	F	UNTREATED	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99586	F	UNTREATED	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99593	F	UNTREATED	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99534	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99561	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99562	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99563	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99572	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99574	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99575	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99576	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99578	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99585	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99530	F	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99532	F	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99555	F	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99556	F	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99566	F	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99568	F	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99571	F	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99582	F	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90

A = CALCULATED TO THE NEAREST WHOLE WEEK USING THE MEAN AGE IN WEEKS AT INITIATION OF DOSING (8)

TABLE A1
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL SURVIVAL AND DISPOSITION

ANIMAL	SEX	GROUP	TYPE OF DEATH	AGE IN WEEKS A	DATE OF DEATH	DAYS ON STUDY
99591	F	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99592	F	5 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99533	F	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99538	F	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99546	F	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99552	F	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99553	F	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99560	F	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99564	F	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99567	F	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99584	F	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99590	F	50 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99531	F	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99536	F	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99540	F	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99548	F	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99554	F	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	16-JUL-11	89
99557	F	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99558	F	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99577	F	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99581	F	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99588	F	150 MG/KG/DAY	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99529	F	60 MG/KG CPS	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99537	F	60 MG/KG CPS	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99539	F	60 MG/KG CPS	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99542	F	60 MG/KG CPS	SCHEDULED EUTHANASIA	20	17-JUL-11	90
99549	F	60 MG/KG CPS	SCHEDULED EUTHANASIA	20	17-JUL-11	90

A = CALCULATED TO THE NEAREST WHOLE WEEK USING THE MEAN AGE IN WEEKS AT INITIATION OF DOSING (8)

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A1
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL SURVIVAL AND DISPOSITION

PAGE 6

ANIMAL	SEX	GROUP	TYPE OF DEATH	AGE IN WEEKS A	DATE OF DEATH	DAYS ON STUDY
99570	F	60 MG/KG CPS	SCHEDULED EUTHANASIA	20	17-JUL-11	90

A = CALCULATED TO THE NEAREST WHOLE WEEK USING THE MEAN AGE IN WEEKS AT INITIATION OF DOSING (8)

PDEADv4.07
09/04/2011

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 1

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99466	M	UNTREATED	NORMAL	0	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99466	M	UNTREATED	DISPOSITION	89	8:17	P	PRIMARY NECROPSY (DAY 89)
99466	M	UNTREATED	BODY/INTEGUMENT	84	6:30	P	HAIR LOSS VENTRAL NECK
				89	7:02	P	HAIR LOSS DORSAL NECK
				89	7:02	P	HAIR LOSS VENTRAL NECK
99466	M	UNTREATED	EYES/EARS/NOSE	89	7:02	P	DRIED RED MATERIAL AROUND NOSE
99472	M	UNTREATED	NORMAL	0	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 2

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99472	M	UNTREATED	NORMAL	84	6:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99472	M	UNTREATED	DISPOSITION	89	8:17	P	PRIMARY NECROPSY (DAY 89)
99472	M	UNTREATED	BODY/INTEGUMENT	89	7:02	P	HAIR LOSS VENTRAL NECK
99474	M	UNTREATED	NORMAL	0	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99474	M	UNTREATED	DISPOSITION	89	8:17	P	PRIMARY NECROPSY (DAY 89)
99474	M	UNTREATED	BODY/INTEGUMENT	42	6:29	P	HAIR LOSS VENTRAL NECK
				84	6:32	P	HAIR LOSS VENTRAL NECK
				84	6:32	P	HAIR LOSS FORELIMB(S)
				89	7:03	P	HAIR LOSS VENTRAL NECK
				89	7:03	P	HAIR LOSS DORSAL NECK
				89	7:03	P	HAIR LOSS FORELIMB(S)
99474	M	UNTREATED	EYES/EARS/NOSE	89	7:03	P	DRIED RED MATERIAL AROUND NOSE
99474	M	UNTREATED	BODY/INTEG II	89	7:03	P	SCABBING VENTRAL NECK
99491	M	UNTREATED	NORMAL	0	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 3

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99491	M	UNTREATED	NORMAL	63	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99491	M	UNTREATED	DISPOSITION	89	8:17	P	PRIMARY NECROPSY (DAY 89)
99491	M	UNTREATED	BODY/INTEGUMENT	14	6:49	P	HAIR LOSS FACIAL AREA
				42	6:30	P	HAIR LOSS VENTRAL NECK
				89	7:03	P	HAIR LOSS VENTRAL NECK
99491	M	UNTREATED	EYES/EARS/NOSE	7	6:52	P	OPACITY RIGHT EYE
				14	6:49	P	OPACITY RIGHT EYE
99491	M	UNTREATED	BODY/INTEG II	70	7:54	P	SCABBING VENTRAL NECK
99496	M	UNTREATED	NORMAL	0	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99496	M	UNTREATED	DISPOSITION	89	8:17	P	PRIMARY NECROPSY (DAY 89)
99496	M	UNTREATED	BODY/INTEGUMENT	42	6:31	P	HAIR LOSS VENTRAL NECK
				42	6:31	P	HAIR LOSS DORSAL NECK
				77	10:59	P	HAIR LOSS DORSAL NECK
				84	6:34	P	HAIR LOSS VENTRAL NECK
				89	7:03	P	HAIR LOSS VENTRAL NECK
				89	7:03	P	HAIR LOSS DORSAL NECK
99496	M	UNTREATED	BODY/INTEG II	42	6:31	P	SCABBING VENTRAL NECK
				77	11:00	P	SCABBING VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 4

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99496	M	UNTREATED	BODY/INTEG II	89	7:03	P	SCABBING VENTRAL NECK
99504	M	UNTREATED	NORMAL	0	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99504	M	UNTREATED	DISPOSITION	90	7:04	P	PRIMARY NECROPSY (DAY 90)
99504	M	UNTREATED	BODY/INTEGUMENT	70	7:55	P	HAIR LOSS VENTRAL NECK
				90	6:22	P	HAIR LOSS VENTRAL NECK
				90	6:22	P	HAIR LOSS DORSAL NECK
99504	M	UNTREATED	BODY/INTEG II	90	6:22	P	SCABBING VENTRAL NECK
99505	M	UNTREATED	NORMAL	0	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99505	M	UNTREATED	DISPOSITION	90	7:04	P	PRIMARY NECROPSY (DAY 90)
99505	M	UNTREATED	BODY/INTEGUMENT	42	6:33	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 5

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99505	M	UNTREATED	BODY/INTEGUMENT	42	6:33	P	HAIR LOSS DORSAL NECK
				56	6:41	P	HAIR LOSS HINDLIMB(S)
				63	6:57	P	HAIR LOSS DORSAL NECK
				63	6:57	P	HAIR LOSS VENTRAL NECK
				70	7:56	P	HAIR LOSS VENTRAL NECK
				90	6:23	P	HAIR LOSS DORSAL NECK
				90	6:23	P	HAIR LOSS VENTRAL NECK
99507	M	UNTREATED	NORMAL	0	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99507	M	UNTREATED	DISPOSITION	90	7:04	P	PRIMARY NECROPSY (DAY 90)
99507	M	UNTREATED	BODY/INTEGUMENT	42	6:34	P	HAIR LOSS DORSAL NECK
				42	6:34	P	HAIR LOSS VENTRAL NECK
				70	7:56	P	HAIR LOSS DORSAL NECK
				70	7:56	P	HAIR LOSS VENTRAL NECK
				77	11:02	P	HAIR LOSS DORSAL NECK
				77	11:02	P	HAIR LOSS VENTRAL NECK
				84	6:36	P	HAIR LOSS VENTRAL NECK
				84	6:36	P	HAIR LOSS DORSAL NECK
				90	6:23	P	HAIR LOSS DORSAL NECK
				90	6:23	P	HAIR LOSS VENTRAL NECK
99507	M	UNTREATED	BODY/INTEG II	90	6:23	P	SCABBING VENTRAL NECK
99509	M	UNTREATED	NORMAL	0	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 6

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99509	M	UNTREATED	NORMAL	7	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99509	M	UNTREATED	DISPOSITION	90	7:04	P	PRIMARY NECROPSY (DAY 90)
99509	M	UNTREATED	BODY/INTEGUMENT	42	6:35	P	HAIR LOSS VENTRAL NECK
				49	7:01	P	HAIR LOSS DORSAL NECK
				49	7:01	P	HAIR LOSS VENTRAL NECK
				63	6:59	P	HAIR LOSS VENTRAL NECK
				70	7:57	P	HAIR LOSS DORSAL NECK
				70	7:57	P	HAIR LOSS VENTRAL NECK
				90	6:23	P	HAIR LOSS DORSAL NECK
				90	6:23	P	HAIR LOSS VENTRAL NECK
99509	M	UNTREATED	BODY/INTEG II	21	9:15	P	SCABBING DORSAL NECK
99515	M	UNTREATED	NORMAL	0	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99515	M	UNTREATED	DISPOSITION	90	7:04	P	PRIMARY NECROPSY (DAY 90)
99515	M	UNTREATED	BODY/INTEGUMENT	21	9:16	P	HAIR LOSS VENTRAL NECK
				42	6:35	P	HAIR LOSS VENTRAL NECK
				70	7:58	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99515	M	UNTREATED	BODY/INTEGUMENT	77	11:03	P	HAIR LOSS DORSAL NECK
				84	6:37	P	HAIR LOSS VENTRAL NECK
				90	6:23	P	HAIR LOSS DORSAL NECK
				90	6:23	P	HAIR LOSS VENTRAL NECK
99467	M	0 MG/KG/DAY	NORMAL	0	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99467	M	0 MG/KG/DAY	DISPOSITION	89	8:18	P	PRIMARY NECROPSY (DAY 89)
99467	M	0 MG/KG/DAY	BODY/INTEGUMENT	35	7:04	P	HAIR LOSS VENTRAL NECK
				42	6:44	P	HAIR LOSS VENTRAL NECK
				63	7:12	P	HAIR LOSS DORSAL NECK
				63	7:12	P	HAIR LOSS VENTRAL NECK
				70	8:10	P	HAIR LOSS VENTRAL NECK
				84	6:46	P	HAIR LOSS VENTRAL NECK
				89	7:05	P	HAIR LOSS DORSAL NECK
				89	7:05	P	HAIR LOSS VENTRAL NECK
99467	M	0 MG/KG/DAY	BODY/INTEG II	89	7:05	P	SCABBING VENTRAL NECK
99471	M	0 MG/KG/DAY	NORMAL	0	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99471	M	0 MG/KG/DAY	DISPOSITION	89	8:18	P	PRIMARY NECROPSY (DAY 89)
99471	M	0 MG/KG/DAY	BODY/INTEGUMENT	21	9:26	P	HAIR LOSS DORSAL NECK
				28	6:56	P	HAIR LOSS DORSAL NECK
				42	6:44	P	HAIR LOSS VENTRAL NECK
				70	8:10	P	HAIR LOSS DORSAL NECK
				70	8:10	P	HAIR LOSS VENTRAL NECK
				77	11:51	P	HAIR LOSS DORSAL NECK
				77	11:51	P	HAIR LOSS VENTRAL NECK
				84	6:47	P	HAIR LOSS VENTRAL NECK
				84	6:47	P	HAIR LOSS DORSAL NECK
				89	7:05	P	HAIR LOSS DORSAL NECK
				89	7:05	P	HAIR LOSS VENTRAL NECK
99473	M	0 MG/KG/DAY	NORMAL	0	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99473	M	0 MG/KG/DAY	DISPOSITION	89	8:18	P	PRIMARY NECROPSY (DAY 89)
99473	M	0 MG/KG/DAY	BODY/INTEGUMENT	84	6:48	P	HAIR LOSS VENTRAL NECK
				89	7:05	P	HAIR LOSS DORSAL NECK
				89	7:05	P	HAIR LOSS VENTRAL NECK
99473	M	0 MG/KG/DAY	BODY/INTEG II	89	7:05	P	SCABBING VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99498	M	0 MG/KG/DAY	NORMAL	0	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99498	M	0 MG/KG/DAY	DISPOSITION	89	8:18	P	PRIMARY NECROPSY (DAY 89)
99498	M	0 MG/KG/DAY	BODY/INTEGUMENT	28	6:57	P	HAIR LOSS DORSAL NECK
				35	7:07	P	HAIR LOSS DORSAL NECK
				35	7:07	P	HAIR LOSS VENTRAL NECK
				42	6:46	P	HAIR LOSS DORSAL NECK
				42	6:46	P	HAIR LOSS VENTRAL NECK
				63	7:14	P	HAIR LOSS DORSAL NECK
				63	7:14	P	HAIR LOSS VENTRAL NECK
				77	11:53	P	HAIR LOSS VENTRAL NECK
				84	6:48	P	HAIR LOSS VENTRAL NECK
				84	6:48	P	HAIR LOSS DORSAL NECK
				89	7:05	P	HAIR LOSS DORSAL NECK
				89	7:05	P	HAIR LOSS VENTRAL NECK
99498	M	0 MG/KG/DAY	BODY/INTEG II	21	9:28	P	SCABBING VENTRAL NECK
				28	6:57	P	SCABBING DORSAL NECK
99502	M	0 MG/KG/DAY	NORMAL	0	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99502	M	0 MG/KG/DAY	NORMAL	56	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99502	M	0 MG/KG/DAY	DISPOSITION	89	8:18	P	PRIMARY NECROPSY (DAY 89)
99502	M	0 MG/KG/DAY	BODY/INTEGUMENT	70	8:12	P	HAIR LOSS VENTRAL NECK
				77	11:53	P	HAIR LOSS VENTRAL NECK
				89	7:06	P	HAIR LOSS DORSAL NECK
				89	7:06	P	HAIR LOSS VENTRAL NECK
99503	M	0 MG/KG/DAY	NORMAL	0	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99503	M	0 MG/KG/DAY	DISPOSITION	90	7:05	P	PRIMARY NECROPSY (DAY 90)
99503	M	0 MG/KG/DAY	BODY/INTEGUMENT	14	7:08	P	HAIR LOSS VENTRAL NECK
				21	9:29	P	HAIR LOSS DORSAL NECK
				28	6:58	P	HAIR LOSS DORSAL NECK
				35	7:09	P	HAIR LOSS DORSAL NECK
				35	7:09	P	HAIR LOSS VENTRAL NECK
				42	6:48	P	HAIR LOSS VENTRAL NECK
				63	7:15	P	HAIR LOSS DORSAL NECK
				63	7:15	P	HAIR LOSS VENTRAL NECK
				70	8:13	P	HAIR LOSS DORSAL NECK
				70	8:13	P	HAIR LOSS VENTRAL NECK
				77	11:54	P	HAIR LOSS VENTRAL NECK
				84	6:50	P	HAIR LOSS DORSAL NECK
				90	6:25	P	HAIR LOSS DORSAL NECK
				90	6:25	P	HAIR LOSS VENTRAL NECK
99503	M	0 MG/KG/DAY	BODY/INTEG II	21	9:29	P	SCABBING DORSAL NECK
				28	6:58	P	SCABBING DORSAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99503	M	0 MG/KG/DAY	BODY/INTEG II	42	6:48	P	SCABBING DORSAL NECK
				63	7:15	P	SCABBING VENTRAL NECK
				84	6:50	P	SCABBING VENTRAL NECK
99506	M	0 MG/KG/DAY	NORMAL	0	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99506	M	0 MG/KG/DAY	DISPOSITION	90	7:05	P	PRIMARY NECROPSY (DAY 90)
99506	M	0 MG/KG/DAY	BODY/INTEGUMENT	21	9:30	P	HAIR LOSS FACIAL AREA
				63	7:16	P	HAIR LOSS VENTRAL NECK
				77	11:54	P	HAIR LOSS VENTRAL NECK
				84	6:51	P	HAIR LOSS VENTRAL NECK
				90	6:26	P	HAIR LOSS DORSAL NECK
				90	6:26	P	HAIR LOSS VENTRAL NECK
99506	M	0 MG/KG/DAY	BODY/INTEG II	7	7:09	P	SCABBING FACIAL AREA
				7	7:09	P	SCABBING DORSAL NECK
				14	7:10	P	SCABBING FACIAL AREA
				35	7:10	P	SCABBING FACIAL AREA
				63	7:16	P	SCABBING RIGHT LATERAL NECK
				90	6:26	P	SCABBING VENTRAL NECK
99516	M	0 MG/KG/DAY	NORMAL	0	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99516	M	0 MG/KG/DAY	NORMAL	63	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99516	M	0 MG/KG/DAY	DISPOSITION	90	7:05	P	PRIMARY NECROPSY (DAY 90)
99516	M	0 MG/KG/DAY	BODY/INTEGUMENT	42	6:50	P	HAIR LOSS VENTRAL NECK
				77	11:55	P	HAIR LOSS DORSAL NECK
				84	6:52	P	HAIR LOSS VENTRAL NECK
				90	6:26	P	HAIR LOSS DORSAL NECK
				90	6:26	P	HAIR LOSS VENTRAL NECK
99516	M	0 MG/KG/DAY	BODY/INTEG II	7	7:10	P	SCABBING DORSAL NECK
				77	11:55	P	SCABBING VENTRAL NECK
99518	M	0 MG/KG/DAY	NORMAL	0	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99518	M	0 MG/KG/DAY	DISPOSITION	90	7:05	P	PRIMARY NECROPSY (DAY 90)
99518	M	0 MG/KG/DAY	BODY/INTEGUMENT	90	6:26	P	HAIR LOSS VENTRAL NECK
99518	M	0 MG/KG/DAY	EYES/EARS/NOSE	7	7:11	P	DRIED RED MATERIAL AROUND NOSE
99519	M	0 MG/KG/DAY	NORMAL	0	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99519	M	0 MG/KG/DAY	NORMAL	28	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99519	M	0 MG/KG/DAY	DISPOSITION	90	7:06	P	PRIMARY NECROPSY (DAY 90)
99519	M	0 MG/KG/DAY	BODY/INTEGUMENT	42	6:51	P	HAIR LOSS VENTRAL NECK
				63	7:18	P	HAIR LOSS VENTRAL NECK
				70	8:16	P	HAIR LOSS VENTRAL NECK
				84	6:53	P	HAIR LOSS VENTRAL NECK
				90	6:26	P	HAIR LOSS DORSAL NECK
				90	6:26	P	HAIR LOSS VENTRAL NECK
99465	M	5 MG/KG/DAY	NORMAL	0	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99465	M	5 MG/KG/DAY	DISPOSITION	89	8:19	P	PRIMARY NECROPSY (DAY 89)
99465	M	5 MG/KG/DAY	EYES/EARS/NOSE	14	7:22	P	DRIED RED MATERIAL AROUND LEFT EYE
99479	M	5 MG/KG/DAY	NORMAL	0	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99479	M	5 MG/KG/DAY	NORMAL	35	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99479	M	5 MG/KG/DAY	DISPOSITION	89	8:19	P	PRIMARY NECROPSY (DAY 89)
99479	M	5 MG/KG/DAY	BODY/INTEGUMENT	28	7:10	P	HAIR LOSS DORSAL NECK
				77	12:06	P	HAIR LOSS DORSAL NECK
				77	12:06	P	HAIR LOSS VENTRAL NECK
				89	7:07	P	HAIR LOSS VENTRAL NECK
99479	M	5 MG/KG/DAY	BODY/INTEG II	7	7:21	P	SCABBING DORSAL NECK
				21	9:43	P	SCABBING DORSAL NECK
				42	7:02	P	SCABBING VENTRAL NECK
				77	12:06	P	SCABBING RIGHT LATERAL NECK
99483	M	5 MG/KG/DAY	NORMAL	0	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99483	M	5 MG/KG/DAY	DISPOSITION	89	8:19	P	PRIMARY NECROPSY (DAY 89)
99489	M	5 MG/KG/DAY	NORMAL	0	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99489	M	5 MG/KG/DAY	DISPOSITION	89	8:19	P	PRIMARY NECROPSY (DAY 89)
99489	M	5 MG/KG/DAY	BODY/INTEGUMENT	70	8:39	P	HAIR LOSS VENTRAL NECK
				77	12:08	P	HAIR LOSS VENTRAL NECK
				84	7:05	P	HAIR LOSS VENTRAL NECK
				89	7:08	P	HAIR LOSS VENTRAL NECK
99490	M	5 MG/KG/DAY	NORMAL	0	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99490	M	5 MG/KG/DAY	DISPOSITION	89	8:19	P	PRIMARY NECROPSY (DAY 89)
99490	M	5 MG/KG/DAY	BODY/INTEGUMENT	14	7:25	P	HAIR LOSS VENTRAL NECK
				21	9:45	P	HAIR LOSS FORELIMB(S)
				28	7:12	P	HAIR LOSS DORSAL NECK
				28	7:12	P	HAIR LOSS FORELIMB(S)
				42	7:04	P	HAIR LOSS FORELIMB(S)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99490	M	5 MG/KG/DAY	BODY/INTEGUMENT	70	8:40	P	HAIR LOSS DORSAL NECK
				70	8:40	P	HAIR LOSS VENTRAL NECK
				77	12:08	P	HAIR LOSS DORSAL NECK
				77	12:08	P	HAIR LOSS VENTRAL NECK
				89	7:08	P	HAIR LOSS DORSAL NECK
				89	7:08	P	HAIR LOSS VENTRAL NECK
99490	M	5 MG/KG/DAY	BODY/INTEG II	14	7:25	P	SCABBING DORSAL NECK
				42	7:04	P	SCABBING DORSAL NECK
99494	M	5 MG/KG/DAY	NORMAL	0	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99494	M	5 MG/KG/DAY	DISPOSITION	90	7:07	P	PRIMARY NECROPSY (DAY 90)
99494	M	5 MG/KG/DAY	BODY/INTEGUMENT	42	7:04	P	HAIR LOSS VENTRAL NECK
				70	8:41	P	HAIR LOSS DORSAL NECK
				70	8:41	P	HAIR LOSS VENTRAL NECK
				84	7:07	P	HAIR LOSS VENTRAL NECK
				90	6:28	P	HAIR LOSS VENTRAL NECK
99494	M	5 MG/KG/DAY	BODY/INTEG II	90	6:28	P	SCABBING VENTRAL NECK
99495	M	5 MG/KG/DAY	NORMAL	0	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99495	M	5 MG/KG/DAY	NORMAL	28	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99495	M	5 MG/KG/DAY	DISPOSITION	90	7:07	P	PRIMARY NECROPSY (DAY 90)
99495	M	5 MG/KG/DAY	BODY/INTEGUMENT	84	7:07	P	HAIR LOSS VENTRAL NECK
				90	6:28	P	HAIR LOSS VENTRAL NECK
99495	M	5 MG/KG/DAY	BODY/INTEG II	90	6:29	P	SCABBING VENTRAL NECK
99511	M	5 MG/KG/DAY	NORMAL	0	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99511	M	5 MG/KG/DAY	DISPOSITION	90	7:07	P	PRIMARY NECROPSY (DAY 90)
99511	M	5 MG/KG/DAY	BODY/INTEGUMENT	35	7:28	P	HAIR LOSS DORSAL NECK
				35	7:28	P	HAIR LOSS VENTRAL NECK
				77	12:10	P	HAIR LOSS DORSAL NECK
				77	12:10	P	HAIR LOSS VENTRAL NECK
				84	7:08	P	HAIR LOSS DORSAL NECK
				90	6:29	P	HAIR LOSS VENTRAL NECK
99511	M	5 MG/KG/DAY	BODY/INTEG II	42	7:06	P	SCABBING VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99511	M	5 MG/KG/DAY	BODY/INTEG II	77	12:11	P	SCABBING LEFT LATERAL NECK
				84	7:08	P	SCABBING VENTRAL NECK
				90	6:29	P	SCABBING VENTRAL NECK
99524	M	5 MG/KG/DAY	NORMAL	0	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99524	M	5 MG/KG/DAY	DISPOSITION	90	7:07	P	PRIMARY NECROPSY (DAY 90)
99524	M	5 MG/KG/DAY	BODY/INTEGUMENT	7	7:26	P	HAIR LOSS FORELIMB(S)
				21	9:48	P	HAIR LOSS FORELIMB(S)
				42	7:07	P	HAIR LOSS FORELIMB(S)
				42	7:07	P	HAIR LOSS VENTRAL NECK
				56	7:39	P	HAIR LOSS FORELIMB(S)
				63	7:48	P	HAIR LOSS VENTRAL NECK
				77	12:12	P	HAIR LOSS VENTRAL NECK
				90	6:29	P	HAIR LOSS VENTRAL NECK
99524	M	5 MG/KG/DAY	BODY/INTEG II	90	6:29	P	SCABBING VENTRAL NECK
99528	M	5 MG/KG/DAY	NORMAL	0	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99528	M	5 MG/KG/DAY	NORMAL	63	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99528	M	5 MG/KG/DAY	DISPOSITION	90	7:07	P	PRIMARY NECROPSY (DAY 90)
99528	M	5 MG/KG/DAY	BODY/INTEGUMENT	77	12:13	P	HAIR LOSS VENTRAL NECK
				84	7:10	P	HAIR LOSS VENTRAL NECK
				90	6:29	P	HAIR LOSS VENTRAL NECK
99464	M	50 MG/KG/DAY	NORMAL	0	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99464	M	50 MG/KG/DAY	DISPOSITION	89	8:19	P	PRIMARY NECROPSY (DAY 89)
99464	M	50 MG/KG/DAY	BODY/INTEGUMENT	89	7:09	P	HAIR LOSS VENTRAL NECK
99469	M	50 MG/KG/DAY	NORMAL	0	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99469	M	50 MG/KG/DAY	NORMAL	63	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99469	M	50 MG/KG/DAY	DISPOSITION	89	8:19	P	PRIMARY NECROPSY (DAY 89)
99469	M	50 MG/KG/DAY	BODY/INTEGUMENT	42	7:17	P	HAIR LOSS VENTRAL NECK
				77	12:22	P	HAIR LOSS DORSAL NECK
				77	12:22	P	HAIR LOSS VENTRAL NECK
				84	7:19	P	HAIR LOSS DORSAL NECK
				84	7:19	P	HAIR LOSS VENTRAL NECK
				89	7:09	P	HAIR LOSS DORSAL NECK
				89	7:09	P	HAIR LOSS VENTRAL NECK
99480	M	50 MG/KG/DAY	NORMAL	0	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99480	M	50 MG/KG/DAY	DISPOSITION	89	8:19	P	PRIMARY NECROPSY (DAY 89)
99480	M	50 MG/KG/DAY	BODY/INTEGUMENT	42	7:18	P	HAIR LOSS VENTRAL NECK
				63	8:00	P	HAIR LOSS VENTRAL NECK
				70	8:56	P	HAIR LOSS VENTRAL NECK
				77	12:23	P	HAIR LOSS VENTRAL NECK
				89	7:09	P	HAIR LOSS DORSAL NECK
				89	7:09	P	HAIR LOSS VENTRAL NECK
99480	M	50 MG/KG/DAY	BODY/INTEG II	70	8:56	P	SCABBING VENTRAL NECK
				84	7:20	P	SCABBING VENTRAL NECK
				89	7:09	P	SCABBING VENTRAL NECK
99485	M	50 MG/KG/DAY	NORMAL	0	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99485	M	50 MG/KG/DAY	NORMAL	7	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99485	M	50 MG/KG/DAY	DISPOSITION	89	8:19	P	PRIMARY NECROPSY (DAY 89)
99485	M	50 MG/KG/DAY	BODY/INTEGUMENT	77	12:23	P	HAIR LOSS VENTRAL NECK
				89	7:09	P	HAIR LOSS VENTRAL NECK
99486	M	50 MG/KG/DAY	NORMAL	0	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99486	M	50 MG/KG/DAY	DISPOSITION	89	8:20	P	PRIMARY NECROPSY (DAY 89)
99486	M	50 MG/KG/DAY	BODY/INTEGUMENT	70	8:57	P	HAIR LOSS VENTRAL NECK
				84	7:21	P	HAIR LOSS VENTRAL NECK
				89	7:09	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99500	M	50 MG/KG/DAY	NORMAL	0	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99500	M	50 MG/KG/DAY	DISPOSITION	90	7:07	P	PRIMARY NECROPSY (DAY 90)
99500	M	50 MG/KG/DAY	BODY/INTEGUMENT	42	7:20	P	HAIR LOSS VENTRAL NECK
				63	8:02	P	HAIR LOSS VENTRAL NECK
				70	8:58	P	HAIR LOSS DORSAL NECK
				70	8:58	P	HAIR LOSS VENTRAL NECK
				77	12:24	P	HAIR LOSS VENTRAL NECK
				84	7:22	P	HAIR LOSS VENTRAL NECK
				90	6:30	P	HAIR LOSS VENTRAL NECK
				90	6:30	P	HAIR LOSS DORSAL NECK
99510	M	50 MG/KG/DAY	NORMAL	0	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99510	M	50 MG/KG/DAY	DISPOSITION	90	7:07	P	PRIMARY NECROPSY (DAY 90)
99510	M	50 MG/KG/DAY	BODY/INTEGUMENT	42	7:21	P	HAIR LOSS FORELIMB(S)
				42	7:21	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99510	M	50 MG/KG/DAY	BODY/INTEGUMENT	70	8:58	P	HAIR LOSS DORSAL NECK
				70	8:58	P	HAIR LOSS VENTRAL NECK
				77	12:25	P	HAIR LOSS DORSAL NECK
				77	12:25	P	HAIR LOSS VENTRAL NECK
				84	7:23	P	HAIR LOSS VENTRAL NECK
				84	7:23	P	HAIR LOSS FORELIMB (S)
				90	6:31	P	HAIR LOSS DORSAL NECK
				90	6:31	P	HAIR LOSS VENTRAL NECK
99512	M	50 MG/KG/DAY	NORMAL	0	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99512	M	50 MG/KG/DAY	DISPOSITION	90	7:07	P	PRIMARY NECROPSY (DAY 90)
99512	M	50 MG/KG/DAY	BODY/INTEGUMENT	42	7:21	P	HAIR LOSS VENTRAL NECK
				63	8:03	P	HAIR LOSS DORSAL NECK
				63	8:03	P	HAIR LOSS VENTRAL NECK
				70	8:59	P	HAIR LOSS DORSAL NECK
				70	8:59	P	HAIR LOSS VENTRAL NECK
				77	12:26	P	HAIR LOSS VENTRAL NECK
				77	12:26	P	HAIR LOSS DORSAL NECK
				77	12:26	P	HAIR LOSS FORELIMB (S)
				84	7:24	P	HAIR LOSS VENTRAL NECK
				84	7:24	P	HAIR LOSS DORSAL NECK
				84	7:24	P	HAIR LOSS FORELIMB (S)
				90	6:31	P	HAIR LOSS DORSAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99512	M	50 MG/KG/DAY	BODY/INTEGUMENT	90	6:31	P	HAIR LOSS VENTRAL NECK
				90	6:31	P	HAIR LOSS FORELIMB(S)
99512	M	50 MG/KG/DAY	BODY/INTEG II	90	6:31	P	SCABBING VENTRAL NECK
99513	M	50 MG/KG/DAY	NORMAL	0	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99513	M	50 MG/KG/DAY	DISPOSITION	90	7:07	P	PRIMARY NECROPSY (DAY 90)
99513	M	50 MG/KG/DAY	BODY/INTEGUMENT	70	8:59	P	HAIR LOSS VENTRAL NECK
99525	M	50 MG/KG/DAY	NORMAL	0	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99525	M	50 MG/KG/DAY	DISPOSITION	90	7:07	P	PRIMARY NECROPSY (DAY 90)
99525	M	50 MG/KG/DAY	BODY/INTEGUMENT	7	7:46	P	HAIR LOSS FORELIMB(S)
				21	10:07	P	HAIR LOSS FORELIMB(S)
				28	7:28	P	HAIR LOSS FORELIMB(S)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99525	M	50 MG/KG/DAY	BODY/INTEGUMENT	42	7:23	P	HAIR LOSS FORELIMB(S)
				56	8:04	P	HAIR LOSS FORELIMB(S)
				77	12:27	P	HAIR LOSS FORELIMB(S)
				77	12:27	P	HAIR LOSS VENTRAL NECK
				84	7:26	P	HAIR LOSS FORELIMB(S)
99468	M	150 MG/KG/DAY	NORMAL	0	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99468	M	150 MG/KG/DAY	DISPOSITION	89	8:20	P	PRIMARY NECROPSY (DAY 89)
99468	M	150 MG/KG/DAY	BODY/INTEGUMENT	63	8:21	P	HAIR LOSS VENTRAL NECK
99468	M	150 MG/KG/DAY	EYES/EARS/NOSE	14	7:55	P	DRIED RED MATERIAL AROUND NOSE
				89	7:10	P	DRIED RED MATERIAL AROUND NOSE
99468	M	150 MG/KG/DAY	EXCRETA	89	7:11	P	DRIED YELLOW MATERIAL UROGENIAL AREA
99482	M	150 MG/KG/DAY	NORMAL	0	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99482	M	150 MG/KG/DAY	NORMAL	70	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99482	M	150 MG/KG/DAY	DISPOSITION	89	8:20	P	PRIMARY NECROPSY (DAY 89)
99482	M	150 MG/KG/DAY	BODY/INTEGUMENT	56	8:19	P	HAIR LOSS FORELIMB(S)
				56	8:19	P	HAIR LOSS VENTRAL TRUNK
				63	8:21	P	HAIR LOSS FORELIMB(S)
				77	12:37	P	HAIR LOSS FORELIMB(S)
				84	7:34	P	HAIR LOSS FORELIMB(S)
				89	7:11	P	HAIR LOSS VENTRAL NECK
				89	7:12	P	HAIR LOSS FORELIMB(S)
99487	M	150 MG/KG/DAY	NORMAL	0	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99487	M	150 MG/KG/DAY	DISPOSITION	89	8:20	P	PRIMARY NECROPSY (DAY 89)
99487	M	150 MG/KG/DAY	BODY/INTEGUMENT	42	7:32	P	HAIR LOSS VENTRAL NECK
				70	9:37	P	HAIR LOSS VENTRAL NECK
				77	12:37	P	HAIR LOSS VENTRAL NECK
				84	7:35	P	HAIR LOSS VENTRAL NECK
				89	7:12	P	HAIR LOSS VENTRAL NECK
				89	7:12	P	HAIR LOSS DORSAL NECK
99499	M	150 MG/KG/DAY	NORMAL	0	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99499	M	150 MG/KG/DAY	NORMAL	28	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99499	M	150 MG/KG/DAY	DISPOSITION	89	8:20	P	PRIMARY NECROPSY (DAY 89)
99501	M	150 MG/KG/DAY	NORMAL	0	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99501	M	150 MG/KG/DAY	DISPOSITION	89	8:20	P	PRIMARY NECROPSY (DAY 89)
99501	M	150 MG/KG/DAY	BODY/INTEGUMENT	89	7:13	P	HAIR LOSS VENTRAL NECK
				89	7:13	P	HAIR LOSS DORSAL NECK
99517	M	150 MG/KG/DAY	NORMAL	0	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99517	M	150 MG/KG/DAY	NORMAL	14	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99517	M	150 MG/KG/DAY	DISPOSITION	90	7:08	P	PRIMARY NECROPSY (DAY 90)
99517	M	150 MG/KG/DAY	BODY/INTEGUMENT	42	7:34	P	HAIR LOSS FORELIMB(S)
				77	12:39	P	HAIR LOSS FORELIMB(S)
				84	7:37	P	HAIR LOSS FORELIMB(S)
				84	7:37	P	HAIR LOSS VENTRAL NECK
				90	6:33	P	HAIR LOSS VENTRAL NECK
99521	M	150 MG/KG/DAY	NORMAL	0	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99521	M	150 MG/KG/DAY	DISPOSITION	90	7:08	P	PRIMARY NECROPSY (DAY 90)
99521	M	150 MG/KG/DAY	BODY/INTEGUMENT	84	7:38	P	HAIR LOSS VENTRAL NECK
				90	6:33	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99522	M	150 MG/KG/DAY	NORMAL	0	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99522	M	150 MG/KG/DAY	DISPOSITION	90	7:08	P	PRIMARY NECROPSY (DAY 90)
99522	M	150 MG/KG/DAY	BODY/INTEGUMENT	90	6:33	P	HAIR LOSS VENTRAL NECK
99523	M	150 MG/KG/DAY	NORMAL	0	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99523	M	150 MG/KG/DAY	DISPOSITION	90	7:08	P	PRIMARY NECROPSY (DAY 90)
99523	M	150 MG/KG/DAY	BODY/INTEGUMENT	42	7:37	P	HAIR LOSS VENTRAL NECK
				70	9:41	P	HAIR LOSS VENTRAL NECK
				77	12:41	P	HAIR LOSS VENTRAL NECK
				84	7:39	P	HAIR LOSS VENTRAL NECK
				90	6:33	P	HAIR LOSS DORSAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99523	M	150 MG/KG/DAY	BODY/INTEGUMENT	90	6:33	P	HAIR LOSS VENTRAL NECK
99523	M	150 MG/KG/DAY	BODY/INTEG II	21	10:22	P	SCABBING DORSAL NECK
99526	M	150 MG/KG/DAY	NORMAL	0	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99526	M	150 MG/KG/DAY	DISPOSITION	40	7:40	P	FOUND DEAD
99526	M	150 MG/KG/DAY	BODY/INTEGUMENT	7	8:03	P	HAIR LOSS FORELIMB(S)
				21	10:23	P	HAIR LOSS FORELIMB(S)
				28	7:41	P	HAIR LOSS FORELIMB(S)
99475	M	60 MG/KG CPS	NORMAL	0	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99475	M	60 MG/KG CPS	DISPOSITION	90	7:09	P	PRIMARY NECROPSY (DAY 90)
99475	M	60 MG/KG CPS	EYES/EARS/NOSE	90	6:35	P	DRIED RED MATERIAL AROUND NOSE
99477	M	60 MG/KG CPS	NORMAL	0	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99477	M	60 MG/KG CPS	NORMAL	35	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99477	M	60 MG/KG CPS	DISPOSITION	90	7:09	P	PRIMARY NECROPSY (DAY 90)
99478	M	60 MG/KG CPS	NORMAL	0	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99478	M	60 MG/KG CPS	DISPOSITION	90	7:09	P	PRIMARY NECROPSY (DAY 90)
99478	M	60 MG/KG CPS	BODY/INTEGUMENT	90	6:36	P	HAIR LOSS FORELIMB(S)
99478	M	60 MG/KG CPS	EYES/EARS/NOSE	90	6:36	P	DRIED RED MATERIAL AROUND NOSE
99478	M	60 MG/KG CPS	EXCRETA	90	6:36	P	WET YELLOW MATERIAL UROGENITAL AREA
				90	6:36	P	WET YELLOW MATERIAL VENTRAL TRUNK
				90	6:36	P	WET YELLOW MATERIAL ANOGENITAL AREA

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99484	M	60 MG/KG CPS	NORMAL	0	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99484	M	60 MG/KG CPS	DISPOSITION	90	7:09	P	PRIMARY NECROPSY (DAY 90)
99484	M	60 MG/KG CPS	BODY/INTEGUMENT	21	10:35	P	HAIR LOSS FORELIMB(S)
				28	7:51	P	HAIR LOSS FORELIMB(S)
				42	7:53	P	HAIR LOSS FORELIMB(S)
				56	8:40	P	HAIR LOSS FORELIMB(S)
				77	12:51	P	HAIR LOSS FORELIMB(S)
				84	7:50	P	HAIR LOSS FORELIMB(S)
99488	M	60 MG/KG CPS	NORMAL	0	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99488	M	60 MG/KG CPS	DISPOSITION	90	7:10	P	PRIMARY NECROPSY (DAY 90)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99488	M	60 MG/KG CPS	EXCRETA	90	6:37	P	WET YELLOW MATERIAL UROGENITAL AREA
				90	6:37	P	WET YELLOW MATERIAL VENTRAL TRUNK
				90	6:37	P	WET YELLOW MATERIAL ANOGENITAL AREA
99497	M	60 MG/KG CPS	NORMAL	0	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99497	M	60 MG/KG CPS	DISPOSITION	90	7:10	P	PRIMARY NECROPSY (DAY 90)
99497	M	60 MG/KG CPS	EXCRETA	90	6:37	P	WET YELLOW MATERIAL UROGENITAL AREA
				90	6:37	P	WET YELLOW MATERIAL VENTRAL TRUNK
				90	6:37	P	WET YELLOW MATERIAL ANOGENITAL AREA
99535	F	UNTREATED	NORMAL	0	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99535	F	UNTREATED	NORMAL	84	6:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99535	F	UNTREATED	DISPOSITION	89	8:17	P	PRIMARY NECROPSY (DAY 89)
99535	F	UNTREATED	BODY/INTEGUMENT	14	6:55	P	HAIR LOSS FACIAL AREA
99535	F	UNTREATED	EYES/EARS/NOSE	7	6:57	P	DRIED RED MATERIAL AROUND NOSE
				21	9:17	P	DRIED RED MATERIAL AROUND RIGHT EYE
99541	F	UNTREATED	NORMAL	0	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99541	F	UNTREATED	DISPOSITION	89	8:17	P	PRIMARY NECROPSY (DAY 89)
99541	F	UNTREATED	BODY/INTEGUMENT	21	9:18	P	HAIR LOSS FORELIMB(S)
				28	6:49	P	HAIR LOSS FORELIMB(S)
				42	6:37	P	HAIR LOSS FORELIMB(S)
				56	6:47	P	HAIR LOSS FORELIMB(S)
				77	11:04	P	HAIR LOSS FORELIMB(S)
				84	6:39	P	HAIR LOSS FORELIMB(S)
99544	F	UNTREATED	NORMAL	0	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99544	F	UNTREATED	NORMAL	56	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99544	F	UNTREATED	DISPOSITION	89	8:17	P	PRIMARY NECROPSY (DAY 89)
99547	F	UNTREATED	NORMAL	0	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99547	F	UNTREATED	DISPOSITION	89	8:17	P	PRIMARY NECROPSY (DAY 89)
99559	F	UNTREATED	NORMAL	0	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 36

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99559	F	UNTREATED	NORMAL	49	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99559	F	UNTREATED	DISPOSITION	89	8:17	P	PRIMARY NECROPSY (DAY 89)
99559	F	UNTREATED	BODY/INTEGUMENT	56	6:50	P	HAIR LOSS FORELIMB(S)
99569	F	UNTREATED	NORMAL	0	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99569	F	UNTREATED	DISPOSITION	90	7:05	P	PRIMARY NECROPSY (DAY 90)
99569	F	UNTREATED	BODY/INTEGUMENT	42	6:40	P	HAIR LOSS DORSAL NECK
				42	6:40	P	HAIR LOSS VENTRAL NECK
99569	F	UNTREATED	BODY/INTEG II	21	9:21	P	SCABBING DORSAL NECK
99579	F	UNTREATED	NORMAL	0	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 37

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99579	F	UNTREATED	NORMAL	35	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99579	F	UNTREATED	DISPOSITION	90	7:05	P	PRIMARY NECROPSY (DAY 90)
99580	F	UNTREATED	NORMAL	0	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99580	F	UNTREATED	DISPOSITION	90	7:05	P	PRIMARY NECROPSY (DAY 90)
99580	F	UNTREATED	BODY/INTEGUMENT	14	7:01	P	HAIR LOSS FACIAL AREA
99580	F	UNTREATED	BODY/INTEG II	49	7:07	P	SCABBING VENTRAL TRUNK
99586	F	UNTREATED	NORMAL	0	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 38

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99586	F	UNTREATED	NORMAL	28	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99586	F	UNTREATED	DISPOSITION	90	7:05	P	PRIMARY NECROPSY (DAY 90)
99586	F	UNTREATED	BODY/INTEGUMENT	42	6:42	P	HAIR LOSS VENTRAL NECK
				42	6:42	P	HAIR LOSS DORSAL NECK
				63	7:05	P	HAIR LOSS DORSAL NECK
				63	7:05	P	HAIR LOSS VENTRAL NECK
				70	8:06	P	HAIR LOSS DORSAL NECK
				70	8:06	P	HAIR LOSS VENTRAL NECK
99586	F	UNTREATED	BODY/INTEG II	84	6:44	P	SCABBING FACIAL AREA
99593	F	UNTREATED	NORMAL	0	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99593	F	UNTREATED	DISPOSITION	90	7:05	P	PRIMARY NECROPSY (DAY 90)
99593	F	UNTREATED	BODY/INTEGUMENT	63	7:06	P	HAIR LOSS FACIAL AREA
99593	F	UNTREATED	EYES/EARS/NOSE	90	6:25	P	DRIED RED MATERIAL AROUND LEFT EYE

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 39

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99593	F	UNTREATED	EYES/EARS/NOSE	90	6:25	P	DRIED RED MATERIAL AROUND RIGHT EYE
99534	F	0 MG/KG/DAY	NORMAL	0	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99534	F	0 MG/KG/DAY	DISPOSITION	89	8:18	P	PRIMARY NECROPSY (DAY 89)
99534	F	0 MG/KG/DAY	BODY/INTEGUMENT	89	7:06	P	HAIR LOSS VENTRAL NECK
99561	F	0 MG/KG/DAY	NORMAL	0	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99561	F	0 MG/KG/DAY	DISPOSITION	89	8:18	P	PRIMARY NECROPSY (DAY 89)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99561	F	0 MG/KG/DAY	EYES/EARS/NOSE	7	7:13	P	DRIED RED MATERIAL AROUND NOSE
				21	9:35	P	DRIED RED MATERIAL AROUND RIGHT EYE
99562	F	0 MG/KG/DAY	NORMAL	0	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99562	F	0 MG/KG/DAY	DISPOSITION	89	8:18	P	PRIMARY NECROPSY (DAY 89)
99562	F	0 MG/KG/DAY	BODY/INTEG II	7	7:14	P	SCABBING RIGHT LATERAL NECK
99563	F	0 MG/KG/DAY	NORMAL	0	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99563	F	0 MG/KG/DAY	DISPOSITION	89	8:18	P	PRIMARY NECROPSY (DAY 89)
99563	F	0 MG/KG/DAY	BODY/INTEGUMENT	21	9:36	P	HAIR LOSS FORELIMB(S)
				28	7:03	P	HAIR LOSS FORELIMB(S)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99563	F	0 MG/KG/DAY	BODY/INTEGUMENT	42	6:54	P	HAIR LOSS FORELIMB(S)
				77	11:59	P	HAIR LOSS FORELIMB(S)
				84	6:56	P	HAIR LOSS FORELIMB(S)
99572	F	0 MG/KG/DAY	NORMAL	0	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99572	F	0 MG/KG/DAY	DISPOSITION	89	8:18	P	PRIMARY NECROPSY (DAY 89)
99574	F	0 MG/KG/DAY	NORMAL	0	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99574	F	0 MG/KG/DAY	NORMAL	77	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99574	F	0 MG/KG/DAY	DISPOSITION	90	7:06	P	PRIMARY NECROPSY (DAY 90)
99574	F	0 MG/KG/DAY	BODY/INTEGUMENT	90	6:27	P	HAIR LOSS VENTRAL NECK
99575	F	0 MG/KG/DAY	NORMAL	0	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99575	F	0 MG/KG/DAY	DISPOSITION	90	7:06	P	PRIMARY NECROPSY (DAY 90)
99575	F	0 MG/KG/DAY	BODY/INTEGUMENT	84	6:58	P	HAIR LOSS FORELIMB(S)
				90	6:27	P	HAIR LOSS FORELIMB(S)
99575	F	0 MG/KG/DAY	EYES/EARS/NOSE	90	6:27	P	DRIED RED MATERIAL AROUND NOSE
99576	F	0 MG/KG/DAY	NORMAL	0	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 43

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99576	F	0 MG/KG/DAY	NORMAL	63	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99576	F	0 MG/KG/DAY	DISPOSITION	90	7:06	P	PRIMARY NECROPSY (DAY 90)
99576	F	0 MG/KG/DAY	EYES/EARS/NOSE	90	6:27	P	DRIED RED MATERIAL AROUND NOSE
99576	F	0 MG/KG/DAY	BODY/INTEG II	84	6:59	P	SCABBING FACIAL AREA
99578	F	0 MG/KG/DAY	NORMAL	0	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99578	F	0 MG/KG/DAY	DISPOSITION	90	7:06	P	PRIMARY NECROPSY (DAY 90)
99578	F	0 MG/KG/DAY	BODY/INTEGUMENT	42	6:58	P	HAIR LOSS FORELIMB(S)
				56	7:25	P	HAIR LOSS FORELIMB(S)
				84	6:59	P	HAIR LOSS FORELIMB(S)
				90	6:27	P	HAIR LOSS FORELIMB(S)
99585	F	0 MG/KG/DAY	NORMAL	0	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99585	F	0 MG/KG/DAY	NORMAL	56	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99585	F	0 MG/KG/DAY	DISPOSITION	90	7:06	P	PRIMARY NECROPSY (DAY 90)
99530	F	5 MG/KG/DAY	NORMAL	0	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99530	F	5 MG/KG/DAY	DISPOSITION	89	8:19	P	PRIMARY NECROPSY (DAY 89)
99530	F	5 MG/KG/DAY	BODY/INTEGUMENT	35	7:30	P	HAIR LOSS VENTRAL NECK
99530	F	5 MG/KG/DAY	EYES/EARS/NOSE	7	7:28	P	DRIED RED MATERIAL AROUND NOSE
99532	F	5 MG/KG/DAY	NORMAL	0	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99532	F	5 MG/KG/DAY	NORMAL	49	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99532	F	5 MG/KG/DAY	DISPOSITION	89	8:19	P	PRIMARY NECROPSY (DAY 89)
99555	F	5 MG/KG/DAY	NORMAL	0	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99555	F	5 MG/KG/DAY	DISPOSITION	89	8:19	P	PRIMARY NECROPSY (DAY 89)
99556	F	5 MG/KG/DAY	NORMAL	0	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99556	F	5 MG/KG/DAY	NORMAL	56	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99556	F	5 MG/KG/DAY	DISPOSITION	89	8:19	P	PRIMARY NECROPSY (DAY 89)
99556	F	5 MG/KG/DAY	BODY/INTEGUMENT	63	7:53	P	HAIR LOSS VENTRAL NECK
				84	7:14	P	HAIR LOSS FORELIMB(S)
				89	7:08	P	HAIR LOSS VENTRAL NECK
99556	F	5 MG/KG/DAY	BODY/INTEG II	7	7:30	P	SCABBING RIGHT LATERAL NECK
				21	9:52	P	SCABBING DORSAL NECK
99566	F	5 MG/KG/DAY	NORMAL	0	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99566	F	5 MG/KG/DAY	DISPOSITION	89	8:19	P	PRIMARY NECROPSY (DAY 89)
99568	F	5 MG/KG/DAY	NORMAL	0	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 47

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99568	F	5 MG/KG/DAY	NORMAL	42	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99568	F	5 MG/KG/DAY	DISPOSITION	90	7:07	P	PRIMARY NECROPSY (DAY 90)
99568	F	5 MG/KG/DAY	BODY/INTEGUMENT	21	9:54	P	HAIR LOSS DORSAL NECK
99568	F	5 MG/KG/DAY	BODY/INTEG II	21	9:54	P	SCABBING DORSAL NECK
99571	F	5 MG/KG/DAY	NORMAL	0	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99571	F	5 MG/KG/DAY	DISPOSITION	90	7:07	P	PRIMARY NECROPSY (DAY 90)
99582	F	5 MG/KG/DAY	NORMAL	0	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 48

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99582	F	5 MG/KG/DAY	NORMAL	21	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99582	F	5 MG/KG/DAY	DISPOSITION	90	7:07	P	PRIMARY NECROPSY (DAY 90)
99591	F	5 MG/KG/DAY	NORMAL	0	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99591	F	5 MG/KG/DAY	DISPOSITION	90	7:07	P	PRIMARY NECROPSY (DAY 90)
99592	F	5 MG/KG/DAY	NORMAL	0	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99592	F	5 MG/KG/DAY	NORMAL	14	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99592	F	5 MG/KG/DAY	DISPOSITION	90	6:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99533	F	50 MG/KG/DAY	NORMAL	0	7:07	P	PRIMARY NECROPSY (DAY 90)
				7	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99533	F	50 MG/KG/DAY	DISPOSITION	89	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99533	F	50 MG/KG/DAY	BODY/INTEGUMENT	89	8:20	P	PRIMARY NECROPSY (DAY 89)
				35	7:47	P	HAIR LOSS DORSAL NECK
				89	7:10	P	HAIR LOSS DORSAL HEAD
				89	7:10	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99538	F	50 MG/KG/DAY	NORMAL	0	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99538	F	50 MG/KG/DAY	DISPOSITION	89	8:20	P	PRIMARY NECROPSY (DAY 89)
99546	F	50 MG/KG/DAY	NORMAL	0	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99546	F	50 MG/KG/DAY	DISPOSITION	89	8:20	P	PRIMARY NECROPSY (DAY 89)
99546	F	50 MG/KG/DAY	BODY/INTEGUMENT	14	7:48	P	HAIR LOSS FACIAL AREA
				70	9:28	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99546	F	50 MG/KG/DAY	BODY/INTEG II	7	7:50	P	SCABBING FACIAL AREA
99552	F	50 MG/KG/DAY	NORMAL	0	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99552	F	50 MG/KG/DAY	DISPOSITION	89	8:20	P	PRIMARY NECROPSY (DAY 89)
99553	F	50 MG/KG/DAY	NORMAL	0	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99553	F	50 MG/KG/DAY	DISPOSITION	89	8:20	P	PRIMARY NECROPSY (DAY 89)
99553	F	50 MG/KG/DAY	EYES/EARS/NOSE	7	7:51	P	DRIED RED MATERIAL AROUND NOSE
99560	F	50 MG/KG/DAY	NORMAL	0	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99560	F	50 MG/KG/DAY	DISPOSITION	90	7:08	P	PRIMARY NECROPSY (DAY 90)
99560	F	50 MG/KG/DAY	BODY/INTEGUMENT	84	7:29	P	HAIR LOSS FORELIMB(S)
				84	7:29	P	HAIR LOSS VENTRAL NECK
				90	6:32	P	HAIR LOSS VENTRAL NECK
99564	F	50 MG/KG/DAY	NORMAL	0	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 53

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99564	F	50 MG/KG/DAY	NORMAL	77	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99564	F	50 MG/KG/DAY	DISPOSITION	90	7:08	P	PRIMARY NECROPSY (DAY 90)
99567	F	50 MG/KG/DAY	NORMAL	0	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99567	F	50 MG/KG/DAY	DISPOSITION	90	7:08	P	PRIMARY NECROPSY (DAY 90)
99584	F	50 MG/KG/DAY	NORMAL	0	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99584	F	50 MG/KG/DAY	NORMAL	77	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99584	F	50 MG/KG/DAY	DISPOSITION	90	7:08	P	PRIMARY NECROPSY (DAY 90)
99584	F	50 MG/KG/DAY	EYES/EARS/NOSE	14	7:53	P	DRIED RED MATERIAL AROUND NOSE
99590	F	50 MG/KG/DAY	NORMAL	0	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99590	F	50 MG/KG/DAY	DISPOSITION	90	7:08	P	PRIMARY NECROPSY (DAY 90)
99531	F	150 MG/KG/DAY	NORMAL	0	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99531	F	150 MG/KG/DAY	NORMAL	63	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99531	F	150 MG/KG/DAY	DISPOSITION	89	8:20	P	PRIMARY NECROPSY (DAY 89)
99531	F	150 MG/KG/DAY	EYES/EARS/NOSE	89	7:13	P	DRIED RED MATERIAL AROUND NOSE
99536	F	150 MG/KG/DAY	NORMAL	0	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99536	F	150 MG/KG/DAY	DISPOSITION	89	8:20	P	PRIMARY NECROPSY (DAY 89)
99536	F	150 MG/KG/DAY	BODY/INTEGUMENT	14	8:03	P	HAIR LOSS FACIAL AREA
				21	10:25	P	HAIR LOSS FORELIMB(S)
				35	8:06	P	HAIR LOSS FACIAL AREA
				35	8:06	P	HAIR LOSS VENTRAL NECK
				70	9:44	P	HAIR LOSS VENTRAL NECK
				77	12:42	P	HAIR LOSS FORELIMB(S)
				77	12:42	P	HAIR LOSS VENTRAL NECK
				84	7:41	P	HAIR LOSS VENTRAL NECK
99536	F	150 MG/KG/DAY	EYES/EARS/NOSE	7	8:05	P	DRIED RED MATERIAL AROUND RIGHT EYE
99540	F	150 MG/KG/DAY	NORMAL	0	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99540	F	150 MG/KG/DAY	NORMAL	42	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99540	F	150 MG/KG/DAY	DISPOSITION	89	8:20	P	PRIMARY NECROPSY (DAY 89)
99548	F	150 MG/KG/DAY	NORMAL	0	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99548	F	150 MG/KG/DAY	DISPOSITION	89	8:20	P	PRIMARY NECROPSY (DAY 89)
99548	F	150 MG/KG/DAY	BODY/INTEGUMENT	42	7:40	P	HAIR LOSS FORELIMB(S)
				84	7:42	P	HAIR LOSS FORELIMB(S)
				89	7:14	P	HAIR LOSS FORELIMB(S)
99548	F	150 MG/KG/DAY	EYES/EARS/NOSE	89	7:14	P	DRIED RED MATERIAL AROUND NOSE
99554	F	150 MG/KG/DAY	NORMAL	0	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99554	F	150 MG/KG/DAY	NORMAL	28	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99554	F	150 MG/KG/DAY	DISPOSITION	89	8:20	P	PRIMARY NECROPSY (DAY 89)
99557	F	150 MG/KG/DAY	NORMAL	0	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99557	F	150 MG/KG/DAY	DISPOSITION	90	7:08	P	PRIMARY NECROPSY (DAY 90)
99558	F	150 MG/KG/DAY	NORMAL	0	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99558	F	150 MG/KG/DAY	NORMAL	21	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99558	F	150 MG/KG/DAY	DISPOSITION	90	7:08	P	PRIMARY NECROPSY (DAY 90)
99577	F	150 MG/KG/DAY	NORMAL	0	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99577	F	150 MG/KG/DAY	DISPOSITION	90	7:09	P	PRIMARY NECROPSY (DAY 90)
99577	F	150 MG/KG/DAY	BODY/INTEGUMENT	7	8:09	P	HAIR LOSS FORELIMB(S)
				21	10:29	P	HAIR LOSS FORELIMB(S)
				28	7:46	P	HAIR LOSS FORELIMB(S)
				42	7:43	P	HAIR LOSS FORELIMB(S)
				84	7:45	P	HAIR LOSS FORELIMB(S)
				90	6:34	P	HAIR LOSS VENTRAL NECK
				90	6:34	P	HAIR LOSS FORELIMB(S)
99581	F	150 MG/KG/DAY	NORMAL	0	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99581	F	150 MG/KG/DAY	NORMAL	7	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99581	F	150 MG/KG/DAY	DISPOSITION	90	7:09	P	PRIMARY NECROPSY (DAY 90)
99581	F	150 MG/KG/DAY	BODY/INTEGUMENT	42	7:44	P	HAIR LOSS FORELIMB(S)
				56	8:35	P	HAIR LOSS FORELIMB(S)
				90	6:34	P	HAIR LOSS VENTRAL NECK
99588	F	150 MG/KG/DAY	NORMAL	0	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99588	F	150 MG/KG/DAY	DISPOSITION	90	7:09	P	PRIMARY NECROPSY (DAY 90)
99588	F	150 MG/KG/DAY	BODY/INTEGUMENT	21	10:30	P	HAIR LOSS DORSAL NECK
				28	7:47	P	HAIR LOSS DORSAL NECK
				90	6:34	P	HAIR LOSS DORSAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99588	F	150 MG/KG/DAY	BODY/INTEGUMENT	90	6:34	P	HAIR LOSS VENTRAL NECK
99588	F	150 MG/KG/DAY	EYES/EARS/NOSE	90	6:35	P	DRIED RED MATERIAL AROUND NOSE
99588	F	150 MG/KG/DAY	EXCRETA	90	6:34	P	DRIED YELLOW MATERIAL UROGENIAL AREA
99529	F	60 MG/KG CPS	NORMAL	0	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99529	F	60 MG/KG CPS	DISPOSITION	90	7:10	P	PRIMARY NECROPSY (DAY 90)
99529	F	60 MG/KG CPS	BODY/INTEGUMENT	28	7:53	P	HAIR LOSS FORELIMB(S)
				42	7:55	P	HAIR LOSS FORELIMB(S)
				56	8:44	P	HAIR LOSS FORELIMB(S)
				70	9:57	P	HAIR LOSS FORELIMB(S)
				77	12:54	P	HAIR LOSS FORELIMB(S)
				84	7:53	P	HAIR LOSS FORELIMB(S)
				90	6:37	P	HAIR LOSS FORELIMB(S)
				90	6:37	P	HAIR LOSS VENTRAL TRUNK
99529	F	60 MG/KG CPS	BODY/INTEG II	77	12:54	P	SCABBING FORELIMB(S)
99537	F	60 MG/KG CPS	NORMAL	0	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99537	F	60 MG/KG CPS	NORMAL	63	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99537	F	60 MG/KG CPS	DISPOSITION	90	7:10	P	PRIMARY NECROPSY (DAY 90)
99539	F	60 MG/KG CPS	NORMAL	0	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99539	F	60 MG/KG CPS	DISPOSITION	90	7:10	P	PRIMARY NECROPSY (DAY 90)
99542	F	60 MG/KG CPS	NORMAL	0	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99542	F	60 MG/KG CPS	NORMAL	70	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99542	F	60 MG/KG CPS	DISPOSITION	90	7:10	P	PRIMARY NECROPSY (DAY 90)
99542	F	60 MG/KG CPS	BODY/INTEGUMENT	21	10:39	P	HAIR LOSS FORELIMB(S)
				28	7:55	P	HAIR LOSS FORELIMB(S)
99549	F	60 MG/KG CPS	NORMAL	0	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99549	F	60 MG/KG CPS	DISPOSITION	90	7:11	P	PRIMARY NECROPSY (DAY 90)
99549	F	60 MG/KG CPS	BODY/INTEGUMENT	77	12:58	P	HAIR LOSS DORSAL TRUNK
99549	F	60 MG/KG CPS	EYES/EARS/NOSE	90	6:38	P	DRIED RED MATERIAL AROUND NOSE
99570	F	60 MG/KG CPS	NORMAL	0	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 63

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99570	F	60 MG/KG CPS	NORMAL	49	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	12:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99570	F	60 MG/KG CPS	DISPOSITION	90	7:11	P	PRIMARY NECROPSY (DAY 90)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PCRDv4.17
09/04/2011

FINAL REPORT



Contents: Volume 3 of 5
Appendix N (continued)

Study Title: A 90-Day Repeat-Dose Dermal Toxicity
Study in Conjunction with a Micronucleus
Assay Utilizing Extract, Light Paraffinic
Distillate Solvent in Sprague Dawley Rats

Laboratory Project ID: WIL-402022

Author: [REDACTED]

Test Guidelines: OPPTS Guideline 870.3250
40 CFR 798.2250 and 798.5395
OECD Guidelines 411 and 474

Study Completion Date: 8 August 2012

Performing Laboratories: WIL Research
1407 George Road
Ashland, OH 44805-8946

WIL Research
8025 Lamon Avenue
Skokie, IL 60077

Sponsor: American Petroleum Institute
1220 L Street, NW
Washington, DC 20005

Total Number of Pages: 1413

APPENDIX N

Individual Animal Data (continued)

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 1

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99466	M	UNTREATED	NORMAL	0	11:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:55	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	7:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 2

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99466	M	UNTREATED	NORMAL	18	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 3

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99466	M	UNTREATED	NORMAL	39	7:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
59	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 4

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99466	M	UNTREATED	NORMAL	59	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:55	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	6:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
78	9:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
79	7:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
79	9:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 5

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99466	M	UNTREATED	NORMAL	80	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99472	M	UNTREATED	NORMAL	0	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 6

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99472	M	UNTREATED	NORMAL	9	10:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	7:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:50	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 7

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99472	M	UNTREATED	NORMAL	30	10:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 8

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99472	M	UNTREATED	NORMAL	51	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 9

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99472	M	UNTREATED	NORMAL	71	10:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	6:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
99474	M	UNTREATED	NORMAL	0	11:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 10

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99474	M	UNTREATED	NORMAL	1	7:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
15	11:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
16	7:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
16	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
17	7:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
17	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
18	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
18	9:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
21	11:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99474	M	UNTREATED	NORMAL	21	15:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
38	8:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
39	7:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
39	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
42	9:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99474	M	UNTREATED	NORMAL	42	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99474	M	UNTREATED	NORMAL	63	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	6:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
79	9:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
80	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
80	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
81	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99474	M	UNTREATED	NORMAL	81	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99491	M	UNTREATED	NORMAL	0	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99491	M	UNTREATED	NORMAL	11	6:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99491	M	UNTREATED	NORMAL	31	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99491	M	UNTREATED	NORMAL	52	7:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99491	M	UNTREATED	NORMAL	72	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99496	M	UNTREATED	NORMAL	0	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99496	M	UNTREATED	NORMAL	2	8:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	7:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99496	M	UNTREATED	NORMAL	23	8:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	10:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			24	7:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			24	9:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			25	6:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			25	9:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			28	9:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			28	11:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			29	7:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			29	10:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			30	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			30	10:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			31	7:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			31	9:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			32	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			32	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			35	9:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			35	12:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			36	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			36	10:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			37	8:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			37	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			38	7:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			38	8:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			39	7:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			39	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			42	9:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			42	11:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			43	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS	

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99496	M	UNTREATED	NORMAL	43	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99496	M	UNTREATED	NORMAL	64	8:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	6:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
80	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
81	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
81	9:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
84	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99496	M	UNTREATED	NORMAL	84	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99504	M	UNTREATED	NORMAL	0	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 24

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99504	M	UNTREATED	NORMAL	14	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 25

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99504	M	UNTREATED	NORMAL	32	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
52	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99504	M	UNTREATED	NORMAL	53	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
73	8:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99504	M	UNTREATED	NORMAL	73	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99505	M	UNTREATED	NORMAL	0	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99505	M	UNTREATED	NORMAL	3	8:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	7:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	10:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 29

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99505	M	UNTREATED	NORMAL	23	10:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
42	9:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
42	11:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
43	7:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
43	9:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 30

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99505	M	UNTREATED	NORMAL	44	9:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	10:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			45	8:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			45	10:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			46	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			46	9:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			49	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			49	12:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			50	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			50	10:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			51	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			51	10:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			52	7:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			52	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			53	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			53	9:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			56	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			56	12:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			57	8:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			57	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			58	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			58	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			59	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			59	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			60	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			60	9:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			63	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			63	11:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			64	8:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS	

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99505	M	UNTREATED	NORMAL	64	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	6:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:50	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
80	9:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
81	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
81	9:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
85	7:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
85	9:55	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99505	M	UNTREATED	NORMAL	86	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99507	M	UNTREATED	NORMAL	0	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 33

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99507	M	UNTREATED	NORMAL	14	14:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	7:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	10:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99507	M	UNTREATED	NORMAL	35	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99507	M	UNTREATED	NORMAL	53	9:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99507	M	UNTREATED	NORMAL	74	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99507	M	UNTREATED	SPECIAL	78	7:39	P	SWOLLEN FACIAL AREA
				78	9:39	P	SWOLLEN FACIAL AREA
99509	M	UNTREATED	NORMAL	0	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 37

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99509	M	UNTREATED	NORMAL	3	10:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	7:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
22	10:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
23	8:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
23	10:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 38

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99509	M	UNTREATED	NORMAL	24	7:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 39

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99509	M	UNTREATED	NORMAL	44	10:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
64	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 40

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99509	M	UNTREATED	NORMAL	65	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	6:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
85	7:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
85	9:55	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
86	7:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 41

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99509	M	UNTREATED	NORMAL	86	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99515	M	UNTREATED	NORMAL	0	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 42

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99515	M	UNTREATED	NORMAL	15	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	7:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	10:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 43

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99515	M	UNTREATED	NORMAL	35	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 44

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99515	M	UNTREATED	NORMAL	56	9:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	6:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 45

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99515	M	UNTREATED	NORMAL	74	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99467	M	0 MG/KG/DAY	NORMAL	0	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS		
99467	M	0 MG/KG/DAY	NORMAL	4	7:26	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				4	9:16	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				7	9:18	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				7	12:04	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				8	8:28	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				8	10:22	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				9	8:24	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				9	10:29	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				10	7:22	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				10	9:21	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				11	6:43	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				11	8:59	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				14	11:55	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				14	14:50	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				15	10:06	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				15	11:59	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				16	8:01	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				16	10:13	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				17	7:55	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				17	10:11	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				18	6:56	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				18	9:14	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				21	11:14	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				21	15:28	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				22	8:47	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				23	8:18	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
23	10:29	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
24	7:44	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
24	9:40	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 47

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS		
99467	M	0 MG/KG/DAY	NORMAL	25	6:53	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				25	9:15	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				28	9:05	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				28	11:29	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				29	7:33	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				29	10:04	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				30	7:33	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				30	10:04	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				31	7:21	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				31	9:45	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				32	6:53	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				32	8:49	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				35	9:54	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				35	12:08	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				36	8:59	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				36	10:45	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				37	8:50	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				37	10:14	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				38	7:20	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				38	8:53	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				39	7:23	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				39	9:05	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				42	9:31	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				42	11:31	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				43	7:31	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
43	9:26	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
44	9:07	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
44	10:42	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
45	8:32	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 48

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99467	M	0 MG/KG/DAY	NORMAL	45	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 49

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99467	M	0 MG/KG/DAY	NORMAL	66	8:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 50

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99467	M	0 MG/KG/DAY	NORMAL	86	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99471	M	0 MG/KG/DAY	NORMAL	0	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99471	M	0 MG/KG/DAY	NORMAL	16	8:01	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:14	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:56	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:11	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:56	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:14	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:14	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:29	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:48	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:03	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:19	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:29	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:45	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:41	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:53	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:15	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:06	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:29	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:33	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:04	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:33	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:04	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:21	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:45	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:54	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:50	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:54	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:08	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:00	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 52

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99471	M	0 MG/KG/DAY	NORMAL	36	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99471	M	0 MG/KG/DAY	NORMAL	57	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99471	M	0 MG/KG/DAY	NORMAL	77	15:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99471	M	0 MG/KG/DAY	SPECIAL	85	7:39	P	SWOLLEN FACIAL AREA
99473	M	0 MG/KG/DAY	NORMAL	0	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99473	M	0 MG/KG/DAY	NORMAL	7	9:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:50	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99473	M	0 MG/KG/DAY	NORMAL	25	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99473	M	0 MG/KG/DAY	NORMAL	46	9:20	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:06	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:17	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:24	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:09	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:00	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:45	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:17	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:08	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:28	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:23	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:46	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:05	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:21	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:37	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:41	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:29	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:22	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:48	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:28	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:36	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:29	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:17	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:29	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:07	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:41	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:18	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:29	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
66	9:47	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99473	M	0 MG/KG/DAY	NORMAL	67	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 59

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99473	M	0 MG/KG/DAY	NORMAL	88	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99473	M	0 MG/KG/DAY	SPECIAL	38	7:20	P	SWOLLEN FACIAL AREA
				77	15:53	P	SWOLLEN FACIAL AREA
99498	M	0 MG/KG/DAY	NORMAL	0	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99498	M	0 MG/KG/DAY	NORMAL	16	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

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PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99498	M	0 MG/KG/DAY	NORMAL	37	10:15	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:20	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:53	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:23	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:05	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:32	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:32	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:31	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:27	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:07	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:43	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:32	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:26	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:25	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:20	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:06	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:18	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:24	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:09	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:01	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:45	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:18	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:08	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:28	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:23	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:47	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:05	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:21	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
57	9:37	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99498	M	0 MG/KG/DAY	NORMAL	58	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
 SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99498	M	0 MG/KG/DAY	NORMAL	78	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99502	M	0 MG/KG/DAY	NORMAL	0	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99502	M	0 MG/KG/DAY	NORMAL	8	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99502	M	0 MG/KG/DAY	NORMAL	29	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 66

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS		
99502	M	0 MG/KG/DAY	NORMAL	49	12:18	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				50	8:24	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				50	10:09	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				51	9:01	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				51	10:45	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				52	7:18	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				52	9:08	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				53	7:29	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				53	9:23	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				56	9:47	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				56	12:06	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				57	8:21	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				57	9:37	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				58	8:41	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				58	10:29	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				59	8:23	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				59	9:48	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				60	7:28	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				60	9:36	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				63	9:29	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				63	11:17	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				64	8:29	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				64	10:07	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				65	8:41	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				65	10:18	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				66	8:29	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				66	9:47	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				67	7:26	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
67	9:01	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 67

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS		
99502	M	0 MG/KG/DAY	NORMAL	70	10:38	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				70	13:17	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				71	8:51	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				71	10:35	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				72	8:21	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				72	10:23	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				73	8:35	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				73	10:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				74	7:02	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				74	9:04	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				77	13:43	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				77	15:54	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				78	7:41	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				78	9:42	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				79	7:31	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				79	9:28	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				80	7:25	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				80	9:08	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				81	7:28	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				81	9:27	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				84	9:37	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				84	11:10	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				85	7:39	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				85	9:57	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
86	7:15	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
86	9:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
87	8:34	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
87	9:56	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
88	7:26	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99502	M	0 MG/KG/DAY	NORMAL	88	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99503	M	0 MG/KG/DAY	NORMAL	0	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS		
99503	M	0 MG/KG/DAY	NORMAL	18	6:56	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				18	9:15	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				21	11:16	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				21	15:29	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				22	8:48	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				22	11:03	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				23	8:19	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				23	10:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				24	7:45	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				24	9:41	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				25	6:53	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				25	9:15	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				28	9:07	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				28	11:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				29	7:34	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				29	10:05	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				30	7:35	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				30	10:04	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				31	7:22	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				31	9:45	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				32	6:54	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				32	8:50	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				35	9:54	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				35	12:09	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
36	9:01	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
36	10:45	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
37	8:51	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
37	10:15	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
38	7:21	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99503	M	0 MG/KG/DAY	NORMAL	38	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99503	M	0 MG/KG/DAY	NORMAL	59	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 72

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99503	M	0 MG/KG/DAY	NORMAL	79	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99506	M	0 MG/KG/DAY	NORMAL	0	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS		
99506	M	0 MG/KG/DAY	NORMAL	9	8:25	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				9	10:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				10	7:26	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				10	9:22	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				11	6:44	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				11	9:00	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				14	11:58	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				14	14:51	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				15	10:08	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				15	12:00	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				16	8:02	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				16	10:14	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				17	7:56	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				17	10:12	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				18	6:57	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				18	9:15	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				21	11:16	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				21	15:29	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				22	8:48	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				22	11:04	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				23	8:20	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				23	10:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				24	7:46	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				24	9:41	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				25	6:53	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				25	9:16	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				28	9:07	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				28	11:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				29	7:34	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99506	M	0 MG/KG/DAY	NORMAL	29	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS		
99506	M	0 MG/KG/DAY	NORMAL	50	8:24	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				50	10:09	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				51	9:01	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				51	10:45	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				52	7:18	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				52	9:08	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				53	7:29	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				53	9:23	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				56	9:48	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				56	12:06	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				57	8:21	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				57	9:38	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				58	8:41	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				58	10:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				59	8:23	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				59	9:48	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				60	7:28	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				60	9:36	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				63	9:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				63	11:18	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				64	8:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
64	10:07	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
65	8:41	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
65	10:18	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
66	8:29	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
66	9:48	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
67	7:26	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
67	9:02	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
70	10:39	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99506	M	0 MG/KG/DAY	NORMAL	70	13:18	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:51	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:35	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:22	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:35	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:30	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:03	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:04	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:43	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:54	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:42	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:42	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:31	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:29	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:25	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:08	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:28	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:27	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:40	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
85	9:58	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS				
86	7:15	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS				
86	9:30	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS				
87	8:34	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS				
87	9:57	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS				
88	7:26	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS				
88	9:11	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS				
89	6:16	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS				
89	8:11	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99516	M	0 MG/KG/DAY	NORMAL	0	11:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 78

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS		
99516	M	0 MG/KG/DAY	NORMAL	18	9:15	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				21	11:16	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				21	15:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				22	8:49	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				22	11:04	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				23	8:20	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				23	10:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				24	7:46	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				24	9:42	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				25	6:54	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				25	9:16	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				28	9:08	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				28	11:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				29	7:34	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				29	10:05	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				30	7:36	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				30	10:05	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				31	7:22	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				31	9:46	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				32	6:54	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				32	8:50	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				35	9:55	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				35	12:09	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				36	9:01	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
36	10:45	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
37	8:51	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
37	10:15	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
38	7:21	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
38	8:54	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99516	M	0 MG/KG/DAY	NORMAL	39	7:23	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:06	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:32	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:32	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:32	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:27	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:08	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:43	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:32	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:26	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:25	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:21	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:06	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:18	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:24	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:09	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:01	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:45	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:18	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:09	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:29	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:23	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:49	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:06	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:21	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:38	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:41	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:30	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:23	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99516	M	0 MG/KG/DAY	NORMAL	59	9:48	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:29	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:36	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:30	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:18	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:30	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:07	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:41	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:18	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:30	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:48	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:26	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:02	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:39	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:18	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:50	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:36	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:22	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:35	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:30	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:03	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:04	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:43	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:54	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:42	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:42	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:31	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:29	P	NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99516	M	0 MG/KG/DAY	NORMAL	80	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99518	M	0 MG/KG/DAY	NORMAL	0	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS		
99518	M	0 MG/KG/DAY	NORMAL	9	10:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				10	7:26	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				10	9:24	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				11	6:44	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				11	9:00	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				14	11:59	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				14	14:51	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				15	10:08	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				15	12:00	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				16	8:02	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				16	10:15	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				17	7:57	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				17	10:12	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				18	6:57	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				18	9:15	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				21	11:16	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				21	15:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				22	8:49	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				22	11:04	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				23	8:20	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				23	10:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				24	7:46	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				24	9:42	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				25	6:54	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				25	9:16	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				28	9:08	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
28	11:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
29	7:35	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
29	10:05	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS		
99518	M	0	MG/KG/DAY	NORMAL	30	7:36	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					30	10:05	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					31	7:23	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					31	9:46	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					32	6:54	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					32	8:50	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					35	9:55	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					35	12:09	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					36	9:01	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					36	10:45	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					37	8:51	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					37	10:16	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					38	7:21	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					38	8:54	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					39	7:23	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					39	9:06	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					42	9:32	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					42	11:32	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					43	7:32	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					43	9:28	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					44	9:08	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					44	10:43	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					45	8:33	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					45	10:26	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					46	7:26	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					46	9:21	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					49	10:07	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					49	12:18	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					50	8:24	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 84

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS		
99518	M	0 MG/KG/DAY	NORMAL	50	10:09	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				51	9:01	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				51	10:46	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				52	7:18	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				52	9:09	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				53	7:29	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				53	9:23	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				56	9:50	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				56	12:06	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				57	8:21	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				57	9:38	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				58	8:42	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				58	10:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				59	8:23	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				59	9:48	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				60	7:29	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				60	9:36	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				63	9:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				63	11:18	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				64	8:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				64	10:07	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				65	8:41	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				65	10:19	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				66	8:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				66	9:48	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				67	7:26	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				67	9:02	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				70	10:39	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
70	13:18	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 85

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99518	M	0 MG/KG/DAY	NORMAL	71	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99519	M	0 MG/KG/DAY	NORMAL	0	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 86

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS		
99519	M	0 MG/KG/DAY	NORMAL	0	13:48	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				1	8:04	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				1	9:53	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				2	8:18	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				2	10:26	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				3	8:23	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				3	10:10	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				4	7:28	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				4	9:17	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				7	9:21	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				7	12:06	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				8	8:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				8	10:24	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				9	8:25	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				9	10:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				10	7:26	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				10	9:24	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				11	6:44	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				11	9:00	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				14	12:00	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				14	14:51	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				15	10:09	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				15	12:00	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
16	8:02	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
16	10:15	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
17	7:57	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
17	10:12	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
18	6:58	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
18	9:15	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS		
99519	M	0 MG/KG/DAY	NORMAL	21	11:17	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				21	15:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				22	8:49	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				23	8:20	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				23	10:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				24	7:46	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				24	9:42	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				25	6:54	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				25	9:16	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				28	9:08	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				28	11:31	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				29	7:35	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				29	10:05	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				30	7:36	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				30	10:05	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				31	7:23	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				31	9:46	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				32	6:54	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				32	8:51	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				35	9:55	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				35	12:09	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				36	9:02	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				36	10:45	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				37	8:51	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
37	10:16	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
38	7:21	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
38	8:54	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
39	7:24	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
39	9:06	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99519	M	0 MG/KG/DAY	NORMAL	42	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 89

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99519	M	0 MG/KG/DAY	NORMAL	60	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT							

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99519	M	0 MG/KG/DAY	NORMAL	81	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99465	M	5 MG/KG/DAY	NORMAL	0	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 91

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99465	M	5 MG/KG/DAY	NORMAL	10	9:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:55	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99465	M	5 MG/KG/DAY	NORMAL	31	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99465	M	5 MG/KG/DAY	NORMAL	51	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT							

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 94

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99465	M	5 MG/KG/DAY	NORMAL	72	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99479	M	5 MG/KG/DAY	NORMAL	0	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 95

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99479	M	5 MG/KG/DAY	NORMAL	1	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
16	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				
16	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				
17	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				
17	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				
18	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				
18	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				
21	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				
21	15:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99479	M	5 MG/KG/DAY	NORMAL	22	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99479	M	5 MG/KG/DAY	NORMAL	42	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99479	M	5 MG/KG/DAY	NORMAL	63	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99479	M	5 MG/KG/DAY	NORMAL	81	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99483	M	5 MG/KG/DAY	NORMAL	0	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 100

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99483	M	5 MG/KG/DAY	NORMAL	11	6:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99483	M	5 MG/KG/DAY	NORMAL	35	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99483	M	5 MG/KG/DAY	NORMAL	53	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99483	M	5 MG/KG/DAY	NORMAL	74	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99483	M	5 MG/KG/DAY	SPECIAL	30	10:08	P	SWOLLEN FACIAL AREA
				31	9:49	P	SWOLLEN FACIAL AREA
99489	M	5 MG/KG/DAY	NORMAL	0	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 104

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99489	M	5 MG/KG/DAY	NORMAL	2	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99489	M	5 MG/KG/DAY	NORMAL	23	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 106

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99489	M	5 MG/KG/DAY	NORMAL	43	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 107

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99489	M	5 MG/KG/DAY	NORMAL	64	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT							

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 108

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99489	M	5 MG/KG/DAY	NORMAL	84	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99490	M	5 MG/KG/DAY	NORMAL	0	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 109

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99490	M	5 MG/KG/DAY	NORMAL	14	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 110

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99490	M	5 MG/KG/DAY	NORMAL	32	8:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99490	M	5 MG/KG/DAY	NORMAL	53	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 112

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99490	M	5 MG/KG/DAY	NORMAL	73	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99494	M	5 MG/KG/DAY	NORMAL	0	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 113

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99494	M	5 MG/KG/DAY	NORMAL	3	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
18	9:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
21	11:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
21	15:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
22	8:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
22	11:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
23	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99494	M	5 MG/KG/DAY	NORMAL	23	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 115

STUDY DAYS: 0 THROUGH 89

			STUDY							
ANIMAL	SEX	GROUP	CATEGORY	DAY	TIME	GRADE	OBSERVATIONS			
99494	M	5 MG/KG/DAY	NORMAL	44	9:10	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				44	10:46	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				45	8:35	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				45	10:29	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				46	7:27	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				46	9:23	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				49	10:09	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				49	12:20	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				50	8:26	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				50	10:11	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				51	9:03	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				51	10:50	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				52	7:21	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				52	9:11	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				53	7:32	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				53	9:26	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				56	10:04	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				56	12:57	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				57	8:24	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				57	9:42	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				58	8:44	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				58	10:32	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				59	8:25	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				59	9:50	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				60	7:31	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				60	9:38	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				63	9:32	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				63	11:29	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
64	8:33	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 116

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99494	M	5 MG/KG/DAY	NORMAL	64	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 117

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99494	M	5 MG/KG/DAY	NORMAL	87	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99494	M	5 MG/KG/DAY	SPECIAL	78	7:45	P	SWOLLEN FACIAL AREA
				78	9:45	P	SWOLLEN FACIAL AREA
99495	M	5 MG/KG/DAY	NORMAL	0	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99495	M	5 MG/KG/DAY	NORMAL	14	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 119

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99495	M	5 MG/KG/DAY	NORMAL	35	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99495	M	5 MG/KG/DAY	NORMAL	56	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 121

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99495	M	5 MG/KG/DAY	NORMAL	74	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99511	M	5 MG/KG/DAY	NORMAL	0	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99511	M	5 MG/KG/DAY	NORMAL	4	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 123

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99511	M	5 MG/KG/DAY	NORMAL	25	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 124

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99511	M	5 MG/KG/DAY	NORMAL	45	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 125

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99511	M	5 MG/KG/DAY	NORMAL	66	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99511	M	5 MG/KG/DAY	NORMAL	87	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99524	M	5 MG/KG/DAY	NORMAL	0	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99524	M	5 MG/KG/DAY	NORMAL	16	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99524	M	5 MG/KG/DAY	NORMAL	36	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 129

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99524	M	5 MG/KG/DAY	NORMAL	57	8:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:50	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99524	M	5 MG/KG/DAY	NORMAL	77	15:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99528	M	5 MG/KG/DAY	NORMAL	0	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 131

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99528	M	5 MG/KG/DAY	NORMAL	7	9:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:55	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:50	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 132

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99528	M	5 MG/KG/DAY	NORMAL	25	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 133

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99528	M	5 MG/KG/DAY	NORMAL	46	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 134

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99528	M	5 MG/KG/DAY	NORMAL	66	9:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS
87	10:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 135

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99528	M	5 MG/KG/DAY	NORMAL	88	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99464	M	50 MG/KG/DAY	NORMAL	0	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 136

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99464	M	50 MG/KG/DAY	NORMAL	16	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 137

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99464	M	50 MG/KG/DAY	NORMAL	37	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 138

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99464	M	50 MG/KG/DAY	NORMAL	58	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 139

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99464	M	50 MG/KG/DAY	NORMAL	78	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99469	M	50 MG/KG/DAY	NORMAL	0	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99469	M	50 MG/KG/DAY	NORMAL	8	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 141

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99469	M	50 MG/KG/DAY	NORMAL	29	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 142

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99469	M	50 MG/KG/DAY	NORMAL	49	12:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:55	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
67	9:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 143

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99469	M	50 MG/KG/DAY	NORMAL	70	10:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:55	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
88	9:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 144

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99469	M	50 MG/KG/DAY	SPECIAL	85	7:49	P	SWOLLEN FACIAL AREA
99480	M	50 MG/KG/DAY	NORMAL	0	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 145

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99480	M	50 MG/KG/DAY	NORMAL	18	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 146

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99480	M	50 MG/KG/DAY	NORMAL	38	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99480	M	50 MG/KG/DAY	NORMAL	59	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 148

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99480	M	50 MG/KG/DAY	NORMAL	79	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99480	M	50 MG/KG/DAY	SPECIAL	85	7:50	P	SWOLLEN FACIAL AREA
				85	10:04	P	SWOLLEN FACIAL AREA
99485	M	50 MG/KG/DAY	NORMAL	0	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 149

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99485	M	50 MG/KG/DAY	NORMAL	9	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 150

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99485	M	50 MG/KG/DAY	NORMAL	29	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99485	M	50 MG/KG/DAY	NORMAL	50	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99485	M	50 MG/KG/DAY	NORMAL	70	13:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 153

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99486	M	50 MG/KG/DAY	NORMAL	0	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 154

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99486	M	50 MG/KG/DAY	NORMAL	18	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 155

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99486	M	50 MG/KG/DAY	NORMAL	39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99486	M	50 MG/KG/DAY	NORMAL	59	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 157

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99486	M	50 MG/KG/DAY	NORMAL	80	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99500	M	50 MG/KG/DAY	NORMAL	0	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 158

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99500	M	50 MG/KG/DAY	NORMAL	9	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99500	M	50 MG/KG/DAY	NORMAL	30	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99500	M	50 MG/KG/DAY	NORMAL	51	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT							

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SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99500	M	50 MG/KG/DAY	NORMAL	71	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99510	M	50 MG/KG/DAY	NORMAL	0	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99510	M	50 MG/KG/DAY	NORMAL	1	8:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
15	12:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
16	8:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
16	10:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
17	8:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
17	10:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
18	7:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
18	9:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
21	11:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 163

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99510	M	50 MG/KG/DAY	NORMAL	21	15:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99510	M	50 MG/KG/DAY	NORMAL	42	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99510	M	50 MG/KG/DAY	NORMAL	60	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99510	M	50 MG/KG/DAY	NORMAL	81	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99512	M	50 MG/KG/DAY	NORMAL	0	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99512	M	50 MG/KG/DAY	NORMAL	10	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99512	M	50 MG/KG/DAY	NORMAL	31	9:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	7:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			32	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			35	10:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			35	12:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			36	9:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			36	10:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			37	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			37	10:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			38	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			38	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			39	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			39	9:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			42	9:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			42	11:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			43	7:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			43	9:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			44	9:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			44	10:50	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			45	8:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			45	10:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			46	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			46	9:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			49	10:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			49	12:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			50	8:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			50	10:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			51	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			51	10:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS	

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 169

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99512	M	50 MG/KG/DAY	NORMAL	52	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT							

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 170

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99512	M	50 MG/KG/DAY	NORMAL	72	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99512	M	50 MG/KG/DAY	EXCRETA	17	8:05	P	FECES SMALLER THAN NORMAL
99513	M	50 MG/KG/DAY	NORMAL	0	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 171

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99513	M	50 MG/KG/DAY	NORMAL	1	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
16	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				
16	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				
17	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				
17	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				
18	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				
18	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				
21	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				
21	16:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 172

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99513	M	50 MG/KG/DAY	NORMAL	22	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 173

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99513	M	50 MG/KG/DAY	NORMAL	42	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 174

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99513	M	50 MG/KG/DAY	NORMAL	63	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT							

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 175

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99513	M	50 MG/KG/DAY	NORMAL	81	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99525	M	50 MG/KG/DAY	NORMAL	0	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 176

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99525	M	50 MG/KG/DAY	NORMAL	11	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	16:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 177

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99525	M	50 MG/KG/DAY	NORMAL	31	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 178

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99525	M	50 MG/KG/DAY	NORMAL	52	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99525	M	50 MG/KG/DAY	NORMAL	72	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99468	M	150 MG/KG/DAY	NORMAL	0	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99468	M 150 MG/KG/DAY	NORMAL	2	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			2	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			3	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			3	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			4	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			4	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			7	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			7	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			8	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			8	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	12:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	15:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	16:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99468	M	150 MG/KG/DAY	NORMAL	23	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99468	M 150 MG/KG/DAY	NORMAL	43	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			45	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			45	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			46	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			46	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	12:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	13:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99468	M 150 MG/KG/DAY	NORMAL	64	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	13:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	16:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			84	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99468	M	150 MG/KG/DAY	NORMAL	84	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99482	M	150 MG/KG/DAY	NORMAL	0	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99482	M	150 MG/KG/DAY	NORMAL	14	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	15:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	16:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99482	M	150 MG/KG/DAY	NORMAL	35	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99482	M	150 MG/KG/DAY	NORMAL	53	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99482	M	150 MG/KG/DAY	NORMAL	74	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99487	M	150 MG/KG/DAY	NORMAL	0	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 189

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99487	M	150 MG/KG/DAY	NORMAL	3	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	15:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	16:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99487	M	150 MG/KG/DAY	NORMAL	24	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 191

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99487	M	150 MG/KG/DAY	NORMAL	45	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99487	M 150 MG/KG/DAY	NORMAL	65	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	13:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	16:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			84	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			84	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			85	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			85	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99487	M	150 MG/KG/DAY	NORMAL	86	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99499	M	150 MG/KG/DAY	NORMAL	0	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	15:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99499	M	150 MG/KG/DAY	NORMAL	15	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	16:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 195

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99499	M	150 MG/KG/DAY	NORMAL	36	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99499	M 150 MG/KG/DAY	NORMAL	57	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	13:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 197

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99499	M	150 MG/KG/DAY	NORMAL	77	16:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99501	M	150 MG/KG/DAY	NORMAL	0	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 198

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99501	M 150 MG/KG/DAY	NORMAL	7	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			7	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			8	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			8	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	12:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	15:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	16:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99501	M	150 MG/KG/DAY	NORMAL	25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 200

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99501	M	150 MG/KG/DAY	NORMAL	46	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 201

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99501	M	150 MG/KG/DAY	NORMAL	66	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 202

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99501	M	150 MG/KG/DAY	NORMAL	87	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99517	M	150 MG/KG/DAY	NORMAL	0	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	15:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 203

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99517	M 150 MG/KG/DAY	NORMAL	16	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	16:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			30	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			30	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			31	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			31	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 204

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99517	M 150 MG/KG/DAY	NORMAL	37	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			37	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			39	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			42	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			42	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			43	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			43	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			45	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			45	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			46	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			46	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	12:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	13:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 205

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99517	M 150 MG/KG/DAY	NORMAL	57	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	13:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	16:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 206

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99517	M	150 MG/KG/DAY	NORMAL	78	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99521	M	150 MG/KG/DAY	NORMAL	0	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 207

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99521	M	150 MG/KG/DAY	NORMAL	7	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	15:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	16:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99521	M	150 MG/KG/DAY	NORMAL	28	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99521	M	150 MG/KG/DAY	NORMAL	49	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 210

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99521	M	150 MG/KG/DAY	NORMAL	67	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 211

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99521	M	150 MG/KG/DAY	NORMAL	89	6:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99521	M	150 MG/KG/DAY	EXCRETA	17	8:09	P	FECES SMALLER THAN NORMAL
99522	M	150 MG/KG/DAY	NORMAL	0	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	15:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99522	M	150 MG/KG/DAY	NORMAL	17	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	16:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99522	M	150 MG/KG/DAY	NORMAL	38	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99522	M	150 MG/KG/DAY	NORMAL	58	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99522	M	150 MG/KG/DAY	NORMAL	80	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99522	M	150 MG/KG/DAY	EXCRETA	78	9:51	P	SOFT FECES
				79	7:40	P	FECES SMALLER THAN NORMAL
				85	10:08	P	SOFT FECES
99523	M	150 MG/KG/DAY	NORMAL	0	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 216

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99523	M	150 MG/KG/DAY	NORMAL	8	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	15:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	16:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 217

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99523	M	150 MG/KG/DAY	NORMAL	29	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 218

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99523	M	150 MG/KG/DAY	NORMAL	50	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 219

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99523	M 150 MG/KG/DAY	NORMAL	70	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	13:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	16:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			85	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			85	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			86	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			86	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			87	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			87	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			88	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			88	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			89	6:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			89	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 220

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99526	M 150 MG/KG/DAY	NORMAL	0	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			0	13:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			1	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			1	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			2	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			2	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			3	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			3	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			4	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			4	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			7	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			7	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			8	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			8	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	12:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	15:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 221

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99526	M 150 MG/KG/DAY	NORMAL	18	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	16:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			30	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			30	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			31	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			31	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			37	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			37	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 222

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99526	M	150 MG/KG/DAY	NORMAL	39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99526	M	150 MG/KG/DAY	BODY/INTEGUMENT	39	17:15	P	DERMAL ATONIA
99526	M	150 MG/KG/DAY	CARDIO-PULMONARY	39	17:15	P	EXTREMITIES PALE
				39	17:15	P	EXTREMITIES COOL TO TOUCH
				39	17:15	P	BODY PALE
99535	F	UNTREATED	NORMAL	0	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 223

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99535	F	UNTREATED	NORMAL	15	11:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	7:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99535	F	UNTREATED	NORMAL	36	10:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 225

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99535	F	UNTREATED	NORMAL	57	8:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	6:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 226

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99535	F	UNTREATED	NORMAL	77	15:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99541	F	UNTREATED	NORMAL	0	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 227

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99541	F	UNTREATED	NORMAL	7	9:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:50	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	7:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	10:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 228

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99541	F	UNTREATED	NORMAL	25	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 229

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99541	F	UNTREATED	NORMAL	46	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 230

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99541	F	UNTREATED	NORMAL	66	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

FINAL REPORT



Contents: Volume 4 of 5
Appendix N (continued)

Study Title: A 90-Day Repeat-Dose Dermal Toxicity
Study in Conjunction with a Micronucleus
Assay Utilizing Extract, Light Paraffinic
Distillate Solvent in Sprague Dawley Rats

Laboratory Project ID: WIL-402022

Author: [REDACTED]

Test Guidelines: OPPTS Guideline 870.3250
40 CFR 798.2250 and 798.5395
OECD Guidelines 411 and 474

Study Completion Date: 8 August 2012

Performing Laboratories: WIL Research
1407 George Road
Ashland, OH 44805-8946

WIL Research
8025 Lamon Avenue
Skokie, IL 60077

Sponsor: American Petroleum Institute
1220 L Street, NW
Washington, DC 20005

Total Number of Pages: 1413

APPENDIX N

Individual Animal Data (continued)

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 231

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99541	F	UNTREATED	NORMAL	87	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99544	F	UNTREATED	NORMAL	0	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 232

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99544	F	UNTREATED	NORMAL	16	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT							

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 233

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99544	F	UNTREATED	NORMAL	37	8:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 234

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99544	F	UNTREATED	NORMAL	57	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
74	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
77	13:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
77	15:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 235

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99544	F	UNTREATED	NORMAL	78	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99547	F	UNTREATED	NORMAL	0	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 236

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99547	F	UNTREATED	NORMAL	7	11:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
28	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 237

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99547	F	UNTREATED	NORMAL	28	11:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
45	10:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
46	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
46	9:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99547	F	UNTREATED	NORMAL	49	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99547	F	UNTREATED	NORMAL	67	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:50	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 240

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99547	F	UNTREATED	NORMAL	88	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99559	F	UNTREATED	NORMAL	0	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99559	F	UNTREATED	NORMAL	17	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 242

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99559	F	UNTREATED	NORMAL	38	8:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99559	F	UNTREATED	NORMAL	59	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99559	F	UNTREATED	NORMAL	79	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99569	F	UNTREATED	NORMAL	0	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 245

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99569	F	UNTREATED	NORMAL	9	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	10:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			10	7:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			10	9:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			11	6:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			11	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			14	11:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			14	14:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			15	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			15	11:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			16	8:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			16	10:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			17	7:55	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			17	10:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			18	6:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			18	9:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			21	11:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			21	15:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			22	8:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			23	8:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			23	10:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			24	7:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			24	9:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			25	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			25	9:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			28	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			28	11:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			29	7:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			29	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS	

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 246

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99569	F	UNTREATED	NORMAL	30	7:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	9:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
50	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 247

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99569	F	UNTREATED	NORMAL	50	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
70	13:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99569	F	UNTREATED	NORMAL	71	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:50	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
99579	F	UNTREATED	NORMAL	0	11:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 249

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99579	F	UNTREATED	NORMAL	0	13:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
16	10:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
17	7:55	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
17	10:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
18	6:55	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
18	9:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 250

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99579	F	UNTREATED	NORMAL	21	11:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	10:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	9:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 251

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99579	F	UNTREATED	NORMAL	39	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
59	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 252

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99579	F	UNTREATED	NORMAL	60	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			63	9:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			63	11:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			64	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			64	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			65	8:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			65	10:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			66	8:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			66	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			67	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			67	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			70	10:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			70	13:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			71	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			71	10:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			72	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			72	10:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			73	8:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			73	10:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			74	7:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			74	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			77	13:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			77	15:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			78	7:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			78	9:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			79	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			79	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS	
			80	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS	

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99579	F	UNTREATED	NORMAL	80	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99580	F	UNTREATED	NORMAL	0	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99580	F	UNTREATED	NORMAL	10	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99580	F	UNTREATED	NORMAL	31	7:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	9:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
49	12:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
50	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
50	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
51	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99580	F	UNTREATED	NORMAL	51	10:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
71	10:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99580	F	UNTREATED	NORMAL	72	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:50	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
99586	F	UNTREATED	NORMAL	0	11:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99586	F	UNTREATED	NORMAL	1	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99586	F	UNTREATED	NORMAL	22	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	9:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99586	F	UNTREATED	NORMAL	43	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
59	9:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
60	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
60	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
63	9:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99586	F	UNTREATED	NORMAL	63	11:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
79	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
80	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
80	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
81	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
81	9:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99586	F	UNTREATED	NORMAL	85	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99593	F	UNTREATED	NORMAL	0	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99593	F	UNTREATED	NORMAL	11	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:50	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	11:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:55	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:55	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	10:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99593	F	UNTREATED	NORMAL	32	6:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	8:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	9:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 265

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99593	F	UNTREATED	NORMAL	52	9:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:46	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 266

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99593	F	UNTREATED	NORMAL	73	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99534	F	0 MG/KG/DAY	NORMAL	0	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 267

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99534	F	0 MG/KG/DAY	NORMAL	2	10:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:21	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:57	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
18	6:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
18	9:15	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
21	11:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
21	15:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
22	8:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
23	8:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99534	F	0 MG/KG/DAY	NORMAL	23	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 269

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99534	F	0	MG/KG/DAY	NORMAL	44	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					44	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					45	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					45	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					46	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					46	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					49	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					49	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					50	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					50	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					51	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					51	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					52	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					52	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					53	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					53	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					56	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					56	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					57	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					57	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					58	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					58	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					59	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					59	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					60	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					60	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					63	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					63	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
					64	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99534	F	0 MG/KG/DAY	NORMAL	64	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99534	F	0 MG/KG/DAY	NORMAL	85	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99561	F	0 MG/KG/DAY	NORMAL	0	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99561	F	0 MG/KG/DAY	NORMAL	14	14:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99561	F	0 MG/KG/DAY	NORMAL	35	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99561	F	0 MG/KG/DAY	NORMAL	56	9:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 275

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99561	F	0 MG/KG/DAY	NORMAL	74	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99562	F	0 MG/KG/DAY	NORMAL	0	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 276

STUDY DAYS: 0 THROUGH 89

			STUDY							
ANIMAL	SEX	GROUP	CATEGORY	DAY	TIME	GRADE	OBSERVATIONS			
99562	F	0 MG/KG/DAY	NORMAL	4	7:28	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				4	9:18	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				7	9:22	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				7	12:07	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				8	8:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				8	10:24	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				9	8:26	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				9	10:31	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				10	7:27	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				10	9:25	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				11	6:45	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				11	9:01	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				14	12:01	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				14	14:52	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				15	10:09	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				15	12:01	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				16	8:03	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				16	10:15	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				17	7:57	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				17	10:13	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				18	6:58	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				18	9:15	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				21	11:17	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
				21	15:30	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS
22	8:50	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
22	11:05	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
23	8:21	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
23	10:31	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				
24	7:47	P	NO	SIGNIFICANT	CLINICAL	OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 277

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99562	F	0 MG/KG/DAY	NORMAL	24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99562	F	0 MG/KG/DAY	NORMAL	45	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT							

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99562	F	0 MG/KG/DAY	NORMAL	65	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99562	F	0 MG/KG/DAY	NORMAL	86	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99563	F	0 MG/KG/DAY	NORMAL	0	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99563	F	0 MG/KG/DAY	NORMAL	15	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99563	F	0 MG/KG/DAY	NORMAL	36	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 283

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99563	F	0 MG/KG/DAY	NORMAL	57	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:03	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 284

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99563	F	0 MG/KG/DAY	NORMAL	77	15:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99572	F	0 MG/KG/DAY	NORMAL	0	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99572	F	0 MG/KG/DAY	NORMAL	7	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99572	F	0 MG/KG/DAY	NORMAL	25	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 287

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99572	F	0 MG/KG/DAY	NORMAL	46	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 288

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99572	F	0 MG/KG/DAY	NORMAL	66	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99572	F	0 MG/KG/DAY	NORMAL	87	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99574	F	0 MG/KG/DAY	NORMAL	0	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 290

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99574	F	0 MG/KG/DAY	NORMAL	16	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99574	F	0 MG/KG/DAY	NORMAL	37	8:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:17	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:55	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:02	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:19	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 292

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99574	F	0 MG/KG/DAY	NORMAL	57	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 293

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99574	F	0 MG/KG/DAY	NORMAL	78	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99575	F	0 MG/KG/DAY	NORMAL	0	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 294

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99575	F	0 MG/KG/DAY	NORMAL	7	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 295

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99575	F	0 MG/KG/DAY	NORMAL	28	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 296

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99575	F	0 MG/KG/DAY	NORMAL	49	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 297

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99575	F	0 MG/KG/DAY	NORMAL	67	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 298

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99575	F	0 MG/KG/DAY	NORMAL	89	6:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99576	F	0 MG/KG/DAY	NORMAL	0	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 299

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99576	F	0 MG/KG/DAY	NORMAL	17	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 300

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99576	F	0 MG/KG/DAY	NORMAL	38	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 301

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99576	F	0 MG/KG/DAY	NORMAL	59	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 302

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99576	F	0 MG/KG/DAY	NORMAL	79	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99578	F	0 MG/KG/DAY	NORMAL	0	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 303

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99578	F	0 MG/KG/DAY	NORMAL	9	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 304

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99578	F	0 MG/KG/DAY	NORMAL	30	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 305

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99578	F	0 MG/KG/DAY	NORMAL	50	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 306

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99578	F	0 MG/KG/DAY	NORMAL	71	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99585	F	0 MG/KG/DAY	NORMAL	0	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 307

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99585	F	0 MG/KG/DAY	NORMAL	0	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 308

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99585	F	0 MG/KG/DAY	NORMAL	21	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 309

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99585	F	0 MG/KG/DAY	NORMAL	42	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT							

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 310

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99585	F	0 MG/KG/DAY	NORMAL	60	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT							

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99585	F	0 MG/KG/DAY	NORMAL	81	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99530	F	5 MG/KG/DAY	NORMAL	0	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99530	F	5 MG/KG/DAY	NORMAL	10	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99530	F	5 MG/KG/DAY	NORMAL	31	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT							

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99530	F	5 MG/KG/DAY	NORMAL	51	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
 SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99530	F	5 MG/KG/DAY	NORMAL	72	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99532	F	5 MG/KG/DAY	NORMAL	0	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99532	F	5 MG/KG/DAY	NORMAL	1	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99532	F	5 MG/KG/DAY	NORMAL	22	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT							

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99532	F	5 MG/KG/DAY	NORMAL	42	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS		
99532	F	5	MG/KG/DAY	NORMAL	63	9:32	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					63	11:30	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					64	8:34	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					64	10:11	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					65	8:44	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					65	10:21	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					66	8:34	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					66	9:53	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					67	7:32	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					67	9:08	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					70	10:49	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					70	13:23	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					71	8:54	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					71	10:40	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					72	8:25	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					72	10:26	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					73	8:38	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					73	10:33	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					74	7:06	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					74	9:08	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					77	13:48	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					77	15:58	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					78	7:45	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					78	9:46	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
79	7:35	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS					
79	9:33	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS					
80	7:28	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS					
80	9:12	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS					
81	7:31	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS					

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99532	F	5 MG/KG/DAY	NORMAL	81	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99555	F	5 MG/KG/DAY	NORMAL	0	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99555	F	5 MG/KG/DAY	NORMAL	11	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99555	F	5 MG/KG/DAY	NORMAL	31	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX			GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS		
99555	F	5	MG/KG/DAY	NORMAL	52	7:22	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					52	9:12	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					53	7:33	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					53	9:26	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					56	10:07	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					56	12:58	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					57	8:26	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					57	9:43	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					58	8:45	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					58	10:33	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					59	8:25	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					59	9:51	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					60	7:32	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					60	9:39	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					63	9:32	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					63	11:30	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					64	8:35	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					64	10:11	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					65	8:44	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					65	10:21	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					66	8:34	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					66	9:53	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					67	7:32	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
					67	9:08	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS
70	10:49	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS					
70	13:23	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS					
71	8:54	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS					
71	10:40	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS					
72	8:25	P	NO	SIGNIFICANT	CLINICAL OBSERVATIONS					

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99555	F	5 MG/KG/DAY	NORMAL	72	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
88	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				
99556	F	5 MG/KG/DAY	NORMAL	0	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99556	F	5 MG/KG/DAY	NORMAL	2	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99556	F	5 MG/KG/DAY	NORMAL	23	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99556	F	5 MG/KG/DAY	NORMAL	43	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 328

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99556	F	5 MG/KG/DAY	NORMAL	64	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99556	F	5 MG/KG/DAY	NORMAL	84	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99566	F	5 MG/KG/DAY	NORMAL	0	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 330

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99566	F	5 MG/KG/DAY	NORMAL	14	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT							

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 331

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99566	F	5 MG/KG/DAY	NORMAL	32	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 332

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99566	F	5 MG/KG/DAY	NORMAL	53	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 333

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99566	F	5 MG/KG/DAY	NORMAL	73	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99568	F	5 MG/KG/DAY	NORMAL	0	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99568	F	5 MG/KG/DAY	NORMAL	3	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99568	F	5 MG/KG/DAY	NORMAL	23	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 336

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99568	F	5 MG/KG/DAY	NORMAL	44	9:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:47	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:04	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:39	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 337

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99568	F	5 MG/KG/DAY	NORMAL	64	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
 SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99568	F	5 MG/KG/DAY	NORMAL	86	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99571	F	5 MG/KG/DAY	NORMAL	0	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99571	F	5 MG/KG/DAY	NORMAL	14	14:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 340

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99571	F	5 MG/KG/DAY	NORMAL	35	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 341

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99571	F	5 MG/KG/DAY	NORMAL	56	10:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:26	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:45	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:51	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:24	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 342

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99571	F	5 MG/KG/DAY	NORMAL	74	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99582	F	5 MG/KG/DAY	NORMAL	0	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 343

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99582	F	5 MG/KG/DAY	NORMAL	4	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 344

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99582	F	5 MG/KG/DAY	NORMAL	24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 345

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99582	F	5 MG/KG/DAY	NORMAL	45	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT							

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 346

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99582	F	5 MG/KG/DAY	NORMAL	65	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 347

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99582	F	5 MG/KG/DAY	NORMAL	87	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99591	F	5 MG/KG/DAY	NORMAL	0	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 348

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99591	F	5 MG/KG/DAY	NORMAL	15	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 349

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99591	F	5 MG/KG/DAY	NORMAL	36	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 350

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99591	F	5 MG/KG/DAY	NORMAL	56	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 351

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99591	F	5 MG/KG/DAY	NORMAL	77	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99592	F	5 MG/KG/DAY	NORMAL	0	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 352

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99592	F	5 MG/KG/DAY	NORMAL	4	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	15:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99592	F	5 MG/KG/DAY	NORMAL	25	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 354

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99592	F	5 MG/KG/DAY	NORMAL	45	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99592	F	5 MG/KG/DAY	NORMAL	66	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	15:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99592	F	5 MG/KG/DAY	NORMAL	87	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99533	F	50 MG/KG/DAY	NORMAL	0	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99533	F	50 MG/KG/DAY	NORMAL	16	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	16:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99533	F	50 MG/KG/DAY	NORMAL	37	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 359

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99533	F	50 MG/KG/DAY	NORMAL	57	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT							

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 360

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99533	F	50 MG/KG/DAY	NORMAL	78	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99538	F	50 MG/KG/DAY	NORMAL	0	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 361

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99538	F	50 MG/KG/DAY	NORMAL	7	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	16:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 362

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99538	F	50 MG/KG/DAY	NORMAL	28	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 363

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99538	F	50 MG/KG/DAY	NORMAL	49	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 364

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99538	F	50 MG/KG/DAY	NORMAL	67	9:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:56	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:43	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:27	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:53	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:48	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:14	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:05	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:41	P NO SIGNIFICANT CLINICAL OBSERVATIONS
87	10:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 365

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99538	F	50 MG/KG/DAY	NORMAL	88	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99546	F	50 MG/KG/DAY	NORMAL	0	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 366

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99546	F	50 MG/KG/DAY	NORMAL	17	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	16:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 367

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99546	F	50 MG/KG/DAY	NORMAL	38	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99546	F	50 MG/KG/DAY	NORMAL	58	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
 SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99546	F	50 MG/KG/DAY	NORMAL	79	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99552	F	50 MG/KG/DAY	NORMAL	0	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
8	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS				
GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT							

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99552	F	50 MG/KG/DAY	NORMAL	8	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	16:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99552	F	50 MG/KG/DAY	NORMAL	29	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99552	F	50 MG/KG/DAY	NORMAL	49	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99552	F	50 MG/KG/DAY	NORMAL	70	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 374

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99552	F	50 MG/KG/DAY	NORMAL	88	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99553	F	50 MG/KG/DAY	NORMAL	0	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 375

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99553	F	50 MG/KG/DAY	NORMAL	18	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	16:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99553	F	50 MG/KG/DAY	NORMAL	38	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99553	F	50 MG/KG/DAY	NORMAL	59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99553	F	50 MG/KG/DAY	NORMAL	79	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99560	F	50 MG/KG/DAY	NORMAL	0	11:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99560	F	50 MG/KG/DAY	NORMAL	9	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	16:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99560	F	50 MG/KG/DAY	NORMAL	30	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99560	F	50 MG/KG/DAY	NORMAL	50	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99560	F	50 MG/KG/DAY	NORMAL	71	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99564	F	50 MG/KG/DAY	NORMAL	0	11:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99564	F	50 MG/KG/DAY	NORMAL	0	13:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99564	F	50 MG/KG/DAY	NORMAL	21	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	16:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99564	F	50 MG/KG/DAY	NORMAL	39	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99564	F	50 MG/KG/DAY	NORMAL	60	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 387

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99564	F	50 MG/KG/DAY	NORMAL	80	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99567	F	50 MG/KG/DAY	NORMAL	0	11:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 388

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99567	F	50 MG/KG/DAY	NORMAL	10	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	14:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	16:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 389

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99567	F	50 MG/KG/DAY	NORMAL	30	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 390

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99567	F	50 MG/KG/DAY	NORMAL	51	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 391

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99567	F	50 MG/KG/DAY	NORMAL	71	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99584	F	50 MG/KG/DAY	NORMAL	89	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99584	F	50 MG/KG/DAY	NORMAL	1	8:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:36	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:30	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:52	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:25	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	15:00	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
15	12:09	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
16	8:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
16	10:22	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
17	8:07	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
17	10:20	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
18	7:10	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
18	9:23	P NO SIGNIFICANT CLINICAL OBSERVATIONS				
21	11:32	P NO SIGNIFICANT CLINICAL OBSERVATIONS				

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99584	F	50 MG/KG/DAY	NORMAL	21	16:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 394

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99584	F	50 MG/KG/DAY	NORMAL	42	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99584	F	50 MG/KG/DAY	NORMAL	63	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 396

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99584	F	50 MG/KG/DAY	NORMAL	81	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99590	F	50 MG/KG/DAY	NORMAL	0	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 397

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99590	F	50 MG/KG/DAY	NORMAL	11	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	15:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	16:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99590	F	50 MG/KG/DAY	NORMAL	31	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99590	F	50 MG/KG/DAY	NORMAL	52	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99590	F	50 MG/KG/DAY	NORMAL	72	10:29	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:40	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:11	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:12	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	13:55	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	16:01	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:49	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:38	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:31	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:34	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:54	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:06	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:35	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:37	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:42	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:08	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:33	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:58	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:18	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS
99531	F	150 MG/KG/DAY	NORMAL	0	11:28	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:59	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:16	P NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:13	P NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 401

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99531	F 150 MG/KG/DAY	NORMAL	2	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			2	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			3	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			3	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			4	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			4	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			7	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			7	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			8	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			8	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	12:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	15:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	16:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99531	F 150 MG/KG/DAY	NORMAL	22	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			30	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			30	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			31	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			31	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			37	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			37	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			42	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			42	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99531	F 150 MG/KG/DAY	NORMAL	43	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			43	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			45	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			45	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			46	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			46	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	12:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	13:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99531	F 150 MG/KG/DAY	NORMAL	63	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	13:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	16:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99531	F	150 MG/KG/DAY	NORMAL	84	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99536	F	150 MG/KG/DAY	NORMAL	0	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 406

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99536	F 150 MG/KG/DAY	NORMAL	14	15:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	16:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			30	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			30	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			31	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			31	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			37	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 407

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99536	F 150 MG/KG/DAY	NORMAL	37	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			42	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			42	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			43	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			43	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			45	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			45	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			46	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			46	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 408

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99536	F 150 MG/KG/DAY	NORMAL	58	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	13:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	16:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 409

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99536	F	150 MG/KG/DAY	NORMAL	78	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99536	F	150 MG/KG/DAY	SPECIAL	11	6:57	P	REDDENED LEFT EAR
				11	6:57	P	REDDENED RIGHT EAR
				11	9:10	P	REDDENED LEFT EAR
				11	9:10	P	REDDENED RIGHT EAR
				16	8:13	P	REDDENED LEFT EAR
				16	8:13	P	REDDENED RIGHT EAR
				16	10:24	P	REDDENED LEFT EAR
				16	10:24	P	REDDENED RIGHT EAR
				24	7:58	P	REDDENED LEFT EAR
				24	7:58	P	REDDENED RIGHT EAR
				24	9:56	P	REDDENED LEFT EAR
				24	9:56	P	REDDENED RIGHT EAR

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 410

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99540	F 150 MG/KG/DAY	NORMAL	0	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			0	14:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			1	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			1	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			2	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			2	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			3	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			3	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			4	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			4	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			7	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			7	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			8	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			8	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	15:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 411

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99540	F 150 MG/KG/DAY	NORMAL	18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	16:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			37	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			37	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			39	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			42	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			42	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			43	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 412

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99540	F 150 MG/KG/DAY	NORMAL	43	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			45	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			45	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			46	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			46	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 413

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99540	F 150 MG/KG/DAY	NORMAL	64	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	13:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	16:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			84	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99540	F	150 MG/KG/DAY	NORMAL	84	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99540	F	150 MG/KG/DAY	SPECIAL	30	7:52	P	REDDENED LEFT EAR
				30	7:52	P	REDDENED RIGHT EAR
				30	10:16	P	REDDENED LEFT EAR
				30	10:16	P	REDDENED RIGHT EAR
				31	7:37	P	SWOLLEN LEFT EAR
				31	7:37	P	SWOLLEN RIGHT EAR
				31	7:37	P	REDDENED LEFT EAR
				31	7:37	P	REDDENED RIGHT EAR
				31	9:59	P	REDDENED LEFT EAR
				31	9:59	P	REDDENED RIGHT EAR
99548	F	150 MG/KG/DAY	NORMAL	0	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	14:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99548	F 150 MG/KG/DAY	NORMAL	7	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			7	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			8	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			8	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	15:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	16:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99548	F	150 MG/KG/DAY	NORMAL	25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99548	F	150 MG/KG/DAY	NORMAL	46	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99548	F 150 MG/KG/DAY	NORMAL	66	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	13:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	16:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			84	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			84	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			85	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			85	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			86	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			86	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99548	F	150 MG/KG/DAY	NORMAL	87	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99554	F	150 MG/KG/DAY	NORMAL	0	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	14:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	15:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99554	F 150 MG/KG/DAY	NORMAL	16	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	16:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			30	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			30	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			31	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			31	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99554	F 150 MG/KG/DAY	NORMAL	37	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			37	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			39	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			42	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			42	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			43	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			43	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			45	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			45	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			46	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			46	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99554	F 150 MG/KG/DAY	NORMAL	57	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	13:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	16:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99554	F	150 MG/KG/DAY	NORMAL	78	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99557	F	150 MG/KG/DAY	NORMAL	0	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	14:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99557	F 150 MG/KG/DAY	NORMAL	7	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			8	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			8	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	15:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	16:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 425

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99557	F	150 MG/KG/DAY	NORMAL	28	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 426

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99557	F 150 MG/KG/DAY	NORMAL	46	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 427

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99557	F 150 MG/KG/DAY	NORMAL	67	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	13:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	16:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			85	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			85	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			86	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			86	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			87	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			87	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			88	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 428

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99557	F	150 MG/KG/DAY	NORMAL	88	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99558	F	150 MG/KG/DAY	NORMAL	0	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	14:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 429

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99558	F 150 MG/KG/DAY	NORMAL	17	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	16:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			30	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			30	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			31	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			31	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			37	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 430

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99558	F 150 MG/KG/DAY	NORMAL	37	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			39	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			39	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			42	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			42	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			43	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			43	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			45	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			45	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			46	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			46	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 431

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99558	F 150 MG/KG/DAY	NORMAL	58	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	13:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	16:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
 SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 432

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99558	F	150 MG/KG/DAY	NORMAL	78	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99577	F	150 MG/KG/DAY	NORMAL	0	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	14:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99577	F 150 MG/KG/DAY	NORMAL	8	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			8	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	12:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	16:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 434

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99577	F 150 MG/KG/DAY	NORMAL	28	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			30	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			30	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			31	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			31	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			37	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			37	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			39	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			39	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			42	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			42	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			43	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			43	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			44	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			45	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			45	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			46	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			46	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 435

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99577	F 150 MG/KG/DAY	NORMAL	49	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			49	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 436

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99577	F 150 MG/KG/DAY	NORMAL	67	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	13:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	16:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			85	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			85	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			86	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			86	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			87	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			87	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			88	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			88	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 437

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99577	F	150 MG/KG/DAY	NORMAL	89	6:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99581	F	150 MG/KG/DAY	NORMAL	0	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	14:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	12:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 438

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99581	F 150 MG/KG/DAY	NORMAL	17	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	16:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			30	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			30	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			31	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			31	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			32	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			35	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			36	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			37	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			37	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			38	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 439

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99581	F	150 MG/KG/DAY	NORMAL	38	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 440

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99581	F 150 MG/KG/DAY	NORMAL	59	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	13:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	16:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 441

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99581	F	150 MG/KG/DAY	NORMAL	79	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99588	F	150 MG/KG/DAY	NORMAL	0	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	14:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

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TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 442

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99588	F 150 MG/KG/DAY	NORMAL	9	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			9	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			10	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			11	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			14	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			15	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			16	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			17	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			21	16:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			22	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			23	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			24	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			28	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			29	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 443

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99588	F	150 MG/KG/DAY	NORMAL	29	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	12:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 444

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99588	F 150 MG/KG/DAY	NORMAL	50	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			50	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			51	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			52	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			53	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			56	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			57	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			58	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			59	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			60	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			63	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			64	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			65	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			66	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			67	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			70	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 445

STUDY DAYS: 0 THROUGH 89

ANIMAL SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99588	F 150 MG/KG/DAY	NORMAL	70	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			71	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			72	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			73	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			74	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	13:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			77	16:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			78	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			79	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			80	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			81	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			85	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			85	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			86	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			86	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			87	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			87	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			88	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			88	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			89	6:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
			89	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 1

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99466	M	UNTREATED	NORMAL	5	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99472	M	UNTREATED	NORMAL	5	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 2

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99472	M	UNTREATED	NORMAL	19	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99474	M	UNTREATED	NORMAL	5	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 3

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99474	M	UNTREATED	NORMAL	34	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99474	M	UNTREATED	EYES/EARS/NOSE	12	10:23	P	DRIED RED MATERIAL AROUND NOSE
				89	7:16	P	DRIED RED MATERIAL AROUND NOSE
99491	M	UNTREATED	NORMAL	5	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 4

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99491	M	UNTREATED	NORMAL	54	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99491	M	UNTREATED	EYES/EARS/NOSE	12	10:23	P	DRIED RED MATERIAL AROUND LEFT EYE
				27	10:02	P	DRIED RED MATERIAL AROUND LEFT EYE
99496	M	UNTREATED	NORMAL	5	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 5

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99496	M	UNTREATED	NORMAL	61	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99496	M	UNTREATED	EYES/EARS/NOSE	82	6:59	P	DRIED RED MATERIAL AROUND NOSE
99504	M	UNTREATED	NORMAL	5	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 6

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99504	M	UNTREATED	NORMAL	75	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99505	M	UNTREATED	NORMAL	5	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 7

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99505	M	UNTREATED	NORMAL	83	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99507	M	UNTREATED	NORMAL	5	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 8

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99509	M	UNTREATED	NORMAL	5	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99515	M	UNTREATED	NORMAL	5	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99515	M	UNTREATED	NORMAL	13	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99467	M	0 MG/KG/DAY	NORMAL	6	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99467	M	0 MG/KG/DAY	NORMAL	27	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99467	M	0 MG/KG/DAY	EYES/EARS/NOSE	5	10:24	P	DRIED RED MATERIAL AROUND NOSE
				33	9:57	P	DRIED RED MATERIAL AROUND NOSE
				62	8:17	P	DRIED RED MATERIAL AROUND NOSE
99471	M	0 MG/KG/DAY	NORMAL	5	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99471	M	0 MG/KG/DAY	NORMAL	40	15:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99473	M	0 MG/KG/DAY	NORMAL	5	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99473	M	0 MG/KG/DAY	NORMAL	54	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99498	M	0 MG/KG/DAY	NORMAL	5	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99498	M	0 MG/KG/DAY	NORMAL	68	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99502	M	0 MG/KG/DAY	NORMAL	5	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99502	M	0 MG/KG/DAY	NORMAL	82	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99503	M	0 MG/KG/DAY	NORMAL	5	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99506	M	0 MG/KG/DAY	NORMAL	12	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99506	M	0 MG/KG/DAY	EYES/EARS/NOSE	5	10:24	P	DRIED RED MATERIAL AROUND RIGHT EYE
				6	10:57	P	DRIED RED MATERIAL AROUND RIGHT EYE
99516	M	0 MG/KG/DAY	NORMAL	5	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99516	M	0 MG/KG/DAY	NORMAL	13	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99518	M	0 MG/KG/DAY	NORMAL	13	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 17

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99518	M	0 MG/KG/DAY	NORMAL	34	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99518	M	0 MG/KG/DAY	EYES/EARS/NOSE	5	10:25	P	DRIED RED MATERIAL AROUND NOSE
				6	10:57	P	DRIED RED MATERIAL AROUND NOSE
				12	10:28	P	DRIED RED MATERIAL AROUND NOSE
99519	M	0 MG/KG/DAY	NORMAL	5	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 18

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99519	M	0 MG/KG/DAY	NORMAL	34	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99465	M	5 MG/KG/DAY	NORMAL	5	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 19

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99465	M	5 MG/KG/DAY	NORMAL	54	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99465	M	5 MG/KG/DAY	EYES/EARS/NOSE	6	10:59	P	DRIED RED MATERIAL AROUND RIGHT EYE
				12	10:31	P	DRIED RED MATERIAL AROUND NOSE
99479	M	5 MG/KG/DAY	NORMAL	5	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 20

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99479	M	5 MG/KG/DAY	NORMAL	62	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99479	M	5 MG/KG/DAY	EYES/EARS/NOSE	33	10:02	P	DRIED RED MATERIAL AROUND NOSE
99483	M	5 MG/KG/DAY	NORMAL	5	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
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TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99483	M	5 MG/KG/DAY	NORMAL	75	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99489	M	5 MG/KG/DAY	NORMAL	5	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
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TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 22

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99489	M	5 MG/KG/DAY	NORMAL	89	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99490	M	5 MG/KG/DAY	NORMAL	5	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99494	M	5 MG/KG/DAY	NORMAL	5	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 23

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99494	M	5 MG/KG/DAY	NORMAL	13	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99495	M	5 MG/KG/DAY	NORMAL	5	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
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TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 24

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99495	M	5 MG/KG/DAY	NORMAL	26	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99511	M	5 MG/KG/DAY	NORMAL	5	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 25

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99511	M	5 MG/KG/DAY	NORMAL	34	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99524	M	5 MG/KG/DAY	NORMAL	5	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 26

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99524	M	5 MG/KG/DAY	NORMAL	47	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99528	M	5 MG/KG/DAY	NORMAL	5	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99528	M	5 MG/KG/DAY	NORMAL	55	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99464	M	50 MG/KG/DAY	NORMAL	5	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99464	M	50 MG/KG/DAY	NORMAL	75	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99464	M	50 MG/KG/DAY	EYES/EARS/NOSE	62	8:23	P	DRIED RED MATERIAL AROUND NOSE
				69	14:59	P	DRIED RED MATERIAL AROUND NOSE
99469	M	50 MG/KG/DAY	NORMAL	5	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 29

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99469	M	50 MG/KG/DAY	NORMAL	82	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99480	M	50 MG/KG/DAY	NORMAL	5	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99485	M	50 MG/KG/DAY	NORMAL	5	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99485	M	50 MG/KG/DAY	NORMAL	6	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99486	M	50 MG/KG/DAY	NORMAL	5	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99486	M	50 MG/KG/DAY	NORMAL	20	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99500	M	50 MG/KG/DAY	NORMAL	5	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 32

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99500	M	50 MG/KG/DAY	NORMAL	40	15:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99500	M	50 MG/KG/DAY	EYES/EARS/NOSE	12	10:35	P	DRIED RED MATERIAL AROUND NOSE
99510	M	50 MG/KG/DAY	NORMAL	5	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 33

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99510	M	50 MG/KG/DAY	NORMAL	47	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99512	M	50 MG/KG/DAY	NORMAL	5	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 34

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99512	M	50 MG/KG/DAY	NORMAL	55	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99513	M	50 MG/KG/DAY	NORMAL	5	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 35

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99513	M	50 MG/KG/DAY	NORMAL	68	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99525	M	50 MG/KG/DAY	NORMAL	5	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 36

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99525	M	50 MG/KG/DAY	NORMAL	76	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99468	M	150 MG/KG/DAY	NORMAL	5	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99468	M	150 MG/KG/DAY	EYES/EARS/NOSE	12	10:39	P	DRIED RED MATERIAL AROUND NOSE
				33	10:12	P	DRIED RED MATERIAL AROUND NOSE

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 37

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99468	M	150 MG/KG/DAY	EYES/EARS/NOSE	89	7:22	P	DRIED RED MATERIAL AROUND NOSE
99468	M	150 MG/KG/DAY	BODY/INTEG III	89	7:22	P	DRIED YELLOW MATERIAL UROGENITAL AREA
99482	M	150 MG/KG/DAY	NORMAL	5	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99482	M	150 MG/KG/DAY	EYES/EARS/NOSE	54	10:39	P	DRIED RED MATERIAL AROUND NOSE
				68	12:12	P	DRIED RED MATERIAL AROUND NOSE
				82	7:13	P	DRIED RED MATERIAL AROUND NOSE
				89	7:22	P	DRIED RED MATERIAL AROUND NOSE
99487	M	150 MG/KG/DAY	NORMAL	5	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 38

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99487	M	150 MG/KG/DAY	NORMAL	12	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99499	M	150 MG/KG/DAY	NORMAL	5	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 39

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99499	M	150 MG/KG/DAY	NORMAL	33	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99499	M	150 MG/KG/DAY	EYES/EARS/NOSE	12	10:40	P	DRIED RED MATERIAL AROUND NOSE
99499	M	150 MG/KG/DAY	BODY/INTEG III	26	11:26	P	DRIED YELLOW MATERIAL UROGENITAL AREA
99501	M	150 MG/KG/DAY	NORMAL	5	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
 SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99501	M	150 MG/KG/DAY	NORMAL	41	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99501	M	150 MG/KG/DAY	BODY/INTEG III	12	10:40	P	DRIED YELLOW MATERIAL UROGENITAL AREA
99517	M	150 MG/KG/DAY	NORMAL	5	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 41

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99517	M	150 MG/KG/DAY	NORMAL	54	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99521	M	150 MG/KG/DAY	NORMAL	5	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 42

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99521	M	150 MG/KG/DAY	NORMAL	68	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99521	M	150 MG/KG/DAY	EYES/EARS/NOSE	12	10:41	P	DRIED RED MATERIAL AROUND NOSE
99521	M	150 MG/KG/DAY	SPECIAL	84	10:41	P	REDDENED LEFT EAR
				84	10:41	P	REDDENED RIGHT EAR
99522	M	150 MG/KG/DAY	NORMAL	5	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 43

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99522	M	150 MG/KG/DAY	NORMAL	75	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99522	M	150 MG/KG/DAY	EYES/EARS/NOSE	12	10:41	P	DRIED RED MATERIAL AROUND NOSE
99522	M	150 MG/KG/DAY	BODY/INTEG III	12	10:41	P	DRIED YELLOW MATERIAL UROGENITAL AREA
99523	M	150 MG/KG/DAY	NORMAL	5	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 44

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99523	M	150 MG/KG/DAY	NORMAL	90	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99523	M	150 MG/KG/DAY	BODY/INTEG III	12	10:42	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				26	11:27	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				27	10:18	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				33	10:14	P	DRIED YELLOW MATERIAL UROGENITAL AREA
99526	M	150 MG/KG/DAY	NORMAL	5	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99535	F	UNTREATED	NORMAL	5	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99535	F	UNTREATED	NORMAL	55	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99535	F	UNTREATED	EYES/EARS/NOSE	33	9:55	P	DRIED RED MATERIAL AROUND NOSE
				82	7:00	P	DRIED RED MATERIAL AROUND NOSE
99541	F	UNTREATED	NORMAL	5	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99541	F	UNTREATED	NORMAL	68	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99544	F	UNTREATED	NORMAL	5	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 47

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99544	F	UNTREATED	NORMAL	82	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99547	F	UNTREATED	NORMAL	5	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99547	F	UNTREATED	EYES/EARS/NOSE	12	10:25	P	DRIED RED MATERIAL AROUND NOSE
99559	F	UNTREATED	NORMAL	5	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99559	F	UNTREATED	NORMAL	6	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99569	F	UNTREATED	NORMAL	5	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99569	F	UNTREATED	NORMAL	20	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99579	F	UNTREATED	NORMAL	90	6:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				5	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99579	F	UNTREATED	NORMAL	33	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99580	F	UNTREATED	NORMAL	90	6:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				5	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99580	F	UNTREATED	NORMAL	41	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99586	F	UNTREATED	NORMAL	5	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 52

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99586	F	UNTREATED	NORMAL	54	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99593	F	UNTREATED	NORMAL	5	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
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TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99593	F	UNTREATED	NORMAL	69	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99593	F	UNTREATED	EYES/EARS/NOSE	12	10:26	P	DRIED RED MATERIAL AROUND NOSE
				54	10:31	P	DRIED RED MATERIAL AROUND LEFT EYE
				54	10:31	P	DRIED RED MATERIAL AROUND RIGHT EYE
				82	7:01	P	DRIED RED MATERIAL AROUND NOSE
				90	6:40	P	DRIED RED MATERIAL AROUND LEFT EYE
				90	6:40	P	DRIED RED MATERIAL AROUND RIGHT EYE
99534	F	0 MG/KG/DAY	NORMAL	6	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99534	F	0 MG/KG/DAY	NORMAL	75	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99534	F	0 MG/KG/DAY	EYES/EARS/NOSE	5	10:25	P	DRIED RED MATERIAL AROUND NOSE
				33	10:00	P	DRIED RED MATERIAL AROUND NOSE
99561	F	0 MG/KG/DAY	NORMAL	5	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99561	F	0 MG/KG/DAY	NORMAL	82	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99562	F	0 MG/KG/DAY	NORMAL	5	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99563	F	0 MG/KG/DAY	NORMAL	5	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99563	F	0 MG/KG/DAY	NORMAL	6	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99572	F	0 MG/KG/DAY	NORMAL	5	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99572	F	0 MG/KG/DAY	NORMAL	20	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99574	F	0 MG/KG/DAY	NORMAL	5	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99574	F	0 MG/KG/DAY	NORMAL	34	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99575	F	0 MG/KG/DAY	NORMAL	5	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 59

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99575	F	0 MG/KG/DAY	NORMAL	48	12:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99575	F	0 MG/KG/DAY	EYES/EARS/NOSE	12	10:29	P	DRIED RED MATERIAL AROUND NOSE
				90	6:41	P	DRIED RED MATERIAL AROUND NOSE
99576	F	0 MG/KG/DAY	NORMAL	13	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 60

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99576	F	0 MG/KG/DAY	NORMAL	68	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99576	F	0 MG/KG/DAY	EYES/EARS/NOSE	5	10:26	P	DRIED RED MATERIAL AROUND LEFT EYE
				5	10:26	P	DRIED RED MATERIAL AROUND RIGHT EYE
				6	10:58	P	DRIED RED MATERIAL AROUND RIGHT EYE
				12	10:30	P	DRIED RED MATERIAL AROUND NOSE
				82	7:05	P	DRIED RED MATERIAL AROUND NOSE
				90	6:41	P	DRIED RED MATERIAL AROUND NOSE
99578	F	0 MG/KG/DAY	NORMAL	5	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 61

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99578	F	0 MG/KG/DAY	NORMAL	68	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99578	F	0 MG/KG/DAY	EYES/EARS/NOSE	33	10:01	P	DRIED RED MATERIAL AROUND NOSE
99585	F	0 MG/KG/DAY	NORMAL	5	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	12:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99585	F	0 MG/KG/DAY	NORMAL	75	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99530	F	5 MG/KG/DAY	NORMAL	13	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99530	F	5 MG/KG/DAY	EYES/EARS/NOSE	5	10:28	P	DRIED RED MATERIAL AROUND NOSE

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 63

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99530	F	5 MG/KG/DAY	EYES/EARS/NOSE	6	11:00	P	DRIED RED MATERIAL AROUND NOSE
				12	10:32	P	DRIED RED MATERIAL AROUND NOSE
99532	F	5 MG/KG/DAY	NORMAL	5	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99555	F	5 MG/KG/DAY	NORMAL	5	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99555	F	5 MG/KG/DAY	NORMAL	12	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99555	F	5 MG/KG/DAY	EYES/EARS/NOSE	33	10:05	P	DRIED RED MATERIAL AROUND NOSE
99556	F	5 MG/KG/DAY	NORMAL	5	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99556	F	5 MG/KG/DAY	NORMAL	26	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99566	F	5 MG/KG/DAY	NORMAL	5	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 66

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99566	F	5 MG/KG/DAY	NORMAL	40	15:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99568	F	5 MG/KG/DAY	NORMAL	5	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 67

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99568	F	5 MG/KG/DAY	NORMAL	54	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99571	F	5 MG/KG/DAY	NORMAL	5	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 68

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99571	F	5 MG/KG/DAY	NORMAL	68	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99571	F	5 MG/KG/DAY	EYES/EARS/NOSE	12	10:33	P	DRIED RED MATERIAL AROUND NOSE
99582	F	5 MG/KG/DAY	NORMAL	5	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99582	F	5 MG/KG/DAY	NORMAL	76	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99582	F	5 MG/KG/DAY	EYES/EARS/NOSE	54	10:36	P	DRIED RED MATERIAL AROUND LEFT EYE
99591	F	5 MG/KG/DAY	NORMAL	5	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 70

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99591	F	5 MG/KG/DAY	NORMAL	84	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99591	F	5 MG/KG/DAY	EYES/EARS/NOSE	33	10:06	P	DRIED RED MATERIAL AROUND NOSE
99592	F	5 MG/KG/DAY	NORMAL	5	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	14:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99592	F	5 MG/KG/DAY	EYES/EARS/NOSE	12	10:34	P	DRIED RED MATERIAL AROUND NOSE

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99533	F	50 MG/KG/DAY	NORMAL	5	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99538	F	50 MG/KG/DAY	NORMAL	12	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 72

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99538	F	50 MG/KG/DAY	NORMAL	26	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99538	F	50 MG/KG/DAY	EYES/EARS/NOSE	5	10:33	P	DRIED RED MATERIAL AROUND NOSE
				6	11:03	P	DRIED RED MATERIAL AROUND NOSE
				33	10:10	P	DRIED RED MATERIAL AROUND NOSE
99546	F	50 MG/KG/DAY	NORMAL	12	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 73

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99546	F	50 MG/KG/DAY	NORMAL	40	15:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99546	F	50 MG/KG/DAY	EYES/EARS/NOSE	5	10:33	P	DRIED RED MATERIAL AROUND NOSE
				5	10:33	P	DRIED RED MATERIAL AROUND LEFT EYE
				5	10:33	P	DRIED RED MATERIAL AROUND RIGHT EYE
				6	11:03	P	DRIED RED MATERIAL AROUND RIGHT EYE
				6	11:03	P	DRIED RED MATERIAL AROUND NOSE
99552	F	50 MG/KG/DAY	NORMAL	5	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99552	F	50 MG/KG/DAY	NORMAL	40	15:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99552	F	50 MG/KG/DAY	EYES/EARS/NOSE	12	10:37	P	DRIED RED MATERIAL AROUND NOSE
99553	F	50 MG/KG/DAY	NORMAL	6	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99553	F	50 MG/KG/DAY	NORMAL	54	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99553	F	50 MG/KG/DAY	EYES/EARS/NOSE	5	10:33	P	DRIED RED MATERIAL AROUND NOSE
99553	F	50 MG/KG/DAY	SPECIAL	83	8:38	P	SWOLLEN LEFT EAR
				83	8:38	P	SWOLLEN RIGHT EAR
99560	F	50 MG/KG/DAY	NORMAL	5	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99560	F	50 MG/KG/DAY	NORMAL	61	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99564	F	50 MG/KG/DAY	NORMAL	5	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 77

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99564	F	50 MG/KG/DAY	NORMAL	75	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99564	F	50 MG/KG/DAY	EYES/EARS/NOSE	12	10:38	P	DRIED RED MATERIAL AROUND NOSE
99567	F	50 MG/KG/DAY	NORMAL	5	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 78

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99567	F	50 MG/KG/DAY	NORMAL	82	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99584	F	50 MG/KG/DAY	NORMAL	5	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 79

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99584	F	50 MG/KG/DAY	EYES/EARS/NOSE	12	10:39	P	DRIED RED MATERIAL AROUND NOSE
99590	F	50 MG/KG/DAY	NORMAL	5	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99590	F	50 MG/KG/DAY	EYES/EARS/NOSE	54	10:38	P	DRIED RED MATERIAL AROUND LEFT EYE
				54	10:39	P	DRIED RED MATERIAL AROUND RIGHT EYE
99531	F	150 MG/KG/DAY	NORMAL	5	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99531	F	150 MG/KG/DAY	NORMAL	6	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99531	F	150 MG/KG/DAY	EYES/EARS/NOSE	12	10:42	P	DRIED RED MATERIAL AROUND NOSE
99536	F	150 MG/KG/DAY	NORMAL	12	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99536	F	150 MG/KG/DAY	NORMAL	27	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99536	F	150 MG/KG/DAY	EYES/EARS/NOSE	5	10:35	P	DRIED RED MATERIAL AROUND LEFT EYE
				5	10:35	P	DRIED RED MATERIAL AROUND RIGHT EYE
				6	11:06	P	DRIED RED MATERIAL AROUND LEFT EYE
				6	11:06	P	DRIED RED MATERIAL AROUND RIGHT EYE
				33	10:15	P	DRIED RED MATERIAL AROUND NOSE
99540	F	150 MG/KG/DAY	NORMAL	5	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 82

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99540	F	150 MG/KG/DAY	NORMAL	40	15:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99540	F	150 MG/KG/DAY	EYES/EARS/NOSE	6	11:06	P	DRIED RED MATERIAL AROUND NOSE
				12	10:43	P	DRIED RED MATERIAL AROUND NOSE
99540	F	150 MG/KG/DAY	SPECIAL	33	10:16	P	REDDENED LEFT EAR
				33	10:16	P	REDDENED RIGHT EAR
99548	F	150 MG/KG/DAY	NORMAL	5	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
 SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 83

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99548	F	150 MG/KG/DAY	NORMAL	41	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99548	F	150 MG/KG/DAY	EYES/EARS/NOSE	12	10:43	P	DRIED RED MATERIAL AROUND NOSE
99548	F	150 MG/KG/DAY	BODY/INTEG III	82	7:15	P	DRIED RED MATERIAL FORELIMB(S)
99554	F	150 MG/KG/DAY	NORMAL	5	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99554	F	150 MG/KG/DAY	NORMAL	54	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99554	F	150 MG/KG/DAY	EYES/EARS/NOSE	82	7:16	P	DRIED RED MATERIAL AROUND NOSE
99557	F	150 MG/KG/DAY	NORMAL	5	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99557	F	150 MG/KG/DAY	NORMAL	68	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99557	F	150 MG/KG/DAY	EYES/EARS/NOSE	90	6:44	P	DRIED RED MATERIAL AROUND NOSE
99558	F	150 MG/KG/DAY	NORMAL	5	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 86

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99558	F	150 MG/KG/DAY	NORMAL	82	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99558	F	150 MG/KG/DAY	EYES/EARS/NOSE	12	10:44	P	DRIED RED MATERIAL AROUND NOSE
99577	F	150 MG/KG/DAY	NORMAL	5	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 87

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99577	F	150 MG/KG/DAY	NORMAL	84	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99581	F	150 MG/KG/DAY	NORMAL	5	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99588	F	150 MG/KG/DAY	NORMAL	5	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402022U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 88

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
99588	F	150 MG/KG/DAY	NORMAL	6	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	12:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	11:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	15:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	12:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	12:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	15:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
99588	F	150 MG/KG/DAY	EYES/EARS/NOSE	90	6:45	P	DRIED RED MATERIAL AROUND NOSE
99588	F	150 MG/KG/DAY	BODY/INTEG III	75	9:33	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				90	6:44	P	DRIED YELLOW MATERIAL UROGENITAL AREA

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A5
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 1

GROUP :		ANIMAL NO. / SEX									
UNTREATED		99466/M	99472/M	99474/M	99491/M	99496/M	99504/M	99505/M	99507/M	99509/M	99515/M
STUDY DAY	ERYTHEMA+/EDEMA+/OTHER FINDINGS										
4	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
11	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
18	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
25	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
32	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
39	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
46	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
53	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
60	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
67	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
74	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
81	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
88	SNR	SNR	SNR	SNR	SNR	NA	NA	NA	NA	NA	NA
89	DEAD	DEAD	DEAD	DEAD	DEAD	SNR	SNR	SNR	SNR	SNR	SNR

+ = REFER TO DRAIZE SCALE FOR DERMAL SCORING CRITERIA

SEX CODE: M = MALE F = FEMALE

SNR = SCORED, NOT REMARKABLE

NA = NOT APPLICABLE

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TABLE A5
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 2

GROUP : 0 MG/KG/DAY		ANIMAL NO. / SEX								
	99467/M	99471/M	99473/M	99498/M	99502/M	99503/M	99506/M	99516/M	99518/M	99519/M
STUDY DAY	ERYTHEMA+/EDEMA+/OTHER FINDINGS									
4	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
11	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
18	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
25	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
32	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
39	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
46	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
53	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
60	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
67	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
74	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
81	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
88	SNR	SNR	SNR	SNR	SNR	NA	NA	NA	NA	NA
89	DEAD	DEAD	DEAD	DEAD	DEAD	SNR	SNR	SNR	SNR	SNR

+ = REFER TO DRAIZE SCALE FOR DERMAL SCORING CRITERIA

SEX CODE: M = MALE F = FEMALE

SNR = SCORED, NOT REMARKABLE

NA = NOT APPLICABLE

PROJECT NO.:WIL-402022
 SPONSOR:AMERICAN PETROLEUM

TABLE A5
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL DERMAL OBSERVATIONS

PAGE 3

GROUP : 5 MG/KG/DAY		ANIMAL NO. / SEX								
	99465/M	99479/M	99483/M	99489/M	99490/M	99494/M	99495/M	99511/M	99524/M	99528/M
STUDY DAY	ERYTHEMA+/EDEMA+/OTHER FINDINGS									
4	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
11	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
18	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
25	SNR	1/0	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
32	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
39	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
46	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
53	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
60	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
67	SNR	SNR	SNR	SNR	0/0/d	SNR	SNR	SNR	SNR	SNR
74	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
81	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
88	SNR	SNR	SNR	SNR	SNR	NA	NA	NA	NA	NA
89	DEAD	DEAD	DEAD	DEAD	DEAD	SNR	SNR	SNR	SNR	SNR

+ = REFER TO DRAIZE SCALE FOR DERMAL SCORING CRITERIA
 SEX CODE: M = MALE F = FEMALE
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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A5
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 4

GROUP : 50 MG/KG/DAY		ANIMAL NO. / SEX								
	99464/M	99469/M	99480/M	99485/M	99486/M	99500/M	99510/M	99512/M	99513/M	99525/M
STUDY DAY	ERYTHEMA+/EDEMA+/OTHER FINDINGS									
4	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
11	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
18	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
25	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
32	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
39	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
46	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
53	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
60	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
67	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
74	SNR	0/0/d	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
81	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
88	SNR	SNR	SNR	SNR	SNR	NA	NA	NA	NA	NA
89	DEAD	DEAD	DEAD	DEAD	DEAD	SNR	SNR	SNR	SNR	SNR

+ = REFER TO DRAIZE SCALE FOR DERMAL SCORING CRITERIA
SEX CODE: M = MALE F = FEMALE
d = DESQUAMATION, SNR = SCORED, NOT REMARKABLE
NA = NOT APPLICABLE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A5
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 5

GROUP : 150 MG/KG/DAY			ANIMAL NO. / SEX							
	99468/M	99482/M	99487/M	99499/M	99501/M	99517/M	99521/M	99522/M	99523/M	99526/M
STUDY DAY	ERYTHEMA+/EDEMA+/OTHER FINDINGS									
4	SNR	0/0/h	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
11	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
18	SNR	SNR	1/0	SNR	SNR	SNR	SNR	SNR	SNR	SNR
25	SNR	1/0	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
32	SNR	SNR	1/0	SNR	SNR	SNR	SNR	SNR	SNR	0/0/d
39	SNR	SNR	1/0	1/0	SNR	SNR	SNR	0/0/h	SNR	SNR
46	SNR	SNR	1/0	SNR	SNR	SNR	SNR	SNR	SNR	DEAD
53	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	1/0	
60	0/0/h	0/0/h	0/0/h	SNR	SNR	SNR	0/0/h	SNR	0/0/h	
67	0/0/h	0/0/h	SNR	0/0/h	SNR	SNR	SNR	0/0/h	SNR	
74	0/0/h	SNR	0/0/h	0/0/h	SNR	SNR	SNR	SNR	0/0/h	
81	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	
88	SNR	SNR	SNR	SNR	SNR	NA	NA	NA	NA	
89	DEAD	DEAD	DEAD	DEAD	DEAD	SNR	SNR	SNR	SNR	

+ = REFER TO DRAIZE SCALE FOR DERMAL SCORING CRITERIA

SEX CODE: M = MALE F = FEMALE

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PROJECT NO.:WIL-402022
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TABLE A5
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 6

GROUP :		ANIMAL NO. / SEX									
UNTREATED		99535/F	99541/F	99544/F	99547/F	99559/F	99569/F	99579/F	99580/F	99586/F	99593/F
STUDY DAY	ERYTHEMA+/EDEMA+/OTHER FINDINGS										
4	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
11	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
18	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
25	SNR	SNR	SNR	SNR	SNR	SNR	SNR	1/0	SNR	SNR	SNR
32	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
39	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
46	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
53	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
60	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
67	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
74	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
81	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
88	SNR	SNR	SNR	SNR	SNR	SNR	NA	NA	NA	NA	NA
89	DEAD	DEAD	DEAD	DEAD	DEAD	DEAD	SNR	SNR	SNR	SNR	SNR
+ = REFER TO DRAIZE SCALE FOR DERMAL SCORING CRITERIA											
SEX CODE: M = MALE F = FEMALE											
d = DESQUAMATION, SNR = SCORED, NOT REMARKABLE											
NA = NOT APPLICABLE											

PROJECT NO.:WIL-402022
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TABLE A5
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 7

GROUP : 0 MG/KG/DAY		ANIMAL NO. / SEX								
	99534/F	99561/F	99562/F	99563/F	99572/F	99574/F	99575/F	99576/F	99578/F	99585/F
STUDY DAY	ERYTHEMA+/EDEMA+/OTHER FINDINGS									
4	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	0/0/d	SNR
11	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
18	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
25	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
32	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
39	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
46	SNR	SNR	SNR	1/0	SNR	SNR	SNR	SNR	SNR	SNR
53	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
60	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
67	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
74	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
81	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
88	SNR	SNR	SNR	SNR	SNR	NA	NA	NA	NA	NA
89	DEAD	DEAD	DEAD	DEAD	DEAD	SNR	SNR	SNR	SNR	SNR

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A5
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 8

GROUP : 5 MG/KG/DAY		ANIMAL NO. / SEX									
		99530/F	99532/F	99555/F	99556/F	99566/F	99568/F	99571/F	99582/F	99591/F	99592/F
STUDY DAY	ERYTHEMA+/EDEMA+/OTHER FINDINGS										
4	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
11	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
18	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
25	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
32	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
39	SNR	0/0/i	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
46	SNR	1/0	1/0	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
53	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
60	SNR	1/0	SNR	SNR	SNR	SNR	SNR	SNR	1/0	SNR	SNR
67	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	1/0	SNR	SNR
74	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
81	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	1/0	SNR	SNR
88	SNR	SNR	SNR	SNR	SNR	SNR	NA	NA	NA	NA	NA
89	DEAD	DEAD	DEAD	DEAD	DEAD	SNR	SNR	SNR	SNR	SNR	SNR
+ = REFER TO DRAIZE SCALE FOR DERMAL SCORING CRITERIA											
SEX CODE: M = MALE F = FEMALE											
d = DESQUAMATION, SNR = SCORED, NOT REMARKABLE											
i = PINPOINT SCABBING											
NA = NOT APPLICABLE											

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A5
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 9

GROUP : 50 MG/KG/DAY		ANIMAL NO. / SEX								
	99533/F	99538/F	99546/F	99552/F	99553/F	99560/F	99564/F	99567/F	99584/F	99590/F
STUDY DAY	ERYTHEMA+/EDEMA+/OTHER FINDINGS									
4	SNR	1/0	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
11	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
18	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	0/0/d	0/0/d
25	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
32	0/0/d	SNR	SNR	SNR	SNR	SNR	SNR	SNR	0/0/d	SNR
39	0/0/d	0/0/d	0/0/d	SNR	0/0/d	0/0/d	SNR	SNR	0/0/d	0/0/d
46	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
53	SNR	SNR	SNR	SNR	SNR	SNR	1/0	SNR	SNR	SNR
60	0/0/hd	SNR	SNR	SNR	SNR	0/0/d	1/0/d	SNR	SNR	0/0/d
67	0/0/d	SNR	0/0/d	SNR	SNR	0/0/d	0/0/d	0/0/h	SNR	0/0/h
74	0/0/d	SNR	0/0/d	0/0/d	0/0/d	SNR	SNR	0/0/d	SNR	0/0/d
81	0/0/d	SNR	SNR	SNR	0/0/d	0/0/d	SNR	0/0/d	SNR	0/0/d
88	SNR	SNR	SNR	SNR	SNR	NA	NA	NA	NA	NA
89	DEAD	DEAD	DEAD	DEAD	DEAD	SNR	SNR	SNR	0/0/d	SNR

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SEX CODE: M = MALE F = FEMALE
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SPONSOR:AMERICAN PETROLEUM

TABLE A5
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 10

GROUP : 150 MG/KG/DAY		ANIMAL NO. / SEX								
	99531/F	99536/F	99540/F	99548/F	99554/F	99557/F	99558/F	99577/F	99581/F	99588/F
STUDY DAY	ERYTHEMA+/EDEMA+/OTHER FINDINGS									
4	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	0/0/d
11	SNR	SNR	SNR	SNR	SNR	SNR	0/0/d	SNR	SNR	0/0/d
18	0/0/d	0/0/d	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
25	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
32	0/0/d	SNR	1/0/d	SNR	0/0/d	SNR	SNR	SNR	0/0/d	0/0/d
39	0/0/dh	SNR	SNR	0/0/d	0/0/d	SNR	0/0/d	SNR	0/0/d	SNR
46	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
53	0/0/d	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
60	0/0/h	0/0/d	SNR	0/0/h	SNR	0/0/hd	0/0/h	SNR	SNR	0/0/h
67	0/0/h	0/0/hd	SNR	0/0/h	0/0/d	0/0/dh	SNR	0/0/d	0/0/h	SNR
74	0/0/d	0/0/h	0/0/d	0/0/d	0/0/h	0/0/hd	0/0/d	SNR	0/0/d	0/0/d
81	0/0/d	SNR	0/0/d	0/0/d	SNR	SNR	0/0/d	SNR	SNR	SNR
88	SNR	SNR	SNR	SNR	SNR	NA	NA	NA	NA	NA
89	DEAD	DEAD	DEAD	DEAD	DEAD	SNR	0/0/d	SNR	SNR	0/0/d

+ = REFER TO DRAIZE SCALE FOR DERMAL SCORING CRITERIA

SEX CODE: M = MALE F = FEMALE

d = DESQUAMATION, SNR = SCORED, NOT REMARKABLE

h = RESIDUAL TEST SUBSTANCE WITHIN DOSE SITE

NA = NOT APPLICABLE

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09/04/2011
R:10/13/2011

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

PAGE 1

WEEK	-2	-1	0	1	MALE GROUP: 2	UNTREATED 3	4	5
ANIMAL								
99466	200.	252.	287.	326.	350.	371.	384.	405.
99472	193.	238.	276.	323.	352.	387.	410.	430.
99474	204.	247.	289.	319.	350.	371.	401.	418.
99491	190.	231.	269.	305.	338.	364.	398.	421.
99496	191.	250.	289.	327.	364.	387.	419.	432.
99504	195.	232.	274.	299.	326.	349.	380.	397.
99505	177.	222.	257.	287.	324.	346.	388.	401.
99507	204.	242.	286.	312.	344.	373.	408.	434.
99509	200.	256.	295.	334.	360.	389.	413.	436.
99515	200.	253.	304.	352.	369.	393.	435.	461.
MEAN	195.	242.	283.	318.	348.	373.	404.	424.
S.D.	8.2	11.3	13.7	18.6	15.1	16.5	17.0	19.4
S.E.	2.6	3.6	4.3	5.9	4.8	5.2	5.4	6.1
N	10	10	10	10	10	10	10	10

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

PAGE 2

WEEK	-2	-1	0	1	MALE GROUP: 0 MG/KG/DAY	2	3	4	5
ANIMAL									
99467	196.	243.	286.	326.	356.	380.	408.	432.	
99471	207.	253.	289.	323.	353.	376.	413.	441.	
99473	207.	259.	303.	351.	387.	408.	444.	468.	
99498	202.	247.	278.	299.	321.	326.	344.	361.	
99502	204.	241.	284.	303.	330.	340.	344.	356.	
99503	198.	237.	264.	281.	302.	318.	342.	353.	
99506	187.	218.	255.	274.	300.	328.	351.	370.	
99516	198.	229.	273.	311.	332.	346.	375.	386.	
99518	187.	233.	273.	308.	339.	364.	395.	418.	
99519	214.	250.	285.	312.	338.	361.	389.	410.	
MEAN	200.	241.	279.	309.	336.	355.	381.	400.	
S.D.	8.7	12.2	13.6	22.1	25.9	28.4	35.2	40.2	
S.E.	2.7	3.9	4.3	7.0	8.2	9.0	11.1	12.7	
N	10	10	10	10	10	10	10	10	

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

PAGE 3

WEEK	-2	-1	0	1	MALE GROUP: 5 MG/KG/DAY	2	3	4	5
ANIMAL									
99465	198.	227.	275.	293.	318.	338.	364.	383.	
99479	196.	234.	265.	299.	325.	348.	360.	380.	
99483	201.	242.	290.	326.	354.	373.	398.	424.	
99489	199.	237.	268.	299.	315.	334.	360.	380.	
99490	202.	251.	288.	313.	342.	373.	391.	413.	
99494	208.	257.	302.	342.	372.	395.	429.	448.	
99495	201.	244.	285.	316.	338.	362.	389.	423.	
99511	203.	259.	299.	343.	372.	397.	430.	449.	
99524	198.	251.	301.	339.	373.	405.	432.	459.	
99528	182.	229.	266.	290.	307.	324.	343.	359.	
MEAN	199.	243.	284.	316.	342.	365.	390.	412.	
S.D.	6.8	11.3	14.6	20.6	25.3	28.5	32.7	34.7	
S.E.	2.1	3.6	4.6	6.5	8.0	9.0	10.3	11.0	
N	10	10	10	10	10	10	10	10	

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

PAGE 4

WEEK	-2	-1	0	1	MALE GROUP: 50 MG/KG/DAY 2	3	4	5
ANIMAL								
99464	195.	238.	294.	329.	363.	381.	407.	431.
99469	205.	253.	288.	318.	343.	351.	375.	400.
99480	203.	252.	298.	345.	381.	406.	440.	465.
99485	198.	244.	284.	323.	335.	351.	371.	399.
99486	194.	238.	270.	303.	330.	346.	370.	398.
99500	199.	256.	299.	336.	371.	403.	440.	463.
99510	189.	233.	277.	314.	344.	364.	385.	397.
99512	200.	248.	282.	306.	326.	340.	363.	379.
99513	198.	226.	260.	278.	304.	316.	334.	357.
99525	196.	235.	268.	291.	310.	328.	344.	355.
MEAN	198.	242.	282.	314.	341.	359.	383.	404.
S.D.	4.6	9.9	13.2	20.5	25.2	30.0	36.2	38.4
S.E.	1.4	3.1	4.2	6.5	8.0	9.5	11.4	12.2
N	10	10	10	10	10	10	10	10

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SPONSOR:AMERICAN PETROLEUM

TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

PAGE 5

	MALE GROUP: 150 MG/KG/DAY							
WEEK	-2	-1	0	1	2	3	4	5
ANIMAL								
99468	203.	253.	303.	336.	354.	370.	398.	410.
99482	203.	249.	298.	334.	365.	390.	412.	436.
99487	214.	257.	294.	321.	360.	371.	399.	416.
99499	176.	232.	269.	310.	344.	364.	392.	418.
99501	199.	238.	286.	314.	361.	385.	409.	422.
99517	194.	223.	263.	275.	296.	312.	346.	365.
99521	195.	232.	268.	287.	313.	337.	364.	386.
99522	199.	245.	286.	313.	344.	372.	399.	420.
99523	204.	248.	291.	319.	349.	374.	384.	408.
99526	200.	240.	285.	335.	374.	396.	425.	417.
MEAN	199.	242.	284.	314.	346.	367.	393.	410.
S.D.	9.7	10.6	13.5	20.2	24.1	25.2	23.3	20.2
S.E.	3.1	3.4	4.3	6.4	7.6	8.0	7.4	6.4
N	10	10	10	10	10	10	10	10

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SPONSOR:AMERICAN PETROLEUM

TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

PAGE 6

WEEK	-2	-1	0	1	MALE GROUP: 60 MG/KG CPS 2	3	4	5
ANIMAL								
99475	204.	242.	285.	324.	380.	423.	469.	507.
99477	182.	226.	276.	312.	352.	384.	409.	431.
99478	206.	248.	283.	320.	359.	390.	413.	436.
99484	208.	269.	313.	362.	399.	436.	474.	501.
99488	183.	232.	283.	337.	395.	434.	470.	499.
99497	197.	247.	286.	325.	369.	409.	448.	470.
MEAN	197.	244.	288.	330.	376.	413.	447.	474.
S.D.	11.6	15.0	12.9	17.7	19.1	22.2	29.5	33.9
S.E.	4.7	6.1	5.3	7.2	7.8	9.0	12.0	13.8
N	6	6	6	6	6	6	6	6

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

PAGE 7

WEEK	6	7	8	9	MALE GROUP: 10	UNTREATED 11	12	12'
ANIMAL								
99466	402.	438.	455.	462.	472.	479.	502.	491.
99472	451.	472.	489.	505.	517.	527.	539.	550.
99474	424.	453.	460.	470.	482.	491.	510.	516.
99491	439.	482.	497.	516.	529.	540.	559.	562.
99496	450.	472.	476.	499.	499.	507.	520.	517.
99504	415.	425.	455.	463.	467.	471.	472.	480.
99505	418.	436.	454.	465.	468.	485.	494.	490.
99507	461.	486.	506.	527.	533.	544.	562.	559.
99509	449.	470.	487.	500.	507.	501.	520.	532.
99515	486.	493.	520.	542.	546.	551.	578.	588.
MEAN	440.	463.	480.	495.	502.	510.	526.	529.
S.D.	25.1	23.3	23.7	28.8	29.0	29.0	33.5	35.9
S.E.	7.9	7.4	7.5	9.1	9.2	9.2	10.6	11.4
N	10	10	10	10	10	10	10	10

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

PAGE 8

WEEK	6	7	8	9	MALE GROUP: 0 MG/KG/DAY 10	11	12	12'
ANIMAL								
99467	454.	476.	487.	499.	523.	515.	537.	537.
99471	464.	468.	488.	505.	520.	526.	540.	547.
99473	484.	491.	509.	522.	537.	551.	566.	572.
99498	364.	379.	393.	394.	407.	412.	422.	436.
99502	366.	386.	398.	418.	421.	419.	436.	423.
99503	373.	386.	397.	410.	420.	418.	435.	427.
99506	386.	403.	418.	433.	439.	443.	461.	457.
99516	402.	413.	427.	429.	438.	442.	456.	439.
99518	429.	461.	468.	477.	493.	500.	513.	515.
99519	434.	451.	468.	475.	489.	494.	505.	497.
MEAN	416.	431.	445.	456.	469.	472.	487.	485.
S.D.	43.5	42.4	43.5	44.8	48.9	50.9	51.3	55.4
S.E.	13.7	13.4	13.8	14.2	15.5	16.1	16.2	17.5
N	10	10	10	10	10	10	10	10

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

PAGE 9

WEEK	6	7	8	9	MALE GROUP: 5 MG/KG/DAY 10	11	12	12'
ANIMAL								
99465	392.	410.	413.	423.	436.	442.	462.	447.
99479	389.	393.	394.	408.	417.	417.	422.	420.
99483	452.	471.	484.	494.	509.	504.	522.	517.
99489	396.	415.	424.	444.	451.	451.	462.	457.
99490	429.	445.	464.	463.	476.	493.	502.	499.
99494	463.	489.	497.	510.	532.	528.	541.	548.
99495	440.	451.	456.	476.	498.	502.	516.	494.
99511	475.	481.	485.	504.	502.	515.	529.	513.
99524	486.	505.	516.	532.	547.	551.	569.	564.
99528	373.	390.	405.	418.	422.	424.	436.	435.
MEAN	430.	445.	454.	467.	479.	483.	496.	489.
S.D.	39.9	41.4	42.5	43.0	45.9	46.1	48.2	48.4
S.E.	12.6	13.1	13.4	13.6	14.5	14.6	15.3	15.3
N	10	10	10	10	10	10	10	10

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

PAGE 10

WEEK	6	7	8	9	MALE GROUP: 50 MG/KG/DAY 10	11	12	12'
ANIMAL								
99464	442.	453.	465.	489.	490.	485.	503.	502.
99469	414.	440.	445.	465.	477.	480.	494.	489.
99480	484.	505.	516.	533.	551.	547.	563.	565.
99485	414.	428.	443.	456.	468.	472.	488.	489.
99486	414.	432.	444.	451.	462.	467.	491.	492.
99500	481.	507.	520.	523.	533.	539.	560.	545.
99510	421.	440.	443.	452.	458.	448.	480.	468.
99512	396.	411.	425.	434.	443.	441.	467.	467.
99513	367.	375.	381.	387.	395.	398.	421.	421.
99525	368.	376.	388.	394.	405.	393.	429.	413.
MEAN	420.	437.	447.	458.	468.	467.	490.	485.
S.D.	40.1	44.9	45.7	47.9	49.1	51.0	46.6	47.4
S.E.	12.7	14.2	14.4	15.2	15.5	16.1	14.7	15.0
N	10	10	10	10	10	10	10	10

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

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WEEK	6	7	8	9	MALE GROUP: 150 MG/KG/DAY 10	11	12	12'
ANIMAL								
99468	426.	445.	465.	468.	474.	471.	452.	435.
99482	447.	467.	485.	505.	502.	516.	526.	493.
99487	441.	453.	467.	482.	503.	506.	530.	516.
99499	435.	448.	460.	472.	493.	494.	510.	507.
99501	439.	463.	460.	481.	480.	480.	497.	491.
99517	380.	398.	417.	428.	436.	432.	443.	446.
99521	397.	410.	429.	441.	452.	448.	460.	464.
99522	437.	454.	467.	473.	481.	473.	476.	462.
99523	423.	440.	450.	462.	460.	459.	483.	482.
99526								
MEAN	425.	442.	456.	468.	476.	475.	486.	477.
S.D.	22.3	23.3	20.9	22.7	22.8	27.1	31.7	27.4
S.E.	7.4	7.8	7.0	7.6	7.6	9.0	10.6	9.1
N	9	9	9	9	9	9	9	9

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

PAGE 12

WEEK	6	7	8	9	MALE GROUP: 60 MG/KG CPS 10	11	12	12'
ANIMAL								
99475	552.	585.	615.	617.	661.	668.	696.	704.
99477	439.	464.	464.	494.	503.	509.	514.	524.
99478	459.	474.	487.	497.	523.	522.	531.	540.
99484	525.	556.	573.	585.	617.	628.	657.	666.
99488	530.	554.	579.	600.	617.	622.	652.	660.
99497	491.	518.	535.	560.	578.	583.	596.	603.
MEAN	499.	525.	542.	559.	583.	589.	608.	616.
S.D.	44.1	48.5	58.0	52.5	60.7	62.9	73.5	72.9
S.E.	18.0	19.8	23.7	21.4	24.8	25.7	30.0	29.8
N	6	6	6	6	6	6	6	6

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

PAGE 13

WEEK	-2	-1	0	1	FEMALE GROUP: 2	UNTREATED 3	4	5
ANIMAL								
99535	149.	167.	192.	213.	229.	247.	261.	270.
99541	157.	188.	209.	235.	251.	264.	274.	291.
99544	154.	176.	198.	225.	250.	252.	279.	278.
99547	159.	179.	210.	222.	230.	238.	253.	259.
99559	141.	159.	180.	192.	205.	209.	219.	231.
99569	155.	178.	198.	218.	245.	253.	279.	280.
99579	148.	168.	185.	196.	212.	221.	237.	251.
99580	154.	166.	186.	206.	217.	227.	238.	249.
99586	148.	171.	185.	196.	212.	221.	238.	245.
99593	157.	181.	201.	229.	243.	251.	277.	284.
MEAN	152.	173.	194.	213.	229.	238.	256.	264.
S.D.	5.6	8.6	10.5	15.1	17.2	17.9	21.7	19.7
S.E.	1.8	2.7	3.3	4.8	5.5	5.7	6.9	6.2
N	10	10	10	10	10	10	10	10

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

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	FEMALE GROUP: 0 MG/KG/DAY							
WEEK	-2	-1	0	1	2	3	4	5
ANIMAL								
99534	138.	160.	180.	196.	205.	218.	231.	240.
99561	156.	182.	214.	230.	247.	255.	272.	290.
99562	155.	165.	189.	217.	231.	243.	256.	273.
99563	153.	159.	185.	204.	224.	229.	239.	254.
99572	148.	171.	192.	209.	222.	227.	249.	261.
99574	149.	176.	196.	215.	231.	236.	255.	271.
99575	148.	171.	196.	222.	240.	250.	259.	275.
99576	157.	179.	201.	217.	233.	244.	256.	268.
99578	151.	172.	193.	207.	214.	226.	238.	240.
99585	162.	181.	205.	216.	221.	229.	239.	246.
MEAN	152.	172.	195.	213.	227.	236.	249.	262.
S.D.	6.6	8.2	9.8	9.6	12.3	11.9	12.5	16.6
S.E.	2.1	2.6	3.1	3.0	3.9	3.8	4.0	5.2
N	10	10	10	10	10	10	10	10

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

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	FEMALE GROUP: 5 MG/KG/DAY							
WEEK	-2	-1	0	1	2	3	4	5
ANIMAL								
99530	147.	168.	186.	201.	214.	225.	235.	247.
99532	161.	189.	213.	232.	239.	262.	277.	294.
99555	158.	177.	202.	232.	254.	269.	273.	291.
99556	154.	181.	198.	211.	221.	231.	240.	255.
99566	151.	170.	202.	220.	233.	251.	271.	278.
99568	153.	173.	200.	223.	233.	253.	268.	279.
99571	143.	157.	182.	195.	207.	215.	234.	240.
99582	149.	167.	187.	199.	213.	214.	229.	239.
99591	155.	178.	191.	221.	238.	259.	277.	276.
99592	149.	159.	177.	205.	220.	229.	231.	249.
MEAN	152.	172.	194.	214.	227.	241.	254.	265.
S.D.	5.3	9.8	11.0	13.6	14.6	20.3	21.1	21.0
S.E.	1.7	3.1	3.5	4.3	4.6	6.4	6.7	6.7
N	10	10	10	10	10	10	10	10

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

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	FEMALE GROUP: 50 MG/KG/DAY							
WEEK	-2	-1	0	1	2	3	4	5
ANIMAL								
99533	155.	177.	195.	217.	237.	245.	272.	278.
99538	139.	156.	179.	187.	203.	207.	225.	228.
99546	147.	169.	187.	195.	202.	216.	223.	227.
99552	152.	166.	184.	204.	216.	227.	239.	246.
99553	148.	161.	181.	190.	206.	221.	224.	231.
99560	170.	192.	212.	233.	249.	263.	275.	285.
99564	150.	178.	203.	217.	240.	257.	270.	280.
99567	160.	183.	203.	220.	243.	250.	266.	265.
99584	157.	171.	193.	202.	218.	233.	246.	251.
99590	152.	173.	193.	197.	207.	221.	238.	243.
MEAN	153.	173.	193.	206.	222.	234.	248.	253.
S.D.	8.3	10.6	10.7	14.9	18.3	18.8	21.2	22.3
S.E.	2.6	3.3	3.4	4.7	5.8	6.0	6.7	7.0
N	10	10	10	10	10	10	10	10

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

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	FEMALE GROUP: 150 MG/KG/DAY							
WEEK	-2	-1	0	1	2	3	4	5
ANIMAL								
99531	157.	174.	190.	203.	216.	232.	232.	241.
99536	151.	180.	200.	214.	222.	238.	246.	248.
99540	150.	170.	183.	205.	220.	238.	253.	265.
99548	162.	189.	220.	226.	239.	251.	261.	272.
99554	153.	159.	173.	185.	197.	202.	209.	214.
99557	154.	176.	197.	211.	225.	239.	250.	261.
99558	144.	163.	180.	191.	197.	206.	220.	228.
99577	163.	197.	221.	234.	256.	264.	280.	290.
99581	147.	169.	189.	197.	201.	209.	217.	217.
99588	152.	163.	179.	194.	203.	208.	219.	225.
MEAN	153.	174.	193.	206.	218.	229.	239.	246.
S.D.	6.0	12.0	16.6	15.5	19.3	21.3	22.9	25.5
S.E.	1.9	3.8	5.2	4.9	6.1	6.7	7.2	8.1
N	10	10	10	10	10	10	10	10

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

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WEEK	-2	-1	0	1	2	3	4	5
FEMALE GROUP: 60 MG/KG CPS								
ANIMAL								
99529	159.	185.	211.	237.	246.	257.	279.	300.
99537	142.	167.	192.	210.	234.	251.	278.	287.
99539	137.	158.	182.	202.	220.	239.	257.	263.
99542	152.	179.	198.	226.	245.	261.	273.	286.
99549	147.	169.	190.	209.	220.	224.	237.	252.
99570	153.	175.	195.	213.	236.	248.	266.	277.
MEAN	148.	172.	195.	216.	234.	247.	265.	278.
S.D.	8.0	9.6	9.7	12.9	11.5	13.5	16.0	17.5
S.E.	3.3	3.9	3.9	5.3	4.7	5.5	6.5	7.1
N	6	6	6	6	6	6	6	6

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

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WEEK	6	7	8	9	FEMALE GROUP: 10	UNTREATED 11	12	12'
ANIMAL								
99535	279.	291.	288.	299.	298.	296.	302.	311.
99541	294.	309.	310.	318.	321.	321.	327.	332.
99544	303.	294.	317.	316.	320.	321.	327.	330.
99547	269.	280.	285.	286.	286.	284.	303.	301.
99559	242.	244.	248.	253.	255.	254.	269.	269.
99569	297.	313.	312.	326.	331.	332.	341.	345.
99579	257.	269.	271.	285.	284.	282.	291.	288.
99580	267.	278.	272.	286.	280.	286.	297.	305.
99586	255.	271.	269.	277.	288.	287.	292.	296.
99593	294.	290.	289.	288.	311.	313.	332.	323.
MEAN	276.	284.	286.	293.	297.	298.	308.	310.
S.D.	20.9	20.3	22.1	21.9	23.3	23.8	22.7	23.0
S.E.	6.6	6.4	7.0	6.9	7.4	7.5	7.2	7.3
N	10	10	10	10	10	10	10	10

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

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	FEMALE GROUP: 0 MG/KG/DAY							
WEEK	6	7	8	9	10	11	12	12'
ANIMAL								
99534	242.	251.	260.	260.	265.	271.	270.	273.
99561	295.	307.	314.	311.	309.	315.	327.	327.
99562	282.	293.	293.	304.	309.	310.	321.	315.
99563	267.	268.	273.	275.	278.	278.	292.	278.
99572	267.	270.	281.	294.	293.	289.	304.	298.
99574	279.	278.	286.	294.	298.	296.	308.	308.
99575	283.	289.	297.	300.	306.	305.	307.	312.
99576	283.	289.	289.	292.	297.	291.	291.	288.
99578	248.	257.	269.	271.	266.	263.	274.	270.
99585	261.	263.	265.	265.	280.	272.	279.	276.
MEAN	271.	277.	283.	287.	290.	289.	297.	295.
S.D.	16.8	17.8	16.5	17.5	16.8	17.8	19.4	20.3
S.E.	5.3	5.6	5.2	5.5	5.3	5.6	6.1	6.4
N	10	10	10	10	10	10	10	10

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

PAGE 21

	FEMALE GROUP: 5 MG/KG/DAY							
WEEK	6	7	8	9	10	11	12	12'
ANIMAL								
99530	257.	258.	271.	269.	275.	268.	284.	284.
99532	295.	310.	323.	327.	334.	332.	339.	341.
99555	288.	304.	306.	311.	306.	304.	319.	315.
99556	265.	268.	279.	285.	282.	282.	293.	294.
99566	282.	290.	294.	289.	302.	304.	307.	306.
99568	282.	292.	297.	295.	306.	307.	308.	306.
99571	252.	260.	262.	268.	273.	277.	283.	277.
99582	245.	249.	265.	274.	271.	274.	277.	286.
99591	287.	291.	291.	301.	302.	313.	315.	305.
99592	253.	252.	256.	265.	274.	269.	267.	270.
MEAN	271.	277.	284.	288.	293.	293.	299.	298.
S.D.	18.1	22.5	21.5	20.4	20.7	21.9	22.2	20.8
S.E.	5.7	7.1	6.8	6.5	6.6	6.9	7.0	6.6
N	10	10	10	10	10	10	10	10

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SPONSOR:AMERICAN PETROLEUM

TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

PAGE 22

	FEMALE GROUP: 50 MG/KG/DAY							
WEEK	6	7	8	9	10	11	12	12'
ANIMAL								
99533	289.	299.	309.	311.	323.	316.	335.	322.
99538	231.	250.	255.	257.	270.	260.	266.	264.
99546	227.	242.	249.	252.	249.	249.	258.	255.
99552	250.	253.	248.	260.	265.	262.	268.	258.
99553	232.	246.	246.	250.	259.	258.	261.	260.
99560	285.	296.	295.	300.	306.	301.	311.	305.
99564	289.	303.	309.	311.	324.	315.	324.	324.
99567	264.	272.	279.	281.	285.	279.	285.	289.
99584	255.	264.	267.	270.	274.	266.	270.	273.
99590	250.	251.	257.	266.	270.	263.	276.	261.
MEAN	257.	268.	271.	276.	283.	277.	285.	281.
S.D.	24.0	23.6	25.0	23.7	26.4	24.8	27.8	27.0
S.E.	7.6	7.5	7.9	7.5	8.4	7.8	8.8	8.5
N	10	10	10	10	10	10	10	10

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

PAGE 23

	FEMALE GROUP: 150 MG/KG/DAY							
WEEK	6	7	8	9	10	11	12	12'
ANIMAL								
99531	242.	250.	252.	255.	258.	250.	274.	265.
99536	257.	257.	261.	260.	267.	264.	280.	271.
99540	271.	281.	291.	293.	302.	298.	312.	300.
99548	279.	279.	283.	293.	292.	293.	306.	290.
99554	221.	221.	223.	221.	229.	223.	227.	232.
99557	268.	272.	277.	282.	285.	275.	286.	290.
99558	237.	237.	242.	246.	248.	243.	249.	247.
99577	309.	322.	312.	314.	320.	314.	317.	328.
99581	221.	226.	229.	232.	238.	231.	236.	237.
99588	235.	235.	237.	247.	250.	249.	249.	250.
MEAN	254.	258.	261.	264.	269.	264.	274.	271.
S.D.	28.1	31.1	29.3	30.0	29.7	30.3	32.3	30.8
S.E.	8.9	9.8	9.3	9.5	9.4	9.6	10.2	9.7
N	10	10	10	10	10	10	10	10

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TABLE A6
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHTS [G]

PAGE 24

	FEMALE GROUP: 60 MG/KG CPS							
WEEK	6	7	8	9	10	11	12	12'
ANIMAL								
99529	307.	316.	322.	339.	336.	344.	334.	338.
99537	301.	312.	310.	326.	328.	329.	341.	339.
99539	271.	282.	286.	295.	291.	296.	314.	310.
99542	288.	298.	305.	310.	315.	310.	319.	320.
99549	254.	252.	259.	267.	270.	263.	274.	277.
99570	289.	294.	299.	316.	319.	318.	321.	330.
MEAN	285.	292.	297.	309.	310.	310.	317.	319.
S.D.	19.6	23.3	22.0	25.3	24.8	28.2	23.4	23.4
S.E.	8.0	9.5	9.0	10.3	10.1	11.5	9.6	9.5
N	6	6	6	6	6	6	6	6

PBFTSv4.55
10/13/2011
R:10/13/2011

FINAL REPORT



Contents: Volume 5 of 5
Appendix N (continued)

Study Title: A 90-Day Repeat-Dose Dermal Toxicity
Study in Conjunction with a Micronucleus
Assay Utilizing Extract, Light Paraffinic
Distillate Solvent in Sprague Dawley Rats

Laboratory Project ID: WIL-402022

Author: [REDACTED]

Test Guidelines: OPPTS Guideline 870.3250
40 CFR 798.2250 and 798.5395
OECD Guidelines 411 and 474

Study Completion Date: 8 August 2012

Performing Laboratories: WIL Research
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Skokie, IL 60077

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Total Number of Pages: 1413

APPENDIX N

Individual Animal Data (continued)

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 1

	MALE GROUP: UNTREATED															
WEEK	-2 TO	-1	-1 TO	0	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6
ANIMAL																
99466	52.		35.		39.		24.		21.		13.		21.		-3.	
99472	45.		38.		47.		29.		35.		23.		20.		21.	
99474	43.		42.		30.		31.		21.		30.		17.		6.	
99491	41.		38.		36.		33.		26.		34.		23.		18.	
99496	59.		39.		38.		37.		23.		32.		13.		18.	
99504	37.		42.		25.		27.		23.		31.		17.		18.	
99505	45.		35.		30.		37.		22.		42.		13.		17.	
99507	38.		44.		26.		32.		29.		35.		26.		27.	
99509	56.		39.		39.		26.		29.		24.		23.		13.	
99515	53.		51.		48.		17.		24.		42.		26.		25.	
MEAN	47.		40.		36.		29.		25.		31.		20.		16.	
S.D.	7.7		4.8		8.0		6.1		4.5		8.8		4.8		8.9	
S.E.	2.4		1.5		2.5		1.9		1.4		2.8		1.5		2.8	
N	10		10		10		10		10		10		10		10	

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 2

MALE GROUP: 0 MG/KG/DAY															
WEEK	-2 TO	-1	-1 TO	0	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO 6
ANIMAL															
99467	47.		43.		40.		30.		24.		28.		24.		22.
99471	46.		36.		34.		30.		23.		37.		28.		23.
99473	52.		44.		48.		36.		21.		36.		24.		16.
99498	45.		31.		21.		22.		5.		18.		17.		3.
99502	37.		43.		19.		27.		10.		4.		12.		10.
99503	39.		27.		17.		21.		16.		24.		11.		20.
99506	31.		37.		19.		26.		28.		23.		19.		16.
99516	31.		44.		38.		21.		14.		29.		11.		16.
99518	46.		40.		35.		31.		25.		31.		23.		11.
99519	36.		35.		27.		26.		23.		28.		21.		24.
MEAN	41.		38.		30.		27.		19.		26.		19.		16.
S.D.	7.2		5.9		10.7		4.9		7.4		9.6		6.1		6.6
S.E.	2.3		1.9		3.4		1.5		2.3		3.0		1.9		2.1
N	10		10		10		10		10		10		10		10

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 3

MALE GROUP: 5 MG/KG/DAY																
WEEK	-2 TO	-1	-1 TO	0	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6
ANIMAL																
99465	29.		48.		18.		25.		20.		26.		19.		9.	
99479	38.		31.		34.		26.		23.		12.		20.		9.	
99483	41.		48.		36.		28.		19.		25.		26.		28.	
99489	38.		31.		31.		16.		19.		26.		20.		16.	
99490	49.		37.		25.		29.		31.		18.		22.		16.	
99494	49.		45.		40.		30.		23.		34.		19.		15.	
99495	43.		41.		31.		22.		24.		27.		34.		17.	
99511	56.		40.		44.		29.		25.		33.		19.		26.	
99524	53.		50.		38.		34.		32.		27.		27.		27.	
99528	47.		37.		24.		17.		17.		19.		16.		14.	
MEAN	44.		41.		32.		26.		23.		25.		22.		18.	
S.D.	8.1		6.9		8.0		5.8		5.0		6.7		5.3		7.0	
S.E.	2.6		2.2		2.5		1.8		1.6		2.1		1.7		2.2	
N	10		10		10		10		10		10		10		10	

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 4

MALE GROUP: 50 MG/KG/DAY																
WEEK	-2 TO	-1	-1 TO	0	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6

ANIMAL																
99464	43.			56.		35.		34.		18.		26.		24.		11.
99469	48.			35.		30.		25.		8.		24.		25.		14.
99480	49.			46.		47.		36.		25.		34.		25.		19.
99485	46.			40.		39.		12.		16.		20.		28.		15.
99486	44.			32.		33.		27.		16.		24.		28.		16.
99500	57.			43.		37.		35.		32.		37.		23.		18.
99510	44.			44.		37.		30.		20.		21.		12.		24.
99512	48.			34.		24.		20.		14.		23.		16.		17.
99513	28.			34.		18.		26.		12.		18.		23.		10.
99525	39.			33.		23.		19.		18.		16.		11.		13.
MEAN	45.			40.		32.		26.		18.		24.		22.		16.
S.D.	7.5			7.6		8.7		7.8		6.7		6.7		6.2		4.1
S.E.	2.4			2.4		2.7		2.5		2.1		2.1		2.0		1.3
N	10			10		10		10		10		10		10		10

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 5

MALE										GROUP: 150 MG/KG/DAY						
WEEK	-2 TO	-1	-1 TO	0	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6

ANIMAL																
99468	50.			50.		33.		18.		16.		28.		12.		16.
99482	46.			49.		36.		31.		25.		22.		24.		11.
99487	43.			37.		27.		39.		11.		28.		17.		25.
99499	56.			37.		41.		34.		20.		28.		26.		17.
99501	39.			48.		28.		47.		24.		24.		13.		17.
99517	29.			40.		12.		21.		16.		34.		19.		15.
99521	37.			36.		19.		26.		24.		27.		22.		11.
99522	46.			41.		27.		31.		28.		27.		21.		17.
99523	44.			43.		28.		30.		25.		10.		24.		15.
99526	40.			45.		50.		39.		22.		29.		-8.		
MEAN	43.			43.		30.		32.		21.		26.		17.		16.
S.D.	7.4			5.2		10.7		8.7		5.3		6.3		9.9		4.1
S.E.	2.3			1.7		3.4		2.8		1.7		2.0		3.1		1.4
N	10			10		10		10		10		10		10		9

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 6

MALE GROUP: 60 MG/KG CPS																
WEEK	-2 TO	-1	-1 TO	0	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6

ANIMAL																
99475		38.		43.		39.		56.		43.		46.		38.		45.
99477		44.		50.		36.		40.		32.		25.		22.		8.
99478		42.		35.		37.		39.		31.		23.		23.		23.
99484		61.		44.		49.		37.		37.		38.		27.		24.
99488		49.		51.		54.		58.		39.		36.		29.		31.
99497		50.		39.		39.		44.		40.		39.		22.		21.
MEAN		47.		44.		42.		46.		37.		35.		27.		25.
S.D.		8.0		6.2		7.4		9.1		4.7		8.8		6.2		12.2
S.E.		3.3		2.5		3.0		3.7		1.9		3.6		2.5		5.0
N		6		6		6		6		6		6		6		6

PROJECT NO.:WIL-402022
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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 7

		MALE GROUP: UNTREATED													
WEEK	6 TO	7	7 TO	8	8 TO	9	9 TO	10	10 TO	11	11 TO	12	12 TO	12 '	

ANIMAL															
99466	36.		17.			7.		10.		7.		23.		-11.	
99472	21.		17.			16.		12.		10.		12.		11.	
99474	29.		7.			10.		12.		9.		19.		6.	
99491	43.		15.			19.		13.		11.		19.		3.	
99496	22.		4.			23.		0.		8.		13.		-3.	
99504	10.		30.			8.		4.		4.		1.		8.	
99505	18.		18.			11.		3.		17.		9.		-4.	
99507	25.		20.			21.		6.		11.		18.		-3.	
99509	21.		17.			13.		7.		-6.		19.		12.	
99515	7.		27.			22.		4.		5.		27.		10.	
MEAN	23.		17.			15.		7.		8.		16.		3.	
S.D.	10.9		7.8			6.0		4.5		6.0		7.5		7.8	
S.E.	3.4		2.5			1.9		1.4		1.9		2.4		2.5	
N	10		10			10		10		10		10		10	

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 8

MALE GROUP: 0 MG/KG/DAY														
WEEK	6 TO	7	7 TO	8	8 TO	9	9 TO	10	10 TO	11	11 TO	12	12 TO	12 '

ANIMAL														
99467	22.			11.		12.		24.		-8.		22.		0.
99471	4.			20.		17.		15.		6.		14.		7.
99473	7.			18.		13.		15.		14.		15.		6.
99498	15.			14.		1.		13.		5.		10.		14.
99502	20.			12.		20.		3.		-2.		17.		-13.
99503	13.			11.		13.		10.		-2.		17.		-8.
99506	17.			15.		15.		6.		4.		18.		-4.
99516	11.			14.		2.		9.		4.		14.		-17.
99518	32.			7.		9.		16.		7.		13.		2.
99519	17.			17.		7.		14.		5.		11.		-8.
MEAN	16.			14.		11.		13.		3.		15.		-2.
S.D.	8.0			3.8		6.2		5.9		6.0		3.5		9.7
S.E.	2.5			1.2		2.0		1.9		1.9		1.1		3.1
N	10			10		10		10		10		10		10

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 9

MALE GROUP: 5 MG/KG/DAY														
WEEK	6 TO	7	7 TO	8	8 TO	9	9 TO	10	10 TO	11	11 TO	12	12 TO	12 '

ANIMAL														
99465	18.		3.		10.		13.		6.		20.		-15.	
99479	4.		1.		14.		9.		0.		5.		-2.	
99483	19.		13.		10.		15.		-5.		18.		-5.	
99489	19.		9.		20.		7.		0.		11.		-5.	
99490	16.		19.		-1.		13.		17.		9.		-3.	
99494	26.		8.		13.		22.		-4.		13.		7.	
99495	11.		5.		20.		22.		4.		14.		-22.	
99511	6.		4.		19.		-2.		13.		14.		-16.	
99524	19.		11.		16.		15.		4.		18.		-5.	
99528	17.		15.		13.		4.		2.		12.		-1.	
MEAN	16.		9.		13.		12.		4.		13.		-7.	
S.D.	6.7		5.8		6.3		7.6		6.9		4.5		8.5	
S.E.	2.1		1.8		2.0		2.4		2.2		1.4		2.7	
N	10		10		10		10		10		10		10	

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 10

MALE GROUP: 50 MG/KG/DAY														
WEEK	6 TO	7	7 TO	8	8 TO	9	9 TO	10	10 TO	11	11 TO	12	12 TO	12'

ANIMAL														
99464	11.		12.		24.		1.		-5.		18.		-1.	
99469	26.		5.		20.		12.		3.		14.		-5.	
99480	21.		11.		17.		18.		-4.		16.		2.	
99485	14.		15.		13.		12.		4.		16.		1.	
99486	18.		12.		7.		11.		5.		24.		1.	
99500	26.		13.		3.		10.		6.		21.		-15.	
99510	19.		3.		9.		6.		-10.		32.		-12.	
99512	15.		14.		9.		9.		-2.		26.		0.	
99513	8.		6.		6.		8.		3.		23.		0.	
99525	8.		12.		6.		11.		-12.		36.		-16.	
MEAN	17.		10.		11.		10.		-1.		23.		-5.	
S.D.	6.6		4.1		6.9		4.4		6.4		7.2		7.1	
S.E.	2.1		1.3		2.2		1.4		2.0		2.3		2.2	
N	10		10		10		10		10		10		10	

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 11

MALE GROUP: 150 MG/KG/DAY														
WEEK	6 TO	7	7 TO	8	8 TO	9	9 TO	10	10 TO	11	11 TO	12	12 TO	12'

ANIMAL														
99468	19.		20.		3.		6.		-3.		-19.		-17.	
99482	20.		18.		20.		-3.		14.		10.		-33.	
99487	12.		14.		15.		21.		3.		24.		-14.	
99499	13.		12.		12.		21.		1.		16.		-3.	
99501	24.		-3.		21.		-1.		0.		17.		-6.	
99517	18.		19.		11.		8.		-4.		11.		3.	
99521	13.		19.		12.		11.		-4.		12.		4.	
99522	17.		13.		6.		8.		-8.		3.		-14.	
99523	17.		10.		12.		-2.		-1.		24.		-1.	
MEAN	17.		14.		12.		8.		0.		11.		-9.	
S.D.	3.9		7.2		5.8		9.0		6.2		13.1		11.8	
S.E.	1.3		2.4		1.9		3.0		2.1		4.4		3.9	
N	9		9		9		9		9		9		9	

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SPONSOR:AMERICAN PETROLEUM

TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 12

MALE GROUP: 60 MG/KG CPS														
WEEK	6 TO	7	7 TO	8	8 TO	9	9 TO	10	10 TO	11	11 TO	12	12 TO	12 '

ANIMAL														
99475				30.		2.		44.		7.		28.		8.
99477		33.		0.		30.		9.		6.		5.		10.
99478		25.		13.		10.		26.		-1.		9.		9.
99484		15.		17.		12.		32.		11.		29.		9.
99488		31.		25.		21.		17.		5.		30.		8.
99497		27.		17.		25.		18.		5.		13.		7.
MEAN		26.		17.		17.		24.		6.		19.		9.
S.D.		6.3		10.4		10.5		12.5		3.9		11.3		1.0
S.E.		2.6		4.2		4.3		5.1		1.6		4.6		0.4
N		6		6		6		6		6		6		6

PROJECT NO.:WIL-402022
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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 13

WEEK	FEMALE GROUP:										UNTREATED					
	-2 TO	-1	-1 TO	0	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6

ANIMAL																
99535	18.			25.		21.		16.		18.		14.		9.		9.
99541	31.			21.		26.		16.		13.		10.		17.		3.
99544	22.			22.		27.		25.		2.		27.		-1.		25.
99547	20.			31.		12.		8.		8.		15.		6.		10.
99559	18.			21.		12.		13.		4.		10.		12.		11.
99569	23.			20.		20.		27.		8.		26.		1.		17.
99579	20.			17.		11.		16.		9.		16.		14.		6.
99580	12.			20.		20.		11.		10.		11.		11.		18.
99586	23.			14.		11.		16.		9.		17.		7.		10.
99593	24.			20.		28.		14.		8.		26.		7.		10.
MEAN		21.		21.		19.		16.		9.		17.		8.		12.
S.D.		4.9		4.5		6.9		5.8		4.4		6.7		5.6		6.4
S.E.		1.6		1.4		2.2		1.8		1.4		2.1		1.8		2.0
N		10		10		10		10		10		10		10		10

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 14

FEMALE GROUP: 0 MG/KG/DAY															
WEEK	-2 TO	-1	-1 TO	0	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO 6
ANIMAL															
99534	22.		20.		16.		9.		13.		13.		9.		2.
99561	26.		32.		16.		17.		8.		17.		18.		5.
99562	10.		24.		28.		14.		12.		13.		17.		9.
99563	6.		26.		19.		20.		5.		10.		15.		13.
99572	23.		21.		17.		13.		5.		22.		12.		6.
99574	27.		20.		19.		16.		5.		19.		16.		8.
99575	23.		25.		26.		18.		10.		9.		16.		8.
99576	22.		22.		16.		16.		11.		12.		12.		15.
99578	21.		21.		14.		7.		12.		12.		2.		8.
99585	19.		24.		11.		5.		8.		10.		7.		15.
MEAN	20.		24.		18.		14.		9.		14.		12.		9.
S.D.	6.7		3.7		5.2		5.0		3.1		4.3		5.1		4.3
S.E.	2.1		1.2		1.6		1.6		1.0		1.4		1.6		1.4
N	10		10		10		10		10		10		10		10

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 15

FEMALE GROUP: 5 MG/KG/DAY															
WEEK	-2 TO	-1	-1 TO	0	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO 6
ANIMAL															
99530	21.		18.		15.		13.		11.		10.		12.		10.
99532	28.		24.		19.		7.		23.		15.		17.		1.
99555	19.		25.		30.		22.		15.		4.		18.		-3.
99556	27.		17.		13.		10.		10.		9.		15.		10.
99566	19.		32.		18.		13.		18.		20.		7.		4.
99568	20.		27.		23.		10.		20.		15.		11.		3.
99571	14.		25.		13.		12.		8.		19.		6.		12.
99582	18.		20.		12.		14.		1.		15.		10.		6.
99591	23.		13.		30.		17.		21.		18.		-1.		11.
99592	10.		18.		28.		15.		9.		2.		18.		4.
MEAN	20.		22.		20.		13.		14.		13.		11.		6.
S.D.	5.4		5.7		7.2		4.2		7.0		6.2		6.1		4.9
S.E.	1.7		1.8		2.3		1.3		2.2		2.0		1.9		1.5
N	10		10		10		10		10		10		10		10

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SPONSOR:AMERICAN PETROLEUM

TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 16

FEMALE GROUP: 50 MG/KG/DAY																
WEEK	-2 TO	-1	-1 TO	0	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6

ANIMAL																
99533	22.			18.		22.		20.		8.		27.		6.		11.
99538	17.			23.		8.		16.		4.		18.		3.		3.
99546	22.			18.		8.		7.		14.		7.		4.		0.
99552	14.			18.		20.		12.		11.		12.		7.		4.
99553	13.			20.		9.		16.		15.		3.		7.		1.
99560	22.			20.		21.		16.		14.		12.		10.		0.
99564	28.			25.		14.		23.		17.		13.		10.		9.
99567	23.			20.		17.		23.		7.		16.		-1.		-1.
99584	14.			22.		9.		16.		15.		13.		5.		4.
99590	21.			20.		4.		10.		14.		17.		5.		7.
MEAN	20.			20.		13.		16.		12.		14.		6.		4.
S.D.	4.9			2.3		6.4		5.2		4.2		6.5		3.3		4.1
S.E.	1.5			0.7		2.0		1.7		1.3		2.0		1.0		1.3
N	10			10		10		10		10		10		10		10

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 17

FEMALE GROUP: 150 MG/KG/DAY																
WEEK	-2 TO	-1	-1 TO	0	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6

ANIMAL																
99531	17.			16.		13.		13.		16.		0.		9.		1.
99536	29.			20.		14.		8.		16.		8.		2.		9.
99540	20.			13.		22.		15.		18.		15.		12.		6.
99548	27.			31.		6.		13.		12.		10.		11.		7.
99554	6.			14.		12.		12.		5.		7.		5.		7.
99557	22.			21.		14.		14.		14.		11.		11.		7.
99558	19.			17.		11.		6.		9.		14.		8.		9.
99577	34.			24.		13.		22.		8.		16.		10.		19.
99581	22.			20.		8.		4.		8.		8.		0.		4.
99588	11.			16.		15.		9.		5.		11.		6.		10.
MEAN		21.		19.		13.		12.		11.		10.		7.		8.
S.D.		8.3		5.3		4.3		5.1		4.7		4.7		4.1		4.7
S.E.		2.6		1.7		1.4		1.6		1.5		1.5		1.3		1.5
N		10		10		10		10		10		10		10		10

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 18

FEMALE GROUP: 60 MG/KG CPS																
WEEK	-2 TO	-1	-1 TO	0	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6

ANIMAL																
99529		26.		26.		26.		9.		11.		22.		21.		7.
99537		25.		25.		18.		24.		17.		27.		9.		14.
99539		21.		24.		20.		18.		19.		18.		6.		8.
99542		27.		19.		28.		19.		16.		12.		13.		2.
99549		22.		21.		19.		11.		4.		13.		15.		2.
99570		22.		20.		18.		23.		12.		18.		11.		12.
MEAN		24.		23.		22.		17.		13.		18.		13.		8.
S.D.		2.5		2.9		4.4		6.2		5.4		5.6		5.2		5.0
S.E.		1.0		1.2		1.8		2.5		2.2		2.3		2.1		2.0
N		6		6		6		6		6		6		6		6

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 19

FEMALE GROUP: UNTREATED														
WEEK	6 TO	7	7 TO	8	8 TO	9	9 TO	10	10 TO	11	11 TO	12	12 TO	12 '

ANIMAL														
99535	12.			-3.		11.		-1.		-2.		6.		9.
99541	15.			1.		8.		3.		0.		6.		5.
99544	-9.			23.		-1.		4.		1.		6.		3.
99547	11.			5.		1.		0.		-2.		19.		-2.
99559	2.			4.		5.		2.		-1.		15.		0.
99569	16.			-1.		14.		5.		1.		9.		4.
99579	12.			2.		14.		-1.		-2.		9.		-3.
99580	11.			-6.		14.		-6.		6.		11.		8.
99586	16.			-2.		8.		11.		-1.		5.		4.
99593	-4.			-1.		-1.		23.		2.		19.		-9.
MEAN	8.			2.		7.		4.		0.		11.		2.
S.D.	8.8			8.0		6.1		8.0		2.5		5.4		5.5
S.E.	2.8			2.5		1.9		2.5		0.8		1.7		1.7
N	10			10		10		10		10		10		10

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 20

FEMALE GROUP: 0 MG/KG/DAY														
WEEK	6 TO	7	7 TO	8	8 TO	9	9 TO	10	10 TO	11	11 TO	12	12 TO	12 '

ANIMAL														
99534	9.		9.		0.		5.		6.		-1.		3.	
99561	12.		7.		-3.		-2.		6.		12.		0.	
99562	11.		0.		11.		5.		1.		11.		-6.	
99563	1.		5.		2.		3.		0.		14.		-14.	
99572	3.		11.		13.		-1.		-4.		15.		-6.	
99574	-1.		8.		8.		4.		-2.		12.		0.	
99575	6.		8.		3.		6.		-1.		2.		5.	
99576	6.		0.		3.		5.		-6.		0.		-3.	
99578	9.		12.		2.		-5.		-3.		11.		-4.	
99585	2.		2.		0.		15.		-8.		7.		-3.	
MEAN	6.		6.		4.		4.		-1.		8.		-3.	
S.D.	4.4		4.3		5.1		5.5		4.6		5.9		5.3	
S.E.	1.4		1.4		1.6		1.7		1.5		1.9		1.7	
N	10		10		10		10		10		10		10	

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 21

FEMALE GROUP: 5 MG/KG/DAY														
WEEK	6 TO	7	7 TO	8	8 TO	9	9 TO	10	10 TO	11	11 TO	12	12 TO	12 '

ANIMAL														
99530	1.			13.		-2.		6.		-7.		16.		0.
99532	15.			13.		4.		7.		-2.		7.		2.
99555	16.			2.		5.		-5.		-2.		15.		-4.
99556	3.			11.		6.		-3.		0.		11.		1.
99566	8.			4.		-5.		13.		2.		3.		-1.
99568	10.			5.		-2.		11.		1.		1.		-2.
99571	8.			2.		6.		5.		4.		6.		-6.
99582	4.			16.		9.		-3.		3.		3.		9.
99591	4.			0.		10.		1.		11.		2.		-10.
99592	-1.			4.		9.		9.		-5.		-2.		3.
MEAN	7.			7.		4.		4.		1.		6.		-1.
S.D.	5.7			5.7		5.2		6.3		5.1		6.1		5.2
S.E.	1.8			1.8		1.7		2.0		1.6		1.9		1.7
N	10			10		10		10		10		10		10

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 22

FEMALE GROUP: 50 MG/KG/DAY								
WEEK	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 12'	
ANIMAL								
99533	10.	10.	2.	12.	-7.	19.	-13.	
99538	19.	5.	2.	13.	-10.	6.	-2.	
99546	15.	7.	3.	-3.	0.	9.	-3.	
99552	3.	-5.	12.	5.	-3.	6.	-10.	
99553	14.	0.	4.	9.	-1.	3.	-1.	
99560	11.	-1.	5.	6.	-5.	10.	-6.	
99564	14.	6.	2.	13.	-9.	9.	0.	
99567	8.	7.	2.	4.	-6.	6.	4.	
99584	9.	3.	3.	4.	-8.	4.	3.	
99590	1.	6.	9.	4.	-7.	13.	-15.	
MEAN	10.	4.	4.	7.	-6.	9.	-4.	
S.D.	5.5	4.5	3.4	5.1	3.3	4.7	6.5	
S.E.	1.7	1.4	1.1	1.6	1.1	1.5	2.1	
N	10	10	10	10	10	10	10	

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TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 23

FEMALE GROUP: 150 MG/KG/DAY														
WEEK	6 TO	7	7 TO	8	8 TO	9	9 TO	10	10 TO	11	11 TO	12	12 TO	12 '

ANIMAL														
99531	8.		2.		3.		3.		-8.		24.		-9.	
99536	0.		4.		-1.		7.		-3.		16.		-9.	
99540	10.		10.		2.		9.		-4.		14.		-12.	
99548	0.		4.		10.		-1.		1.		13.		-16.	
99554	0.		2.		-2.		8.		-6.		4.		5.	
99557	4.		5.		5.		3.		-10.		11.		4.	
99558	0.		5.		4.		2.		-5.		6.		-2.	
99577	13.		-10.		2.		6.		-6.		3.		11.	
99581	5.		3.		3.		6.		-7.		5.		1.	
99588	0.		2.		10.		3.		-1.		0.		1.	
MEAN	4.		3.		4.		5.		-5.		10.		-3.	
S.D.	4.9		5.1		4.0		3.1		3.3		7.3		8.6	
S.E.	1.5		1.6		1.3		1.0		1.0		2.3		2.7	
N	10		10		10		10		10		10		10	

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SPONSOR:AMERICAN PETROLEUM

TABLE A7
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 24

FEMALE GROUP: 60 MG/KG CPS													
WEEK	6 TO	7	7 TO	8	8 TO	9	9 TO	10	10 TO	11	11 TO	12	12 TO 12'
ANIMAL													
99529	9.		6.		17.		-3.		8.		-10.		4.
99537	11.		-2.		16.		2.		1.		12.		-2.
99539	11.		4.		9.		-4.		5.		18.		-4.
99542	10.		7.		5.		5.		-5.		9.		1.
99549	-2.		7.		8.		3.		-7.		11.		3.
99570	5.		5.		17.		3.		-1.		3.		9.
MEAN	7.		5.		12.		1.		0.		7.		2.
S.D.	5.1		3.4		5.3		3.6		5.7		9.7		4.6
S.E.	2.1		1.4		2.2		1.5		2.3		4.0		1.9
N	6		6		6		6		6		6		6

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 1

WEEK	0 TO 1	0 TO 2	0 TO 3	0 TO 4	0 TO 5	0 TO 6	0 TO 7	0 TO 8

ANIMAL								
99466	39.	63.	84.	97.	118.	115.	151.	168.
99472	47.	76.	111.	134.	154.	175.	196.	213.
99474	30.	61.	82.	112.	129.	135.	164.	171.
99491	36.	69.	95.	129.	152.	170.	213.	228.
99496	38.	75.	98.	130.	143.	161.	183.	187.
99504	25.	52.	75.	106.	123.	141.	151.	181.
99505	30.	67.	89.	131.	144.	161.	179.	197.
99507	26.	58.	87.	122.	148.	175.	200.	220.
99509	39.	65.	94.	118.	141.	154.	175.	192.
99515	48.	65.	89.	131.	157.	182.	189.	216.
MEAN	36.	65.	90.	121.	141.	157.	180.	197.
S.D.	8.0	7.3	9.9	12.5	13.4	21.0	20.5	21.1
S.E.	2.5	2.3	3.1	4.0	4.2	6.7	6.5	6.7
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 2

MALE GROUP: 0 MG/KG/DAY									
WEEK	0 TO 1	0 TO 2	0 TO 3	0 TO 4	0 TO 5	0 TO 6	0 TO 7	0 TO 8	
ANIMAL									
99467	40.	70.	94.	122.	146.	168.	190.	201.	
99471	34.	64.	87.	124.	152.	175.	179.	199.	
99473	48.	84.	105.	141.	165.	181.	188.	206.	
99498	21.	43.	48.	66.	83.	86.	101.	115.	
99502	19.	46.	56.	60.	72.	82.	102.	114.	
99503	17.	38.	54.	78.	89.	109.	122.	133.	
99506	19.	45.	73.	96.	115.	131.	148.	163.	
99516	38.	59.	73.	102.	113.	129.	140.	154.	
99518	35.	66.	91.	122.	145.	156.	188.	195.	
99519	27.	53.	76.	104.	125.	149.	166.	183.	
MEAN	30.	57.	76.	102.	121.	137.	152.	166.	
S.D.	10.7	14.4	18.8	26.8	31.8	35.5	35.2	35.9	
S.E.	3.4	4.6	6.0	8.5	10.0	11.2	11.1	11.3	
N	10	10	10	10	10	10	10	10	

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 3

MALE GROUP: 5 MG/KG/DAY									
WEEK	0 TO 1	0 TO 2	0 TO 3	0 TO 4	0 TO 5	0 TO 6	0 TO 7	0 TO 8	
ANIMAL									
99465	18.	43.	63.	89.	108.	117.	135.	138.	
99479	34.	60.	83.	95.	115.	124.	128.	129.	
99483	36.	64.	83.	108.	134.	162.	181.	194.	
99489	31.	47.	66.	92.	112.	128.	147.	156.	
99490	25.	54.	85.	103.	125.	141.	157.	176.	
99494	40.	70.	93.	127.	146.	161.	187.	195.	
99495	31.	53.	77.	104.	138.	155.	166.	171.	
99511	44.	73.	98.	131.	150.	176.	182.	186.	
99524	38.	72.	104.	131.	158.	185.	204.	215.	
99528	24.	41.	58.	77.	93.	107.	124.	139.	
MEAN	32.	58.	81.	106.	128.	146.	161.	170.	
S.D.	8.0	11.9	15.2	18.7	20.8	26.2	27.4	28.6	
S.E.	2.5	3.8	4.8	5.9	6.6	8.3	8.7	9.1	
N	10	10	10	10	10	10	10	10	

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 4

MALE GROUP: 50 MG/KG/DAY									
WEEK	0 TO 1	0 TO 2	0 TO 3	0 TO 4	0 TO 5	0 TO 6	0 TO 7	0 TO 8	
ANIMAL									
99464	35.	69.	87.	113.	137.	148.	159.	171.	
99469	30.	55.	63.	87.	112.	126.	152.	157.	
99480	47.	83.	108.	142.	167.	186.	207.	218.	
99485	39.	51.	67.	87.	115.	130.	144.	159.	
99486	33.	60.	76.	100.	128.	144.	162.	174.	
99500	37.	72.	104.	141.	164.	182.	208.	221.	
99510	37.	67.	87.	108.	120.	144.	163.	166.	
99512	24.	44.	58.	81.	97.	114.	129.	143.	
99513	18.	44.	56.	74.	97.	107.	115.	121.	
99525	23.	42.	60.	76.	87.	100.	108.	120.	
MEAN	32.	59.	77.	101.	122.	138.	155.	165.	
S.D.	8.7	13.9	19.1	25.0	27.2	29.1	33.8	34.3	
S.E.	2.7	4.4	6.0	7.9	8.6	9.2	10.7	10.9	
N	10	10	10	10	10	10	10	10	

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SPONSOR:AMERICAN PETROLEUM

TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 5

MALE GROUP: 150 MG/KG/DAY									
WEEK	0 TO 1	0 TO 2	0 TO 3	0 TO 4	0 TO 5	0 TO 6	0 TO 7	0 TO 8	
ANIMAL									
99468	33.	51.	67.	95.	107.	123.	142.	162.	
99482	36.	67.	92.	114.	138.	149.	169.	187.	
99487	27.	66.	77.	105.	122.	147.	159.	173.	
99499	41.	75.	95.	123.	149.	166.	179.	191.	
99501	28.	75.	99.	123.	136.	153.	177.	174.	
99517	12.	33.	49.	83.	102.	117.	135.	154.	
99521	19.	45.	69.	96.	118.	129.	142.	161.	
99522	27.	58.	86.	113.	134.	151.	168.	181.	
99523	28.	58.	83.	93.	117.	132.	149.	159.	
99526	50.	89.	111.	140.	132.				
MEAN	30.	62.	83.	109.	126.	141.	158.	171.	
S.D.	10.7	16.3	18.0	17.3	14.8	16.2	16.4	13.1	
S.E.	3.4	5.2	5.7	5.5	4.7	5.4	5.5	4.4	
N	10	10	10	10	10	9	9	9	

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 6

MALE GROUP: 60 MG/KG CPS									
WEEK	0 TO 1	0 TO 2	0 TO 3	0 TO 4	0 TO 5	0 TO 6	0 TO 7	0 TO 8	
ANIMAL									
99475	39.	95.	138.	184.	222.	267.	300.	330.	
99477	36.	76.	108.	133.	155.	163.	188.	188.	
99478	37.	76.	107.	130.	153.	176.	191.	204.	
99484	49.	86.	123.	161.	188.	212.	243.	260.	
99488	54.	112.	151.	187.	216.	247.	271.	296.	
99497	39.	83.	123.	162.	184.	205.	232.	249.	
MEAN	42.	88.	125.	160.	186.	212.	238.	255.	
S.D.	7.4	13.7	17.1	24.2	29.2	40.0	44.0	53.8	
S.E.	3.0	5.6	7.0	9.9	11.9	16.3	18.0	22.0	
N	6	6	6	6	6	6	6	6	

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 7

MALE GROUP: UNTREATED					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'

ANIMAL					
99466	175.	185.	192.	215.	204.
99472	229.	241.	251.	263.	274.
99474	181.	193.	202.	221.	227.
99491	247.	260.	271.	290.	293.
99496	210.	210.	218.	231.	228.
99504	189.	193.	197.	198.	206.
99505	208.	211.	228.	237.	233.
99507	241.	247.	258.	276.	273.
99509	205.	212.	206.	225.	237.
99515	238.	242.	247.	274.	284.
MEAN	212.	219.	227.	243.	246.
S.D.	25.7	26.2	28.2	30.7	32.4
S.E.	8.1	8.3	8.9	9.7	10.3
N	10	10	10	10	10

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 8

MALE GROUP: 0 MG/KG/DAY					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'

ANIMAL					
99467	213.	237.	229.	251.	251.
99471	216.	231.	237.	251.	258.
99473	219.	234.	248.	263.	269.
99498	116.	129.	134.	144.	158.
99502	134.	137.	135.	152.	139.
99503	146.	156.	154.	171.	163.
99506	178.	184.	188.	206.	202.
99516	156.	165.	169.	183.	166.
99518	204.	220.	227.	240.	242.
99519	190.	204.	209.	220.	212.
MEAN	177.	190.	193.	208.	206.
S.D.	37.2	41.2	43.0	43.6	47.5
S.E.	11.8	13.0	13.6	13.8	15.0
N	10	10	10	10	10

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 9

MALE GROUP: 5 MG/KG/DAY					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'

ANIMAL					
99465	148.	161.	167.	187.	172.
99479	143.	152.	152.	157.	155.
99483	204.	219.	214.	232.	227.
99489	176.	183.	183.	194.	189.
99490	175.	188.	205.	214.	211.
99494	208.	230.	226.	239.	246.
99495	191.	213.	217.	231.	209.
99511	205.	203.	216.	230.	214.
99524	231.	246.	250.	268.	263.
99528	152.	156.	158.	170.	169.
MEAN	183.	195.	199.	212.	206.
S.D.	29.5	32.5	32.3	34.5	34.6
S.E.	9.3	10.3	10.2	10.9	11.0
N	10	10	10	10	10

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 10

MALE GROUP: 50 MG/KG/DAY					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'

ANIMAL					
99464	195.	196.	191.	209.	208.
99469	177.	189.	192.	206.	201.
99480	235.	253.	249.	265.	267.
99485	172.	184.	188.	204.	205.
99486	181.	192.	197.	221.	222.
99500	224.	234.	240.	261.	246.
99510	175.	181.	171.	203.	191.
99512	152.	161.	159.	185.	185.
99513	127.	135.	138.	161.	161.
99525	126.	137.	125.	161.	145.
MEAN	176.	186.	185.	208.	203.
S.D.	36.0	37.4	39.5	35.3	36.4
S.E.	11.4	11.8	12.5	11.2	11.5
N	10	10	10	10	10

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 11

MALE GROUP: 150 MG/KG/DAY					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'
ANIMAL					
99468	165.	171.	168.	149.	132.
99482	207.	204.	218.	228.	195.
99487	188.	209.	212.	236.	222.
99499	203.	224.	225.	241.	238.
99501	195.	194.	194.	211.	205.
99517	165.	173.	169.	180.	183.
99521	173.	184.	180.	192.	196.
99522	187.	195.	187.	190.	176.
99523	171.	169.	168.	192.	191.
MEAN	184.	191.	191.	202.	193.
S.D.	16.0	18.9	22.4	29.7	29.9
S.E.	5.3	6.3	7.5	9.9	10.0
N	9	9	9	9	9

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 12

MALE GROUP: 60 MG/KG CPS					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'

ANIMAL					
99475	332.	376.	383.	411.	419.
99477	218.	227.	233.	238.	248.
99478	214.	240.	239.	248.	257.
99484	272.	304.	315.	344.	353.
99488	317.	334.	339.	369.	377.
99497	274.	292.	297.	310.	317.
MEAN	271.	296.	301.	320.	329.
S.D.	48.8	56.2	58.0	68.2	67.6
S.E.	19.9	23.0	23.7	27.8	27.6
N	6	6	6	6	6

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 13

		FEMALE GROUP: UNTREATED															
WEEK	0 TO	1	0 TO	2	0 TO	3	0 TO	4	0 TO	5	0 TO	6	0 TO	7	0 TO	8	
<hr/>																	
ANIMAL																	
99535	21.		37.		55.		69.		78.		87.		99.		96.		
99541	26.		42.		55.		65.		82.		85.		100.		101.		
99544	27.		52.		54.		81.		80.		105.		96.		119.		
99547	12.		20.		28.		43.		49.		59.		70.		75.		
99559	12.		25.		29.		39.		51.		62.		64.		68.		
99569	20.		47.		55.		81.		82.		99.		115.		114.		
99579	11.		27.		36.		52.		66.		72.		84.		86.		
99580	20.		31.		41.		52.		63.		81.		92.		86.		
99586	11.		27.		36.		53.		60.		70.		86.		84.		
99593	28.		42.		50.		76.		83.		93.		89.		88.		
MEAN	19.		35.		44.		61.		69.		81.		90.		92.		
S.D.	6.9		10.6		11.1		15.4		13.3		15.4		14.8		16.1		
S.E.	2.2		3.3		3.5		4.9		4.2		4.9		4.7		5.1		
N	10		10		10		10		10		10		10		10		

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 14

FEMALE GROUP: 0 MG/KG/DAY									
WEEK	0 TO 1	0 TO 2	0 TO 3	0 TO 4	0 TO 5	0 TO 6	0 TO 7	0 TO 8	
ANIMAL									
99534	16.	25.	38.	51.	60.	62.	71.	80.	
99561	16.	33.	41.	58.	76.	81.	93.	100.	
99562	28.	42.	54.	67.	84.	93.	104.	104.	
99563	19.	39.	44.	54.	69.	82.	83.	88.	
99572	17.	30.	35.	57.	69.	75.	78.	89.	
99574	19.	35.	40.	59.	75.	83.	82.	90.	
99575	26.	44.	54.	63.	79.	87.	93.	101.	
99576	16.	32.	43.	55.	67.	82.	88.	88.	
99578	14.	21.	33.	45.	47.	55.	64.	76.	
99585	11.	16.	24.	34.	41.	56.	58.	60.	
MEAN	18.	32.	41.	54.	67.	76.	81.	88.	
S.D.	5.2	9.0	9.1	9.4	13.8	13.3	14.1	13.2	
S.E.	1.6	2.9	2.9	3.0	4.4	4.2	4.5	4.2	
N	10	10	10	10	10	10	10	10	

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 15

FEMALE GROUP: 5 MG/KG/DAY									
WEEK	0 TO 1	0 TO 2	0 TO 3	0 TO 4	0 TO 5	0 TO 6	0 TO 7	0 TO 8	
ANIMAL									
99530	15.	28.	39.	49.	61.	71.	72.	85.	
99532	19.	26.	49.	64.	81.	82.	97.	110.	
99555	30.	52.	67.	71.	89.	86.	102.	104.	
99556	13.	23.	33.	42.	57.	67.	70.	81.	
99566	18.	31.	49.	69.	76.	80.	88.	92.	
99568	23.	33.	53.	68.	79.	82.	92.	97.	
99571	13.	25.	33.	52.	58.	70.	78.	80.	
99582	12.	26.	27.	42.	52.	58.	62.	78.	
99591	30.	47.	68.	86.	85.	96.	100.	100.	
99592	28.	43.	52.	54.	72.	76.	75.	79.	
MEAN	20.	33.	47.	60.	71.	77.	84.	91.	
S.D.	7.2	10.3	14.0	14.2	13.1	10.8	14.0	11.6	
S.E.	2.3	3.2	4.4	4.5	4.1	3.4	4.4	3.7	
N	10	10	10	10	10	10	10	10	

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 16

FEMALE GROUP: 50 MG/KG/DAY									
WEEK	0 TO 1	0 TO 2	0 TO 3	0 TO 4	0 TO 5	0 TO 6	0 TO 7	0 TO 8	
ANIMAL									
99533	22.	42.	50.	77.	83.	94.	104.	114.	
99538	8.	24.	28.	46.	49.	52.	71.	76.	
99546	8.	15.	29.	36.	40.	40.	55.	62.	
99552	20.	32.	43.	55.	62.	66.	69.	64.	
99553	9.	25.	40.	43.	50.	51.	65.	65.	
99560	21.	37.	51.	63.	73.	73.	84.	83.	
99564	14.	37.	54.	67.	77.	86.	100.	106.	
99567	17.	40.	47.	63.	62.	61.	69.	76.	
99584	9.	25.	40.	53.	58.	62.	71.	74.	
99590	4.	14.	28.	45.	50.	57.	58.	64.	
MEAN	13.	29.	41.	55.	60.	64.	75.	78.	
S.D.	6.4	10.0	9.9	12.7	13.8	16.4	16.5	18.1	
S.E.	2.0	3.2	3.1	4.0	4.4	5.2	5.2	5.7	
N	10	10	10	10	10	10	10	10	

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SPONSOR:AMERICAN PETROLEUM

TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 17

FEMALE GROUP: 150 MG/KG/DAY									
WEEK	0 TO 1	0 TO 2	0 TO 3	0 TO 4	0 TO 5	0 TO 6	0 TO 7	0 TO 8	
ANIMAL									
99531	13.	26.	42.	42.	51.	52.	60.	62.	
99536	14.	22.	38.	46.	48.	57.	57.	61.	
99540	22.	37.	55.	70.	82.	88.	98.	108.	
99548	6.	19.	31.	41.	52.	59.	59.	63.	
99554	12.	24.	29.	36.	41.	48.	48.	50.	
99557	14.	28.	42.	53.	64.	71.	75.	80.	
99558	11.	17.	26.	40.	48.	57.	57.	62.	
99577	13.	35.	43.	59.	69.	88.	101.	91.	
99581	8.	12.	20.	28.	28.	32.	37.	40.	
99588	15.	24.	29.	40.	46.	56.	56.	58.	
MEAN	13.	24.	36.	46.	53.	61.	65.	68.	
S.D.	4.3	7.7	10.3	12.1	15.2	17.4	20.6	20.1	
S.E.	1.4	2.4	3.3	3.8	4.8	5.5	6.5	6.3	
N	10	10	10	10	10	10	10	10	

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SPONSOR:AMERICAN PETROLEUM

TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 18

FEMALE GROUP: 60 MG/KG CPS									
WEEK	0 TO 1	0 TO 2	0 TO 3	0 TO 4	0 TO 5	0 TO 6	0 TO 7	0 TO 8	
ANIMAL									
99529	26.	35.	46.	68.	89.	96.	105.	111.	
99537	18.	42.	59.	86.	95.	109.	120.	118.	
99539	20.	38.	57.	75.	81.	89.	100.	104.	
99542	28.	47.	63.	75.	88.	90.	100.	107.	
99549	19.	30.	34.	47.	62.	64.	62.	69.	
99570	18.	41.	53.	71.	82.	94.	99.	104.	
MEAN	22.	39.	52.	70.	83.	90.	98.	102.	
S.D.	4.4	5.9	10.5	13.0	11.4	14.8	19.2	17.1	
S.E.	1.8	2.4	4.3	5.3	4.7	6.0	7.8	7.0	
N	6	6	6	6	6	6	6	6	

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 19

FEMALE GROUP: UNTREATED					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'
ANIMAL					
99535	107.	106.	104.	110.	119.
99541	109.	112.	112.	118.	123.
99544	118.	122.	123.	129.	132.
99547	76.	76.	74.	93.	91.
99559	73.	75.	74.	89.	89.
99569	128.	133.	134.	143.	147.
99579	100.	99.	97.	106.	103.
99580	100.	94.	100.	111.	119.
99586	92.	103.	102.	107.	111.
99593	87.	110.	112.	131.	122.
MEAN	99.	103.	103.	114.	116.
S.D.	17.5	18.3	19.0	16.9	17.8
S.E.	5.5	5.8	6.0	5.3	5.6
N	10	10	10	10	10

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 20

FEMALE GROUP: 0 MG/KG/DAY					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'
ANIMAL					
99534	80.	85.	91.	90.	93.
99561	97.	95.	101.	113.	113.
99562	115.	120.	121.	132.	126.
99563	90.	93.	93.	107.	93.
99572	102.	101.	97.	112.	106.
99574	98.	102.	100.	112.	112.
99575	104.	110.	109.	111.	116.
99576	91.	96.	90.	90.	87.
99578	78.	73.	70.	81.	77.
99585	60.	75.	67.	74.	71.
MEAN	92.	95.	94.	102.	99.
S.D.	15.6	14.6	16.3	17.8	18.0
S.E.	4.9	4.6	5.1	5.6	5.7
N	10	10	10	10	10

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 21

FEMALE GROUP: 5 MG/KG/DAY					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'
ANIMAL					
99530	83.	89.	82.	98.	98.
99532	114.	121.	119.	126.	128.
99555	109.	104.	102.	117.	113.
99556	87.	84.	84.	95.	96.
99566	87.	100.	102.	105.	104.
99568	95.	106.	107.	108.	106.
99571	86.	91.	95.	101.	95.
99582	87.	84.	87.	90.	99.
99591	110.	111.	122.	124.	114.
99592	88.	97.	92.	90.	93.
MEAN	95.	99.	99.	105.	105.
S.D.	11.8	12.1	13.9	13.2	11.0
S.E.	3.7	3.8	4.4	4.2	3.5
N	10	10	10	10	10

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 22

FEMALE GROUP: 50 MG/KG/DAY					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'
ANIMAL					
99533	116.	128.	121.	140.	127.
99538	78.	91.	81.	87.	85.
99546	65.	62.	62.	71.	68.
99552	76.	81.	78.	84.	74.
99553	69.	78.	77.	80.	79.
99560	88.	94.	89.	99.	93.
99564	108.	121.	112.	121.	121.
99567	78.	82.	76.	82.	86.
99584	77.	81.	73.	77.	80.
99590	73.	77.	70.	83.	68.
MEAN	83.	90.	84.	92.	88.
S.D.	16.6	20.4	18.7	21.8	20.5
S.E.	5.3	6.4	5.9	6.9	6.5
N	10	10	10	10	10

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 23

FEMALE GROUP: 150 MG/KG/DAY					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'
ANIMAL					
99531	65.	68.	60.	84.	75.
99536	60.	67.	64.	80.	71.
99540	110.	119.	115.	129.	117.
99548	73.	72.	73.	86.	70.
99554	48.	56.	50.	54.	59.
99557	85.	88.	78.	89.	93.
99558	66.	68.	63.	69.	67.
99577	93.	99.	93.	96.	107.
99581	43.	49.	42.	47.	48.
99588	68.	71.	70.	70.	71.
MEAN	71.	76.	71.	80.	78.
S.D.	20.3	20.8	21.1	23.0	21.4
S.E.	6.4	6.6	6.7	7.3	6.8
N	10	10	10	10	10

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TABLE A8
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 24

FEMALE GROUP: 60 MG/KG CPS					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'
ANIMAL					
99529	128.	125.	133.	123.	127.
99537	134.	136.	137.	149.	147.
99539	113.	109.	114.	132.	128.
99542	112.	117.	112.	121.	122.
99549	77.	80.	73.	84.	87.
99570	121.	124.	123.	126.	135.
MEAN	114.	115.	115.	123.	124.
S.D.	20.1	19.4	23.0	21.4	20.2
S.E.	8.2	7.9	9.4	8.7	8.3
N	6	6	6	6	6

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TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 1

	MALE GROUP: UNTREATED															
WEEK	-2 TO	-1	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6	6 TO	7

ANIMAL																
99466		31.		40.		33.		33.		38.		37.		39.		34.
99472		24.		32.		33.		33.		34.		35.		37.		36.
99474		26.		35.		30.		32.		37.		38.		38.		33.
99491		26.		32.		31.		35.		37.		33.		40.		39.
99496		28.		35.		31.		36.		37.		36.		40.		36.
99504		26.		32.		31.		32.		33.		32.		33.		32.
99505		26.		30.		28.		32.		34.		31.		35.		33.
99507		27.		34.		33.		34.		39.		38.		43.		38.
99509		30.		36.		30.		37.		37.		35.		38.		36.
99515		26.		36.		31.		32.		34.		36.		36.		34.

MEAN		27.		34.		31.		34.		36.		35.		38.		35.
S.D.		2.1		2.9		1.6		1.8		2.1		2.4		2.8		2.3
S.E.		0.7		0.9		0.5		0.6		0.6		0.8		0.9		0.7
N		10		10		10		10		10		10		10		10

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TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 2

MALE GROUP: 0 MG/KG/DAY																
WEEK	-2 TO	-1	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6	6 TO	7

ANIMAL																
99467	26.			32.		31.		35.		32.		35.		35.		34.
99471	28.			32.		31.		34.		35.		35.		39.		37.
99473	29.			38.		34.		39.		37.		38.		36.		38.
99498	25.			31.		27.		30.		31.		31.		33.		33.
99502	28.			32.		40.		35.		31.		30.		31.		34.
99503	28.			31.		27.		31.		30.		31.		33.		32.
99506	27.			28.		27.		34.		34.		32.		35.		35.
99516	25.			33.		30.		35.		33.		33.		36.		31.
99518	26.			33.		30.		34.		35.		36.		38.		38.
99519	26.			34.		32.		36.		36.		38.		39.		38.
MEAN	27.			32.		31.		34.		33.		34.		36.		35.
S.D.	1.4			2.5		4.0		2.5		2.4		2.9		2.7		2.6
S.E.	0.4			0.8		1.3		0.8		0.7		0.9		0.8		0.8
N	10			10		10		10		10		10		10		10

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TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 3

MALE GROUP: 5 MG/KG/DAY																
WEEK	-2 TO	-1	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6	6 TO	7

ANIMAL																
99465	25.			27.		29.		32.		31.		31.		32.		33.
99479	28.			33.		31.		34.		32.		34.		34.		31.
99483	25.			34.		33.		35.		33.		34.		37.		35.
99489	23.			32.		24.		29.		30.		32.		31.		34.
99490	31.			34.		33.		38.		35.		38.		35.		37.
99494	29.			37.		30.		36.		37.		39.		39.		37.
99495	29.			35.		35.		38.		36.		43.		40.		38.
99511	26.			32.		30.		37.		37.		35.		38.		36.
99524	30.			36.		35.		38.		38.		38.		45.		43.
99528	25.			32.		30.		32.		33.		31.		35.		32.
MEAN		27.		33.		31.		35.		34.		36.		37.		36.
S.D.		2.6		2.8		3.3		3.1		2.8		3.9		4.1		3.5
S.E.		0.8		0.9		1.0		1.0		0.9		1.2		1.3		1.1
N		10		10		10		10		10		10		10		10

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TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 4

MALE GROUP: 50 MG/KG/DAY																
WEEK	-2 TO	-1	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6	6 TO	7

ANIMAL																
99464	25.		31.		28.		33.		32.		35.		32.		32.	
99469	29.		30.		30.		33.		34.		32.		35.		36.	
99480	29.		35.		34.		38.		38.		38.		41.		40.	
99485	27.		34.		28.		32.		31.		37.		35.		35.	
99486	25.		28.		28.		30.		31.		33.		35.		33.	
99500	27.		31.		28.		35.		35.		35.		37.		35.	
99510	25.		32.		29.		32.		30.		33.		34.		33.	
99512	33.		35.		32.		34.		34.		33.		35.		38.	
99513	25.		24.		24.		28.		28.		29.		29.		27.	
99525	26.		29.		28.		32.		30.		31.		30.		30.	
MEAN	27.		31.		29.		33.		32.		34.		34.		34.	
S.D.	2.6		3.4		2.7		2.7		2.9		2.7		3.4		3.8	
S.E.	0.8		1.1		0.8		0.9		0.9		0.9		1.1		1.2	
N	10		10		10		10		10		10		10		10	

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TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 5

MALE GROUP: 150 MG/KG/DAY																
WEEK	-2 TO	-1	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6	6 TO	7

ANIMAL																
99468	29.		33.		28.		33.		36.		35.		36.		37.	
99482	27.		32.		29.		34.		33.		37.		35.		34.	
99487	28.		31.		31.		34.		34.		33.		39.		36.	
99499	30.		35.		30.		34.		33.		35.		38.		35.	
99501	24.		33.		26.		32.		34.		33.		32.		34.	
99517	26.		30.		24.		29.		35.		34.		35.		32.	
99521	26.		31.		26.		32.		33.		35.		33.		30.	
99522	26.		35.		27.		35.		37.		37.		38.		35.	
99523	28.		35.		29.		35.		35.		39.		38.		36.	
99526	26.		34.		30.		36.		36.		32.					
MEAN	27.		33.		28.		33.		35.		35.		36.		34.	
S.D.	1.8		1.9		2.2		2.0		1.4		2.2		2.4		2.2	
S.E.	0.6		0.6		0.7		0.6		0.5		0.7		0.8		0.7	
N	10		10		10		10		10		10		9		9	

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TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 6

MALE GROUP: 60 MG/KG CPS																
WEEK	-2 TO	-1	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6	6 TO	7
ANIMAL																
99475	28.		30.		32.		34.		36.		37.		40.		38.	
99477	27.		29.		29.		30.		29.		30.		31.		28.	
99478	28.		29.		27.		30.		27.		29.		30.		29.	
99484	31.		36.		34.		37.		36.		36.		37.		39.	
99488	25.		32.		32.		33.		34.		35.		37.		34.	
99497	29.		32.		33.		36.		37.		36.		38.		37.	
MEAN	28.		31.		31.		33.		33.		34.		36.		34.	
S.D.	2.0		2.7		2.6		2.9		4.2		3.4		4.0		4.7	
S.E.	0.8		1.1		1.1		1.2		1.7		1.4		1.6		1.9	
N	6		6		6		6		6		6		6		6	

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TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 7

		MALE GROUP: UNTREATED					
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 12'	

ANIMAL							
99466	36.	34.	35.	35.	38.	36.	
99472	37.	35.	33.	34.	33.	35.	
99474	35.	37.	32.	35.	38.	35.	
99491	37.	38.	38.	39.	38.	33.	
99496	34.	36.	34.	37.	37.	38.	
99504	35.	33.	31.	33.	33.	30.	
99505	35.	33.	32.	36.	31.	26.	
99507	40.	37.	36.	39.	42.	47.	
99509	35.	32.	33.	36.	32.	28.	
99515	34.	34.	36.	34.	38.	32.	
MEAN	36.	35.	34.	36.	36.	34.	
S.D.	1.8	2.0	2.2	2.0	3.5	5.9	
S.E.	0.6	0.6	0.7	0.6	1.1	1.9	
N	10	10	10	10	10	10	

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TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 8

MALE GROUP: 0 MG/KG/DAY						
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 12'
ANIMAL						
99467	35.	34.	36.	36.	36.	36.
99471	37.	37.	36.	42.	41.	35.
99473	33.	38.	36.	39.	36.	37.
99498	30.	33.	29.	30.	30.	28.
99502	32.	36.	32.	31.	36.	29.
99503	32.	31.	33.	34.	37.	30.
99506	33.	37.	36.	36.	37.	39.
99516	33.	35.	34.	31.	35.	28.
99518	39.	33.	37.	34.	37.	34.
99519	38.	38.	37.	38.	36.	34.
MEAN	34.	35.	35.	35.	36.	33.
S.D.	2.9	2.4	2.6	3.9	2.7	4.0
S.E.	0.9	0.8	0.8	1.2	0.8	1.3
N	10	10	10	10	10	10

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 9

MALE GROUP: 5 MG/KG/DAY						
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 12'

ANIMAL						
99465	31.	29.	30.	31.	30.	25.
99479	31.	32.	32.	33.	30.	31.
99483	36.	34.	35.	36.	34.	34.
99489	29.	34.	31.	31.	33.	32.
99490	38.	38.	36.	40.	36.	36.
99494	38.	39.	40.	37.	35.	33.
99495	39.	39.	39.	40.	39.	31.
99511	34.	37.	32.	37.	35.	32.
99524	41.	39.	38.	38.	41.	38.
99528	35.	33.	31.	34.	36.	32.
MEAN	35.	35.	34.	36.	35.	32.
S.D.	3.9	3.5	3.7	3.3	3.5	3.4
S.E.	1.2	1.1	1.2	1.1	1.1	1.1
N	10	10	10	10	10	10

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 10

MALE GROUP: 50 MG/KG/DAY						
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 12'

ANIMAL						
99464	31.	34.	31.	32.	33.	26.
99469	32.	34.	32.	35.	37.	32.
99480	37.	40.	40.	39.	40.	36.
99485	35.	36.	32.	37.	38.	34.
99486	31.	30.	33.	34.	32.	29.
99500	34.	33.	33.	36.	35.	35.
99510	32.	33.	34.	32.	36.	29.
99512	34.	33.	36.	37.	35.	32.
99513	30.	27.	27.	28.	30.	29.
99525	30.	28.	30.	29.	26.	27.
MEAN	33.	33.	33.	34.	34.	31.
S.D.	2.3	3.8	3.5	3.6	4.1	3.4
S.E.	0.7	1.2	1.1	1.1	1.3	1.1
N	10	10	10	10	10	10

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 11

MALE GROUP: 150 MG/KG/DAY						
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 12'
ANIMAL						
99468	36.	33.	33.	35.	27.	23.
99482	35.	38.	32.	38.	35.	26.
99487	17.	37.	42.	40.	37.	38.
99499	37.	37.	39.	44.	39.	40.
99501	32.	34.	31.	31.	34.	28.
99517	35.	35.	34.	36.	37.	36.
99521	36.	35.	32.	34.	31.	33.
99522	37.	38.	39.	39.	33.	28.
99523	36.	39.	36.	42.	39.	36.
MEAN	33.	36.	35.	38.	35.	32.
S.D.	6.3	2.0	3.9	4.1	3.9	5.9
S.E.	2.1	0.7	1.3	1.4	1.3	2.0
N	9	9	9	9	9	9

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 12

MALE GROUP: 60 MG/KG CPS						
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 12'

ANIMAL						
99475	37.	39.	40.	38.	38.	36.
99477	27.	30.	29.	29.	30.	27.
99478	28.	29.	29.	28.	31.	25.
99484	38.	38.	35.	39.	37.	31.
99488	35.	35.	36.	35.	35.	34.
99497	34.	37.	37.	34.	36.	34.
MEAN	33.	35.	34.	34.	35.	31.
S.D.	4.6	4.2	4.5	4.5	3.3	4.4
S.E.	1.9	1.7	1.8	1.9	1.3	1.8
N	6	6	6	6	6	6

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 13

		FEMALE GROUP: UNTREATED														
WEEK	-2 TO	-1	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6	6 TO	7

ANIMAL																
99535		20.		26.		23.		27.		26.		31.		26.		25.
99541		23.		26.		25.		27.		25.		27.		26.		26.
99544		22.		27.		26.		31.		28.		28.		32.		28.
99547		23.		27.		25.		31.		25.		26.		27.		25.
99559		22.		26.		22.		25.		23.		26.		25.		23.
99569		20.		25.		26.		28.		29.		26.		32.		28.
99579		20.		24.		23.		26.		24.		24.		24.		24.
99580		23.		27.		26.		28.		25.		27.		29.		26.
99586		21.		26.		24.		29.		26.		27.		28.		26.
99593		20.		31.		27.		29.		28.		31.		28.		23.
MEAN		21.		27.		25.		28.		26.		27.		28.		25.
S.D.		1.3		1.8		1.6		2.0		1.9		2.2		2.7		1.8
S.E.		0.4		0.6		0.5		0.6		0.6		0.7		0.9		0.6
N		10		10		10		10		10		10		10		10

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 14

FEMALE GROUP: 0 MG/KG/DAY																
WEEK	-2 TO	-1	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6	6 TO	7

ANIMAL																
99534	27.		22.		20.		23.		23.		23.		23.		23.	
99561	22.		27.		26.		27.		26.		28.		28.		30.	
99562	20.		28.		27.		28.		28.		28.		27.		28.	
99563	19.		22.		23.		25.		25.		26.		25.		24.	
99572	22.		26.		25.		26.		27.		29.		28.		26.	
99574	23.		28.		26.		26.		26.		28.		29.		29.	
99575	26.		29.		26.		32.		32.		36.		53.		33.	
99576	23.		25.		26.		27.		26.		27.		30.		27.	
99578	23.		24.		22.		28.		28.		28.		25.		26.	
99585	21.		22.		26.		27.		26.		27.		26.		27.	
MEAN	23.		25.		25.		27.		27.		28.		29.		27.	
S.D.	2.5		2.7		2.3		2.3		2.4		3.3		8.6		2.9	
S.E.	0.8		0.9		0.7		0.7		0.7		1.0		2.7		0.9	
N	10		10		10		10		10		10		10		10	

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SPONSOR:AMERICAN PETROLEUM

TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 15

FEMALE GROUP: 5 MG/KG/DAY																
WEEK	-2 TO	-1	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6	6 TO	7

ANIMAL																
99530	20.		29.		24.		27.		25.		25.		29.		25.	
99532	23.		30.		28.		31.		30.		32.		30.		32.	
99555	20.		27.		27.		29.		26.		28.		28.		26.	
99556	22.		24.		23.		24.		25.		26.		26.		23.	
99566	23.		29.		26.		29.		31.		30.		33.		31.	
99568	21.		27.		25.		30.		27.		36.		30.		29.	
99571	19.		25.		23.		26.		27.		25.		28.		23.	
99582	22.		26.		25.		29.		28.		29.		31.		29.	
99591	21.		30.		24.		27.		25.		28.		29.		26.	
99592	20.		27.		26.		26.		24.		27.		28.		26.	

MEAN	21.		27.		25.		28.		27.		29.		29.		27.	
S.D.	1.4		2.1		1.7		2.1		2.3		3.4		1.9		3.1	
S.E.	0.4		0.7		0.5		0.7		0.7		1.1		0.6		1.0	
N	10		10		10		10		10		10		10		10	

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SPONSOR:AMERICAN PETROLEUM

TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 16

FEMALE GROUP: 50 MG/KG/DAY																
WEEK	-2 TO	-1	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6	6 TO	7

ANIMAL																
99533	23.		27.		23.		27.		30.		29.		28.		28.	
99538	23.		26.		22.		26.		26.		27.		27.		32.	
99546	21.		26.		21.		25.		24.		26.		25.		24.	
99552	21.		21.		21.		25.		23.		25.		25.		24.	
99553	21.		29.		23.		29.		29.		29.		30.		26.	
99560	22.		27.		23.		28.		28.		27.		24.		26.	
99564	19.		24.		22.		27.		27.		25.		27.		29.	
99567	21.		24.		23.		26.		27.		24.		26.		23.	
99584	20.		28.		20.		27.		24.		28.		23.		24.	
99590	19.		23.		21.		25.		24.		24.		25.		22.	
MEAN	21.		26.		22.		27.		26.		26.		26.		26.	
S.D.	1.4		2.5		1.1		1.4		2.4		1.9		2.1		3.1	
S.E.	0.4		0.8		0.3		0.4		0.8		0.6		0.6		1.0	
N	10		10		10		10		10		10		10		10	

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SPONSOR:AMERICAN PETROLEUM

TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 17

FEMALE GROUP: 150 MG/KG/DAY																
WEEK	-2 TO	-1	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6	6 TO	7

ANIMAL																
99531		19.		23.		20.		24.		22.		23.		26.		23.
99536		21.		26.		21.		26.		25.		26.		26.		24.
99540		21.		30.		26.		29.		29.		32.		27.		30.
99548		23.		29.		NA		30.		27.		30.		30.		26.
99554		18.		25.		21.		23.		24.		24.		27.		23.
99557		18.		24.		22.		25.		24.		33.		24.		24.
99558		20.		25.		21.		22.		23.		26.		24.		22.
99577		24.		26.		23.		26.		27.		26.		28.		27.
99581		19.		21.		21.		24.		24.		23.		24.		21.
99588		19.		26.		20.		25.		24.		23.		24.		22.
MEAN		20.		26.		22.		25.		25.		27.		26.		24.
S.D.		2.0		2.6		1.9		2.5		2.1		3.8		2.1		2.7
S.E.		0.6		0.8		0.6		0.8		0.7		1.2		0.6		0.9
N		10		10		9		10		10		10		10		10

NA = NOT APPLICABLE

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TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 18

FEMALE GROUP: 60 MG/KG CPS																
WEEK	-2 TO	-1	0 TO	1	1 TO	2	2 TO	3	3 TO	4	4 TO	5	5 TO	6	6 TO	7
ANIMAL																
99529	20.		25.		22.		25.		25.		26.		27.		23.	
99537	22.		25.		24.		27.		27.		28.		27.		27.	
99539	19.		25.		23.		26.		25.		28.		25.		23.	
99542	20.		25.		24.		24.		27.		25.		25.		22.	
99549	22.		28.		26.		24.		25.		24.		23.		21.	
99570	21.		25.		25.		25.		26.		30.		28.		25.	
MEAN	21.		26.		24.		25.		26.		27.		26.		24.	
S.D.	1.2		1.2		1.4		1.2		1.0		2.2		1.8		2.2	
S.E.	0.5		0.5		0.6		0.5		0.4		0.9		0.7		0.9	
N	6		6		6		6		6		6		6		6	

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TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 19

		FEMALE GROUP: UNTREATED					
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 12'	

ANIMAL							
99535	26.	26.	25.	22.	25.	24.	
99541	26.	25.	27.	25.	26.	21.	
99544	31.	30.	32.	28.	29.	26.	
99547	24.	21.	24.	26.	27.	19.	
99559	25.	23.	22.	23.	24.	19.	
99569	27.	28.	28.	28.	27.	24.	
99579	24.	26.	24.	26.	27.	16.	
99580	25.	27.	25.	25.	28.	22.	
99586	27.	25.	26.	23.	26.	19.	
99593	26.	23.	30.	28.	31.	26.	
MEAN	26.	25.	26.	25.	27.	22.	
S.D.	2.0	2.6	3.0	2.2	2.0	3.4	
S.E.	0.6	0.8	1.0	0.7	0.6	1.1	
N	10	10	10	10	10	10	

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SPONSOR:AMERICAN PETROLEUM

TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 20

FEMALE GROUP: 0 MG/KG/DAY						
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 12'
ANIMAL						
99534	23.	24.	22.	24.	22.	19.
99561	25.	28.	25.	28.	26.	22.
99562	28.	28.	31.	25.	27.	23.
99563	23.	25.	24.	24.	22.	22.
99572	28.	27.	27.	25.	28.	22.
99574	27.	30.	27.	29.	27.	24.
99575	34.	25.	28.	28.	28.	21.
99576	27.	25.	27.	26.	24.	21.
99578	26.	27.	23.	23.	18.	19.
99585	27.	28.	28.	26.	27.	24.
MEAN	27.	27.	26.	26.	25.	22.
S.D.	3.1	1.9	2.7	2.0	3.3	1.8
S.E.	1.0	0.6	0.9	0.6	1.0	0.6
N	10	10	10	10	10	10

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TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 21

FEMALE GROUP: 5 MG/KG/DAY						
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 12'

ANIMAL						
99530	32.	26.	28.	25.	28.	27.
99532	33.	31.	29.	30.	27.	28.
99555	26.	27.	25.	27.	27.	19.
99556	25.	28.	24.	25.	24.	21.
99566	28.	32.	31.	30.	30.	20.
99568	30.	28.	28.	26.	25.	23.
99571	26.	25.	24.	24.	24.	21.
99582	28.	31.	28.	30.	31.	25.
99591	27.	27.	25.	26.	25.	20.
99592	26.	28.	28.	26.	26.	22.
MEAN	28.	28.	27.	27.	27.	23.
S.D.	2.7	2.3	2.4	2.3	2.4	3.1
S.E.	0.9	0.7	0.7	0.7	0.8	1.0
N	10	10	10	10	10	10

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TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 22

FEMALE GROUP: 50 MG/KG/DAY						
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 12'
ANIMAL						
99533	28.	27.	27.	27.	25.	21.
99538	20.	26.	26.	25.	25.	22.
99546	25.	26.	25.	24.	24.	19.
99552	22.	24.	25.	25.	23.	16.
99553	23.	24.	25.	25.	23.	24.
99560	24.	27.	29.	28.	30.	16.
99564	23.	26.	28.	24.	27.	21.
99567	25.	24.	24.	29.	27.	22.
99584	23.	23.	22.	24.	22.	18.
99590	24.	25.	28.	25.	24.	19.
MEAN	24.	25.	26.	26.	25.	20.
S.D.	2.1	1.4	2.1	1.8	2.4	2.7
S.E.	0.7	0.4	0.7	0.6	0.8	0.8
N	10	10	10	10	10	10

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TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 23

FEMALE GROUP: 150 MG/KG/DAY						
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 12'
ANIMAL						
99531	22.	23.	21.	23.	22.	21.
99536	24.	25.	25.	24.	24.	21.
99540	28.	30.	30.	29.	31.	26.
99548	26.	29.	31.	26.	27.	28.
99554	23.	23.	22.	22.	13.	19.
99557	21.	26.	23.	24.	24.	22.
99558	22.	23.	23.	25.	25.	21.
99577	24.	27.	29.	27.	27.	26.
99581	21.	22.	21.	22.	22.	18.
99588	23.	25.	22.	23.	24.	28.
MEAN	23.	25.	25.	25.	24.	23.
S.D.	2.2	2.7	3.9	2.3	4.7	3.7
S.E.	0.7	0.9	1.2	0.7	1.5	1.2
N	10	10	10	10	10	10

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SPONSOR:AMERICAN PETROLEUM

TABLE A9
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 24

FEMALE GROUP: 60 MG/KG CPS						
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 12'
ANIMAL						
99529	23.	24.	24.	25.	24.	15.
99537	24.	26.	26.	26.	31.	21.
99539	23.	23.	21.	23.	22.	19.
99542	21.	23.	22.	24.	22.	19.
99549	21.	21.	22.	23.	21.	20.
99570	26.	31.	28.	27.	29.	26.
MEAN	23.	25.	24.	25.	25.	20.
S.D.	1.9	3.5	2.7	1.6	4.2	3.6
S.E.	0.8	1.4	1.1	0.7	1.7	1.5
N	6	6	6	6	6	6

PBFTSv4.57
07/09/2012
R:07/09/2012

ANIMAL	WBC	RBC	HGB	HCT	MCV	MCH	MCHC	PLATELET	RETIC	RETIC ABSOLUTE
	thous/uL	mil/uL	g/dL	%	fL	pg	g/dL	thous/uL	%	thous/uL
GROUP:	UNTREATED	MALES								
99466	10.72	9.94	17.6	53.1	53.4	17.7	33.1	1054.	1.2	116.8
99472	11.01	9.13	16.0	49.4	54.1	17.5	32.4	841.	2.2	201.7
99474	10.36	9.78	17.0	55.8	57.1	17.4	30.5	1037.	2.0	199.1
99491	8.04	10.03	17.1	55.8	55.6	17.0	30.6	1469.	2.3	228.0
99496	14.82	10.45	17.2	55.6	53.2	16.5	30.9	1032.	2.1	222.7
99504	8.23	9.35	15.8	47.6	50.9	16.9	33.1	1008.	1.4	131.1
99505	7.99	8.12	13.6	40.5	50.0	16.7	33.5	976.	1.6	129.9
99507	16.92	8.31	14.0	42.0	50.5	16.8	33.3	980.	2.4	196.6
99509	17.04	8.44	14.5	43.1	51.1	17.1	33.5	842.	2.3	190.7
99515	12.89	8.85	15.3	46.4	52.5	17.2	32.9	1040.	2.1	182.2
MEAN	11.80	9.24	15.8	48.9	52.8	17.1	32.4	1028.	2.0	179.9
S.D.	3.484	0.803	1.43	5.94	2.32	0.38	1.23	173.3	0.41	39.80
S.E.	1.102	0.254	0.45	1.88	0.73	0.12	0.39	54.8	0.13	12.58
N	10	10	10	10	10	10	10	10	10	10
thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER										

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP:	UNTREATED	MALES				
99466	13.6	80.0	3.0	1.8	0.7	0.9
99472	17.6	76.8	3.7	0.4	0.6	0.8
99474	20.4	76.1	1.7	0.6	0.7	0.5
99491	13.6	84.1	1.2	0.2	0.5	0.4
99496	11.9	84.2	1.9	0.3	0.8	0.9
99504	20.8	74.8	2.0	1.2	0.6	0.6
99505	21.8	72.7	2.9	1.8	0.2	0.5
99507	30.1	64.8	3.1	1.0	0.5	0.6
99509	13.5	80.7	2.9	0.9	0.4	1.5
99515	19.6	73.8	3.4	1.2	0.4	1.7
MEAN	18.3	76.8	2.6	0.9	0.5	0.8
S.D.	5.50	5.85	0.82	0.58	0.18	0.44
S.E.	1.74	1.85	0.26	0.18	0.06	0.14
N	10	10	10	10	10	10

thous/uL = THOUSANDS/MICROLITER

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

PAGE 4
WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP:	UNTREATED	MALES		
99466	20.6	16.4	11.5	2.14
99472	18.5	22.0	11.8	2.11
99474	17.8	16.7	12.1	1.98
99491	17.0	19.2	11.4	2.02
99496	17.7	18.4	12.1	1.93
99504	19.3	22.9	11.4	2.18
99505	18.9	23.3	12.4	2.36
99507	18.7	16.3	12.1	2.43
99509	16.6	19.1	11.9	2.15
99515	17.3	18.4	11.8	2.26
MEAN	18.2	19.3	11.9	2.16
S.D.	1.20	2.63	0.34	0.160
S.E.	0.38	0.83	0.11	0.051
N	10	10	10	10

g/dL = GRAMS/DECILITER

ANIMAL	WBC	RBC	HGB	HCT	MCV	MCH	MCHC	PLATELET	RETIC	RETIC ABSOLUTE
	thous/uL	mil/uL	g/dL	%	fL	pg	g/dL	thous/uL	%	thous/uL
GROUP:	0 MG/KG/DAY	MALES								
99467	9.49	10.04	16.6	51.1	50.9	16.5	32.4	1154.	1.7	167.8
99471	10.15	8.99	16.4	50.7	56.4	18.2	32.3	890.	1.8	158.3
99473	10.23	9.21	15.9	48.9	53.1	17.3	32.5	1144.	1.8	164.2
99498	14.54	8.61	14.7	43.4	50.5	17.1	33.8	942.	1.9	161.8
99502	4.64	10.22	17.9	57.9	56.7	17.5	30.9	1014.	1.7	174.4
99503	8.42	8.66	15.3	46.2	53.3	17.7	33.2	933.	2.1	180.0
99506	8.44	8.67	14.4	44.0	50.8	16.6	32.7	1102.	2.1	185.3
99516	9.48	9.06	15.3	46.2	51.0	16.9	33.1	962.	1.5	133.3
99518	7.56	8.31	13.8	41.5	49.9	16.6	33.2	1016.	1.7	143.1
99519	8.50	8.98	15.8	47.8	53.3	17.6	33.1	869.	1.6	145.2
MEAN	9.15	9.08	15.6	47.8	52.6	17.2	32.7	1003.	1.8	161.3
S.D.	2.489	0.616	1.19	4.73	2.42	0.56	0.79	102.1	0.20	16.77
S.E.	0.787	0.195	0.38	1.49	0.77	0.18	0.25	32.3	0.06	5.30
N	10	10	10	10	10	10	10	10	10	10
thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER										

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP: 0 MG/KG/DAY	MALES					
99467	16.1	78.3	3.1	0.9	0.8	0.8
99471	11.5	83.5	2.6	0.3	0.6	1.4
99473	17.9	76.6	3.1	1.3	0.5	0.7
99498	11.9	84.0	1.9	1.2	0.4	0.6
99502	14.2	83.8	1.1	0.2	0.5	0.3
99503	25.7	70.4	1.7	1.0	0.8	0.3
99506	24.5	70.6	1.6	2.6	0.4	0.3
99516	15.7	80.2	1.8	1.4	0.3	0.6
99518	20.3	74.9	2.5	1.2	0.4	0.7
99519	11.3	85.2	1.5	0.9	0.4	0.6
MEAN	16.9	78.8	2.1	1.1	0.5	0.6
S.D.	5.19	5.53	0.69	0.66	0.17	0.33
S.E.	1.64	1.75	0.22	0.21	0.05	0.10
N	10	10	10	10	10	10

ANIMAL	NEU ABSOLUTE	LYMPH ABSOLUTE	MONO ABSOLUTE	EOS ABSOLUTE	BASO ABSOLUTE	LUC ABSOLUTE	PLATELET ESTIMATE	RBC MORPHOLOGY
thous/uL								
GROUP:	0 MG/KG/DAY	MALES						
99467	1.53	7.44	0.30	0.08	0.08	0.07	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99471	1.17	8.48	0.27	0.03	0.06	0.15	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99473	1.83	7.84	0.32	0.13	0.05	0.07	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99498	1.73	12.22	0.27	0.17	0.06	0.09	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99502	0.66	3.88	0.05	0.01	0.02	0.01	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99503	2.17	5.93	0.15	0.09	0.07	0.03	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99506	2.07	5.96	0.14	0.22	0.04	0.02	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99516	1.49	7.60	0.17	0.13	0.03	0.06	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99518	1.54	5.67	0.19	0.09	0.03	0.05	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99519	0.96	7.25	0.13	0.07	0.04	0.05	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
MEAN	1.52	7.23	0.20	0.10	0.05	0.06		
S.D.	0.476	2.210	0.087	0.063	0.019	0.040		
S.E.	0.151	0.699	0.028	0.020	0.006	0.013		
N	10	10	10	10	10	10		
thous/uL = THOUSANDS/MICROLITER								

thous/uL = THOUSANDS/MICROLITER

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP: 0 MG/KG/DAY		MALES		
99467	19.0	20.5	12.0	2.21
99471	19.3	19.4	12.2	2.05
99473	19.0	18.3	11.7	2.25
99498	17.9	22.8	11.7	2.45
99502	17.1	21.6	11.6	2.07
99503	19.1	22.3	12.3	2.27
99506	18.2	17.0	13.1	2.43
99516	18.8	18.3	11.8	2.05
99518	17.6	21.2	12.2	2.33
99519	18.4	19.4	11.5	2.17
MEAN	18.4	20.1	12.0	2.23
S.D.	0.73	1.91	0.47	0.147
S.E.	0.23	0.60	0.15	0.047
N	10	10	10	10

g/dL = GRAMS/DECILITER

ANIMAL	WBC	RBC	HGB	HCT	MCV	MCH	MCHC	PLATELET	RETIC	RETIC ABSOLUTE
	thous/uL	mil/uL	g/dL	%	fL	pg	g/dL	thous/uL	%	thous/uL
GROUP:	5 MG/KG/DAY	MALES								
99465	12.33	9.66	16.7	49.8	51.5	17.3	33.5	1268.	1.6	154.3
99479	8.92	9.85	16.4	53.2	54.0	16.7	30.9	837.	1.9	183.9
99483	13.78	8.79	15.4	47.0	53.4	17.5	32.8	1078.	2.8	250.3
99489	14.07	9.49	16.6	51.8	54.6	17.5	32.1	942.	1.9	183.0
99490	9.73	9.37	15.6	47.0	50.2	16.6	33.1	1265.	1.8	169.9
99494	11.10	8.96	15.1	45.3	50.5	16.8	33.3	922.	1.9	172.5
99495	8.94	8.70	14.7	44.2	50.9	16.9	33.3	918.	1.3	115.5
99511	9.69	9.15	15.7	47.9	52.3	17.2	32.8	1061.	1.6	142.8
99524	10.04	8.36	14.6	43.1	51.6	17.5	34.0	1099.	1.6	132.6
99528	12.42	9.22	15.1	46.1	50.0	16.4	32.8	958.	1.4	131.3
MEAN	11.10	9.16	15.6	47.5	51.9	17.0	32.9	1035.	1.8	163.6
S.D.	1.934	0.461	0.76	3.23	1.63	0.41	0.86	146.8	0.42	38.39
S.E.	0.612	0.146	0.24	1.02	0.51	0.13	0.27	46.4	0.13	12.14
N	10	10	10	10	10	10	10	10	10	10
thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER										

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP: 5 MG/KG/DAY	MALES					
99465	14.9	82.3	1.4	0.2	0.7	0.5
99479	24.0	72.0	2.8	0.1	0.6	0.4
99483	13.8	80.7	3.0	0.7	0.5	1.3
99489	12.1	84.5	1.7	0.5	0.7	0.5
99490	12.1	83.8	2.4	0.7	0.5	0.4
99494	20.0	75.2	2.4	1.2	0.4	0.7
99495	19.9	74.2	3.5	1.0	0.3	1.1
99511	20.4	76.0	2.2	0.6	0.3	0.6
99524	17.2	77.5	2.8	1.0	0.4	1.2
99528	20.3	76.3	1.7	0.9	0.3	0.5
MEAN	17.5	78.3	2.4	0.7	0.5	0.7
S.D.	4.07	4.30	0.66	0.35	0.16	0.35
S.E.	1.29	1.36	0.21	0.11	0.05	0.11
N	10	10	10	10	10	10

ANIMAL	NEU ABSOLUTE	LYMPH ABSOLUTE	MONO ABSOLUTE	EOS ABSOLUTE	BASO ABSOLUTE	LUC ABSOLUTE	PLATELET ESTIMATE	RBC MORPHOLOGY
thous/uL								
GROUP:	5 MG/KG/DAY	MALES						
99465	1.83	10.15	0.18	0.02	0.09	0.06	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99479	2.14	6.42	0.25	0.01	0.05	0.04	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99483	1.91	11.12	0.41	0.09	0.07	0.17	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99489	1.70	11.89	0.24	0.08	0.10	0.07	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99490	1.17	8.15	0.24	0.07	0.05	0.04	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99494	2.23	8.35	0.27	0.14	0.05	0.07	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99495	1.78	6.63	0.31	0.09	0.03	0.10	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99511	1.97	7.37	0.21	0.05	0.03	0.06	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99524	1.72	7.78	0.28	0.10	0.04	0.12	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99528	2.52	9.48	0.22	0.11	0.04	0.06	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
MEAN	1.90	8.73	0.26	0.08	0.06	0.08		
S.D.	0.362	1.864	0.064	0.040	0.024	0.040		
S.E.	0.115	0.589	0.020	0.013	0.008	0.013		
N	10	10	10	10	10	10		
thous/uL = THOUSANDS/MICROLITER								

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TABLE A10
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INDIVIDUAL HEMATOLOGY VALUES

PAGE 12
WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP: 5 MG/KG/DAY		MALES		
99465	19.0	20.0	12.5	2.34
99479	19.7	19.2	12.3	1.92
99483	17.5	17.3	12.8	2.50
99489	17.5	20.2	11.6	2.15
99490	18.5	18.4	12.2	2.35
99494	17.7	19.7	12.4	2.22
99495	17.7	19.7	11.4	2.30
99511	18.7	21.5	11.3	2.12
99524	17.9	19.1	11.6	2.26
99528	18.0	19.9	12.0	2.09
MEAN	18.2	19.5	12.0	2.23
S.D.	0.73	1.12	0.51	0.163
S.E.	0.23	0.35	0.16	0.052
N	10	10	10	10
g/dL = GRAMS/DECILITER				

ANIMAL	WBC	RBC	HGB	HCT	MCV	MCH	MCHC	PLATELET	RETIC	RETIC ABSOLUTE
	thous/uL	mil/uL	g/dL	%	fL	pg	g/dL	thous/uL	%	thous/uL
GROUP:	50 MG/KG/DAY	MALES								
99464	12.18	7.63	12.8	39.0	51.1	16.8	32.8	750.	4.0	306.0
99469	7.88	9.36	15.7	47.6	50.8	16.8	33.0	844.	1.9	177.9
99480	8.14	9.01	14.9	46.3	51.4	16.5	32.1	710.	2.4	214.7
99485	10.87	9.04	15.3	48.2	53.3	16.9	31.7	909.	2.6	233.2
99486	7.87	9.14	15.3	46.9	51.3	16.8	32.7	736.	2.5	225.8
99500	10.16	8.58	14.6	44.3	51.7	17.0	33.0	973.	2.7	227.5
99510	6.92	8.32	13.6	40.9	49.2	16.3	33.2	936.	1.8	149.8
99512	13.15	8.61	14.1	42.4	49.3	16.4	33.2	754.	2.7	232.2
99513	15.16	7.80	13.1	39.8	51.0	16.8	33.0	1377.	3.4	264.7
99525	7.18	8.57	14.1	42.8	50.0	16.5	33.0	778.	2.6	223.0
MEAN	9.95	8.61	14.4	43.8	50.9	16.7	32.8	877.	2.7	225.5
S.D.	2.828	0.567	0.98	3.34	1.21	0.23	0.49	198.2	0.65	42.48
S.E.	0.894	0.179	0.31	1.06	0.38	0.07	0.16	62.7	0.20	13.43
N	10	10	10	10	10	10	10	10	10	10
thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER										

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INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP: 50 MG/KG/DAY	MALES					
99464	9.5	86.9	2.0	0.2	0.3	1.1
99469	19.9	75.8	2.4	0.4	0.7	0.7
99480	20.7	76.9	1.0	0.3	0.5	0.6
99485	20.5	75.2	2.2	0.1	0.5	1.4
99486	17.1	78.1	2.8	0.4	0.5	1.1
99500	21.6	73.0	3.8	0.2	0.6	0.8
99510	20.7	73.9	3.7	1.0	0.3	0.5
99512	15.9	80.4	2.3	0.6	0.3	0.5
99513	22.4	74.1	2.1	0.2	0.5	0.7
99525	11.4	84.7	2.3	0.3	0.3	0.9
MEAN	18.0	77.9	2.5	0.4	0.5	0.8
S.D.	4.44	4.72	0.82	0.26	0.14	0.29
S.E.	1.41	1.49	0.26	0.08	0.05	0.09
N	10	10	10	10	10	10

ANIMAL	NEU ABSOLUTE	LYMPH ABSOLUTE	MONO ABSOLUTE	EOS ABSOLUTE	BASO ABSOLUTE	LUC ABSOLUTE	PLATELET ESTIMATE	RBC MORPHOLOGY
	thous/uL	thous/uL	thous/uL	thous/uL	thous/uL	thous/uL		
GROUP:	50 MG/KG/DAY	MALES						
99464	1.16	10.58	0.24	0.03	0.03	0.14	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99469	1.57	5.97	0.19	0.03	0.06	0.06	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99480	1.69	6.26	0.08	0.02	0.04	0.05	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99485	2.23	8.18	0.24	0.01	0.05	0.16	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99486	1.34	6.14	0.22	0.03	0.04	0.09	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99500	2.19	7.41	0.39	0.02	0.06	0.08	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99510	1.43	5.11	0.25	0.07	0.02	0.03	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99512	2.08	10.57	0.30	0.08	0.04	0.06	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99513	3.39	11.24	0.32	0.03	0.07	0.10	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99525	0.82	6.09	0.17	0.02	0.02	0.07	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
MEAN	1.79	7.76	0.24	0.03	0.04	0.08		
S.D.	0.725	2.264	0.086	0.023	0.017	0.040		
S.E.	0.229	0.716	0.027	0.007	0.005	0.013		
N	10	10	10	10	10	10		
thous/uL = THOUSANDS/MICROLITER								

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP: 50 MG/KG/DAY		MALES		
99464	16.7	15.9	14.2	2.84
99469	18.4	19.4	12.5	2.46
99480	18.3	17.7	13.4	2.42
99485	18.3	26.2	12.7	2.30
99486	19.5	18.6	12.7	2.47
99500	17.5	18.0	12.7	2.47
99510	19.6	19.6	12.5	2.43
99512	18.2	20.4	12.6	2.47
99513	16.5	20.6	15.5	2.94
99525	17.4	21.3	13.3	2.52
MEAN	18.0	19.8	13.2	2.53
S.D.	1.04	2.76	0.97	0.199
S.E.	0.33	0.87	0.31	0.063
N	10	10	10	10

g/dL = GRAMS/DECILITER

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

PAGE 17
WEEK 12

ANIMAL	WBC	RBC	HGB	HCT	MCV	MCH	MCHC	PLATELET	RETIC	RETIC ABSOLUTE
	thous/uL	mil/uL	g/dL	%	fL	pg	g/dL	thous/uL	%	thous/uL
GROUP: 150 MG/KG/DAY	MALES									
99468	CLT	CLT	CLT	CLT	CLT	CLT	CLT	CLT	CLT	CLT
99482	11.00	6.15	10.5	33.7	54.7	17.0	31.1	1019.	9.8	601.1
99487	9.88	7.53	13.1	41.5	55.1	17.4	31.5	814.	4.5	335.6
99499	10.87	7.41	12.8	40.7	54.9	17.3	31.6	1152.	5.2	387.2
99501	6.31	7.49	13.1	40.3	53.9	17.5	32.6	639.	4.8	361.9
99517	7.29	8.06	13.6	40.1	49.8	16.9	33.9	926.	3.3	268.2
99521	8.76	7.76	13.5	41.8	53.8	17.4	32.3	717.	3.6	276.5
99522	8.68	7.62	12.4	38.3	50.2	16.2	32.3	998.	3.3	253.0
99523	7.30	7.47	11.8	36.7	49.2	15.8	32.1	838.	3.4	257.4
MEAN	8.76	7.44	12.6	39.1	52.7	16.9	32.2	888.	4.7	342.6
S.D.	1.733	0.560	1.03	2.77	2.51	0.62	0.86	168.9	2.18	116.14
S.E.	0.613	0.198	0.36	0.98	0.89	0.22	0.30	59.7	0.77	41.06
N	8	8	8	8	8	8	8	8	8	8

CLT = CLOTTED

thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER

CLT = CLOTTED

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP: 150 MG/KG/DAY		MALES		
99468	CLT	CLT	CLT	CLT
99482	17.5	9.3	21.8	3.35
99487	16.7	14.8	18.4	3.26
99499	17.1	18.6	14.4	2.56
99501	18.3	15.3	17.0	3.14
99517	17.8	18.9	13.7	2.83
99521	17.0	19.2	14.9	2.92
99522	18.5	18.7	15.4	2.93
99523	17.1	13.2	17.1	3.06
MEAN	17.5	16.0	16.6	3.01
S.D.	0.65	3.53	2.63	0.253
S.E.	0.23	1.25	0.93	0.089
N	8	8	8	8
CLT = CLOTTED				
g/dL = GRAMS/DECILITER				

ANIMAL	WBC	RBC	HGB	HCT	MCV	MCH	MCHC	PLATELET	RETIC	RETIC ABSOLUTE
	thous/uL	mil/uL	g/dL	%	fL	pg	g/dL	thous/uL	%	thous/uL
GROUP:	UNTREATED	FEMALES								
99535	8.72	8.77	16.1	48.3	55.1	18.4	33.4	1111.	1.3	109.8
99541	6.62	9.49	17.3	52.7	55.5	18.2	32.8	980.	2.3	214.2
99544	7.21	8.95	16.3	49.9	55.7	18.2	32.6	1175.	2.5	222.1
99547	8.30	8.87	16.1	48.6	54.8	18.1	33.0	899.	2.2	191.9
99559	8.05	9.47	16.6	50.1	52.9	17.6	33.2	1206.	1.9	179.7
99569	7.56	8.66	15.3	46.3	53.5	17.7	33.1	1058.	1.9	164.0
99579	14.18	8.00	14.7	43.6	54.4	18.4	33.7	1265.	1.8	140.3
99580	7.26	8.41	14.5	43.2	51.4	17.3	33.6	812.	2.2	188.4
99586	9.63	8.37	14.9	44.1	52.7	17.8	33.7	1119.	1.8	152.6
99593	7.34	7.79	14.5	43.8	56.2	18.6	33.0	1223.	1.6	127.0
MEAN	8.49	8.68	15.6	47.1	54.2	18.0	33.2	1085.	2.0	169.0
S.D.	2.181	0.560	0.98	3.33	1.54	0.41	0.38	147.9	0.36	36.91
S.E.	0.690	0.177	0.31	1.05	0.49	0.13	0.12	46.8	0.11	11.67
N	10	10	10	10	10	10	10	10	10	10
thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER										

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP:	UNTREATED	FEMALES				
99535	14.0	80.8	2.6	1.0	0.6	1.1
99541	14.7	79.7	2.6	1.1	1.2	0.7
99544	13.8	81.4	1.9	0.9	0.6	1.4
99547	15.3	80.9	2.2	0.7	0.4	0.4
99559	11.7	83.8	2.0	0.8	0.7	1.0
99569	14.0	81.7	2.0	1.0	0.5	0.8
99579	15.2	80.7	1.7	1.2	0.3	0.8
99580	16.5	77.0	3.3	1.5	0.3	1.4
99586	22.2	71.2	3.6	1.8	0.6	0.7
99593	17.8	77.4	2.3	1.3	0.4	0.9
MEAN	15.5	79.5	2.4	1.1	0.6	0.9
S.D.	2.86	3.52	0.62	0.33	0.26	0.32
S.E.	0.91	1.11	0.20	0.11	0.08	0.10
N	10	10	10	10	10	10

ANIMAL	NEU ABSOLUTE	LYMPH ABSOLUTE	MONO ABSOLUTE	EOS ABSOLUTE	BASO ABSOLUTE	LUC ABSOLUTE	PLATELET ESTIMATE	RBC MORPHOLOGY			
thous/uL thous/uL thous/uL thous/uL thous/uL thous/uL thous/uL											
GROUP:	UNTREATED	FEMALES									
99535	1.22	7.05	0.23	0.08	0.05	0.10	PLATELET ESTIMATE AND MORPHOLOGY	NOT	REVIEWED		
99541	0.97	5.28	0.17	0.07	0.08	0.05	PLATELET ESTIMATE AND MORPHOLOGY	NOT	REVIEWED		
99544	0.99	5.87	0.14	0.07	0.04	0.10	PLATELET ESTIMATE AND MORPHOLOGY	NOT	REVIEWED		
99547	1.27	6.72	0.19	0.06	0.03	0.04	PLATELET ESTIMATE AND MORPHOLOGY	NOT	REVIEWED		
99559	0.94	6.75	0.16	0.06	0.06	0.08	PLATELET ESTIMATE AND MORPHOLOGY	NOT	REVIEWED		
99569	1.06	6.18	0.15	0.07	0.04	0.06	PLATELET ESTIMATE AND MORPHOLOGY	NOT	REVIEWED		
99579	2.16	11.45	0.24	0.18	0.04	0.12	PLATELET ESTIMATE AND MORPHOLOGY	NOT	REVIEWED		
99580	1.20	5.59	0.24	0.11	0.02	0.10	PLATELET ESTIMATE AND MORPHOLOGY	NOT	REVIEWED		
99586	2.14	6.86	0.35	0.17	0.05	0.06	PLATELET ESTIMATE AND MORPHOLOGY	NOT	REVIEWED		
99593	1.30	5.68	0.17	0.10	0.03	0.06	PLATELET ESTIMATE AND MORPHOLOGY	NOT	REVIEWED		
MEAN	1.33	6.74	0.20	0.10	0.04	0.08					
S.D.	0.453	1.762	0.063	0.044	0.017	0.027					
S.E.	0.143	0.557	0.020	0.014	0.005	0.008					
N	10	10	10	10	10	10					
thous/uL = THOUSANDS/MICROLITER											

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP:	UNTREATED	FEMALES		
99535	17.6	16.2	11.4	1.96
99541	18.4	13.9	11.2	1.88
99544	19.1	18.6	10.6	1.87
99547	17.9	15.7	11.3	1.93
99559	17.9	17.9	10.8	2.00
99569	17.6	15.6	11.0	1.99
99579	18.3	17.2	11.0	2.07
99580	18.3	16.6	11.4	2.01
99586	17.8	16.2	11.0	1.98
99593	17.5	15.9	10.9	1.92
MEAN	18.0	16.4	11.1	1.96
S.D.	0.49	1.31	0.26	0.062
S.E.	0.16	0.41	0.08	0.020
N	10	10	10	10

g/dL = GRAMS/DECILITER

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

PAGE 25
WEEK 12

ANIMAL	WBC	RBC	HGB	HCT	MCV	MCH	MCHC	PLATELET	RETIC	RETIC ABSOLUTE
	thous/uL	mil/uL	g/dL	%	fL	pg	g/dL	thous/uL	%	thous/uL
GROUP: 0 MG/KG/DAY	FEMALES									
99534	10.51	8.90	16.1	48.0	53.9	18.1	33.5	1250.	1.6	145.9
99561	6.59	8.76	16.2	49.2	56.2	18.5	32.8	1044.	1.9	170.5
99562	8.20	8.83	15.1	46.5	52.7	17.1	32.5	1436.	1.8	158.9
99563	CLT	CLT	CLT	CLT	CLT	CLT	CLT	CLT	CLT	CLT
99572	10.00	9.55	17.3	52.5	55.0	18.1	32.9	1110.	2.0	190.2
99574	9.36	8.62	15.6	45.9	53.3	18.1	34.0	1375.	1.6	135.8
99575	12.09	7.80	13.8	40.6	52.0	17.7	34.0	1140.	1.7	132.7
99576	6.96	8.30	15.1	43.1	51.9	18.3	35.2	980.	2.1	177.5
99578	8.79	8.53	14.8	43.6	51.1	17.4	34.1	1034.	2.0	171.7
99585	7.11	7.76	13.9	41.1	53.0	17.9	33.7	1101.	1.4	111.7
MEAN	8.85	8.56	15.3	45.6	53.2	17.9	33.6	1163.	1.8	155.0
S.D.	1.836	0.559	1.12	3.92	1.60	0.44	0.83	157.5	0.23	25.26
S.E.	0.612	0.186	0.37	1.31	0.53	0.15	0.28	52.5	0.08	8.42
N	9	9	9	9	9	9	9	9	9	9

CLT = CLOTTED

thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP:	0 MG/KG/DAY	FEMALES				
99534	10.3	85.5	1.9	0.9	0.7	0.8
99561	10.4	85.5	1.4	1.2	0.8	0.7
99562	10.2	85.4	2.1	0.7	0.6	1.0
99563	CLT	CLT	CLT	CLT	CLT	CLT
99572	15.7	79.2	1.7	1.2	1.2	0.9
99574	17.5	78.0	2.2	1.2	0.5	0.6
99575	20.3	75.0	2.2	1.2	0.5	0.8
99576	24.7	69.5	1.9	2.5	0.2	1.2
99578	10.4	84.9	2.4	0.8	0.4	1.1
99585	19.8	74.7	3.0	1.1	0.4	0.9
MEAN	15.5	79.7	2.1	1.2	0.6	0.9
S.D.	5.45	5.93	0.45	0.52	0.29	0.19
S.E.	1.82	1.98	0.15	0.17	0.10	0.06
N	9	9	9	9	9	9

CLT = CLOTTED

CLT = CLOTTED

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP: 0 MG/KG/DAY		FEMALES		
99534	16.8	17.6	10.8	2.00
99561	18.2	12.6	11.5	2.05
99562	18.1	16.5	11.7	1.87
99563	CLT	CLT	CLT	CLT
99572	17.6	11.9	10.9	1.82
99574	17.9	16.3	10.6	1.80
99575	18.4	13.7	11.4	2.00
99576	19.1	16.1	11.0	2.23
99578	18.0	17.9	10.8	2.01
99585	16.8	18.4	10.8	1.95
MEAN	17.9	15.7	11.1	1.97
S.D.	0.74	2.37	0.38	0.132
S.E.	0.25	0.79	0.13	0.044
N	9	9	9	9
CLT = CLOTTED				
g/dL = GRAMS/DECILITER				

ANIMAL	WBC	RBC	HGB	HCT	MCV	MCH	MCHC	PLATELET	RETIC	RETIC ABSOLUTE
	thous/uL	mil/uL	g/dL	%	fL	pg	g/dL	thous/uL	%	thous/uL
GROUP:	5 MG/KG/DAY	FEMALES								
99530	7.54	9.43	17.2	52.6	55.8	18.2	32.6	994.	1.6	151.9
99532	5.63	8.05	14.3	43.2	53.7	17.8	33.2	1158.	1.9	155.6
99555	9.21	8.63	16.0	46.4	53.7	18.5	34.5	1461.	1.5	133.6
99556	7.00	8.51	15.2	44.9	52.8	17.8	33.8	1036.	1.9	165.5
99566	6.71	8.68	15.9	48.8	56.1	18.3	32.6	1172.	2.6	226.1
99568	8.62	8.21	14.9	43.9	53.5	18.2	34.0	1472.	1.7	140.9
99571	8.60	8.39	14.6	43.3	51.6	17.5	33.8	1193.	2.1	173.9
99582	10.09	8.56	15.3	44.2	51.6	17.8	34.6	1153.	1.8	150.6
99591	8.32	8.44	14.4	42.2	50.0	17.1	34.2	1153.	1.4	114.6
99592	10.28	7.83	15.0	44.1	56.3	19.1	33.9	976.	2.0	159.0
MEAN	8.20	8.47	15.3	45.4	53.5	18.0	33.7	1177.	1.9	157.2
S.D.	1.490	0.430	0.88	3.15	2.11	0.56	0.71	171.0	0.34	29.46
S.E.	0.471	0.136	0.28	1.00	0.67	0.18	0.22	54.1	0.11	9.32
N	10	10	10	10	10	10	10	10	10	10
thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER										

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP: 5 MG/KG/DAY		FEMALES				
99530	19.1	77.0	2.0	0.5	1.0	0.4
99532	13.9	81.5	2.9	0.9	0.3	0.5
99555	14.0	81.3	2.4	0.9	0.5	0.8
99556	25.8	69.8	2.1	1.2	0.5	0.6
99566	9.4	84.9	2.9	0.9	0.4	1.5
99568	8.1	86.9	1.9	1.1	0.5	1.5
99571	14.6	82.3	1.7	0.5	0.4	0.4
99582	22.5	71.2	3.4	0.9	0.7	1.3
99591	4.3	92.9	1.1	0.7	0.3	0.6
99592	15.0	81.3	1.7	0.5	0.4	1.1
MEAN	14.7	80.9	2.2	0.8	0.5	0.9
S.D.	6.54	6.92	0.69	0.25	0.21	0.44
S.E.	2.07	2.19	0.22	0.08	0.07	0.14
N	10	10	10	10	10	10

ANIMAL	NEU ABSOLUTE	LYMPH ABSOLUTE	MONO ABSOLUTE	EOS ABSOLUTE	BASO ABSOLUTE	LUC ABSOLUTE	PLATELET ESTIMATE	RBC MORPHOLOGY
thous/uL								
GROUP:	5 MG/KG/DAY	FEMALES						
99530	1.44	5.80	0.15	0.04	0.08	0.03	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99532	0.78	4.59	0.16	0.05	0.02	0.03	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99555	1.29	7.49	0.22	0.09	0.05	0.08	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99556	1.80	4.89	0.15	0.08	0.03	0.05	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99566	0.63	5.70	0.19	0.06	0.03	0.10	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99568	0.70	7.49	0.16	0.09	0.04	0.13	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99571	1.26	7.08	0.15	0.04	0.03	0.04	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99582	2.27	7.19	0.34	0.09	0.07	0.13	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99591	0.36	7.73	0.09	0.06	0.03	0.05	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99592	1.54	8.35	0.18	0.06	0.04	0.11	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
MEAN	1.21	6.63	0.18	0.07	0.04	0.08		
S.D.	0.591	1.287	0.066	0.020	0.019	0.040		
S.E.	0.187	0.407	0.021	0.006	0.006	0.013		
N	10	10	10	10	10	10		
thous/uL = THOUSANDS/MICROLITER								

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP:	5 MG/KG/DAY	FEMALES		
99530	17.8	17.0	10.9	1.83
99532	18.2	16.4	11.9	1.95
99555	19.0	18.1	10.7	2.06
99556	18.1	19.7	11.1	2.03
99566	16.4	16.1	11.0	2.00
99568	17.0	18.8	10.5	1.96
99571	18.3	17.9	11.3	2.09
99582	17.9	17.3	10.8	2.14
99591	19.1	17.8	11.2	2.01
99592	17.7	15.5	11.9	2.16
MEAN	18.0	17.5	11.1	2.02
S.D.	0.82	1.27	0.47	0.098
S.E.	0.26	0.40	0.15	0.031
N	10	10	10	10

g/dL = GRAMS/DECILITER

ANIMAL	WBC	RBC	HGB	HCT	MCV	MCH	MCHC	PLATELET	RETIC	RETIC ABSOLUTE
	thous/uL	mil/uL	g/dL	%	fL	pg	g/dL	thous/uL	%	thous/uL
GROUP:	50 MG/KG/DAY	FEMALES								
99533	11.88	8.42	14.6	44.6	53.0	17.3	32.7	1053.	1.9	160.1
99538	7.89	9.16	16.0	47.5	51.9	17.5	33.6	841.	1.7	158.3
99546	6.20	8.52	15.5	47.0	55.2	18.2	33.0	591.	2.5	217.0
99552	6.04	8.14	14.3	41.5	50.9	17.5	34.4	849.	2.0	159.4
99553	9.23	8.34	14.5	43.5	52.1	17.4	33.4	783.	1.9	157.9
99560	9.32	7.80	14.3	42.3	54.2	18.3	33.8	875.	1.9	149.0
99564	7.10	7.77	13.6	40.6	52.2	17.6	33.6	855.	2.3	177.5
99567	7.77	8.03	14.5	41.7	52.0	18.1	34.8	721.	1.8	148.4
99584	7.46	8.14	14.5	41.8	51.3	17.8	34.7	1112.	2.0	162.8
99590	10.77	7.85	13.9	40.4	51.4	17.7	34.4	779.	1.6	128.8
MEAN	8.37	8.22	14.6	43.1	52.4	17.7	33.8	846.	2.0	161.9
S.D.	1.912	0.421	0.70	2.52	1.35	0.35	0.72	150.4	0.27	23.00
S.E.	0.605	0.133	0.22	0.80	0.43	0.11	0.23	47.6	0.08	7.27
N	10	10	10	10	10	10	10	10	10	10
thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER										

PROJECT NO.:WIL-402022
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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP: 50 MG/KG/DAY		FEMALES				
99533	14.3	82.5	1.3	0.2	0.9	0.8
99538	11.7	83.4	2.5	0.5	0.6	1.3
99546	9.3	86.9	1.6	0.2	0.8	1.2
99552	13.0	81.0	3.9	0.3	0.5	1.2
99553	17.3	78.6	2.3	0.3	0.5	1.1
99560	10.4	86.0	1.6	0.6	0.5	0.9
99564	18.7	74.8	3.9	0.7	0.3	1.6
99567	11.1	84.0	2.4	0.5	0.5	1.5
99584	13.0	83.3	1.4	0.8	0.2	1.2
99590	36.4	59.4	2.7	0.6	0.3	0.7
MEAN	15.5	80.0	2.4	0.5	0.5	1.2
S.D.	7.91	8.05	0.95	0.21	0.22	0.29
S.E.	2.50	2.54	0.30	0.07	0.07	0.09
N	10	10	10	10	10	10

ANIMAL	NEU ABSOLUTE	LYMPH ABSOLUTE	MONO ABSOLUTE	EOS ABSOLUTE	BASO ABSOLUTE	LUC ABSOLUTE	PLATELET ESTIMATE	RBC MORPHOLOGY
	thous/uL	thous/uL	thous/uL	thous/uL	thous/uL	thous/uL		
GROUP:	50 MG/KG/DAY	FEMALES						
99533	1.70	9.80	0.16	0.02	0.11	0.10	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99538	0.92	6.58	0.20	0.04	0.05	0.10	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99546	0.57	5.39	0.10	0.01	0.05	0.08	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99552	0.78	4.89	0.24	0.02	0.03	0.07	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99553	1.60	7.26	0.21	0.02	0.05	0.10	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99560	0.97	8.01	0.15	0.06	0.04	0.09	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99564	1.33	5.31	0.28	0.05	0.02	0.12	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99567	0.86	6.52	0.19	0.04	0.04	0.12	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99584	0.97	6.21	0.11	0.06	0.02	0.09	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99590	3.92	6.40	0.29	0.06	0.03	0.07	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
MEAN	1.36	6.64	0.19	0.04	0.04	0.09		
S.D.	0.968	1.449	0.065	0.019	0.026	0.018		
S.E.	0.306	0.458	0.021	0.006	0.008	0.006		
N	10	10	10	10	10	10		
thous/uL = THOUSANDS/MICROLITER								

thous/uL = THOUSANDS/MICROLITER

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP:	50 MG/KG/DAY	FEMALES		
99533	19.1	14.6	12.1	2.02
99538	18.1	17.0	11.8	2.31
99546	16.6	15.2	11.7	2.08
99552	17.5	18.9	12.7	2.57
99553	19.6	16.4	12.3	2.38
99560	17.2	18.0	11.6	2.08
99564	18.0	17.1	12.0	2.23
99567	17.1	16.3	11.7	2.42
99584	18.4	16.4	11.5	2.34
99590	17.4	19.0	12.5	2.65
MEAN	17.9	16.9	12.0	2.31
S.D.	0.93	1.44	0.40	0.210
S.E.	0.30	0.46	0.13	0.066
N	10	10	10	10

g/dL = GRAMS/DECILITER

ANIMAL	WBC	RBC	HGB	HCT	MCV	MCH	MCHC	PLATELET	RETIC	RETIC ABSOLUTE
	thous/uL	mil/uL	g/dL	%	fL	pg	g/dL	thous/uL	%	thous/uL
GROUP:	150 MG/KG/DAY	FEMALES								
99531	7.60	8.31	14.7	44.5	53.6	17.7	33.1	817.	2.4	199.3
99536	6.90	8.21	15.0	44.8	54.6	18.3	33.6	765.	2.9	235.4
99540	6.01	8.34	13.9	42.9	51.5	16.7	32.5	964.	3.0	246.3
99548	5.21	8.82	15.2	47.4	53.7	17.3	32.2	690.	1.8	155.1
99554	7.23	8.94	15.6	48.6	54.4	17.5	32.1	610.	2.6	233.0
99557	7.55	7.32	13.0	38.7	52.8	17.7	33.5	825.	3.3	238.7
99558	10.21	7.44	12.9	37.1	50.0	17.4	34.8	594.	2.0	151.9
99577	4.91	7.81	13.0	38.9	49.8	16.7	33.4	628.	2.1	164.7
99581	3.83	7.53	13.0	38.6	51.2	17.3	33.8	809.	1.8	135.7
99588	5.13	8.09	14.5	43.4	53.6	17.9	33.4	1033.	1.5	121.7
MEAN	6.46	8.08	14.1	42.5	52.5	17.5	33.2	774.	2.3	188.2
S.D.	1.832	0.557	1.05	3.99	1.77	0.50	0.81	147.8	0.60	47.64
S.E.	0.579	0.176	0.33	1.26	0.56	0.16	0.26	46.7	0.19	15.07
N	10	10	10	10	10	10	10	10	10	10
thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER										

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP: 150 MG/KG/DAY		FEMALES				
99531	7.3	88.9	1.7	0.2	0.7	1.2
99536	13.9	82.2	2.0	0.3	0.5	1.1
99540	7.4	89.4	1.8	0.2	0.4	0.9
99548	11.9	82.0	3.8	0.3	0.8	1.3
99554	15.7	78.4	3.2	0.5	0.8	1.4
99557	13.9	81.2	2.7	0.3	0.4	1.5
99558	16.3	79.8	2.0	0.3	0.3	1.2
99577	13.9	81.5	2.5	0.2	0.3	1.6
99581	16.7	78.9	2.6	0.4	0.3	1.2
99588	15.5	81.1	1.6	0.3	0.3	1.2
MEAN	13.3	82.3	2.4	0.3	0.5	1.3
S.D.	3.42	3.81	0.71	0.09	0.21	0.20
S.E.	1.08	1.20	0.22	0.03	0.07	0.06
N	10	10	10	10	10	10

ANIMAL	NEU ABSOLUTE	LYMPH ABSOLUTE	MONO ABSOLUTE	EOS ABSOLUTE	BASO ABSOLUTE	LUC ABSOLUTE	PLATELET ESTIMATE	RBC MORPHOLOGY
thous/uL								
GROUP:	150	MG/KG/DAY	FEMALES					
99531	0.56	6.76	0.13	0.01	0.05	0.09	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99536	0.96	5.67	0.14	0.02	0.04	0.07	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99540	0.45	5.38	0.11	0.01	0.02	0.05	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99548	0.62	4.28	0.20	0.01	0.04	0.07	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99554	1.14	5.67	0.23	0.04	0.06	0.10	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99557	1.05	6.13	0.20	0.02	0.03	0.12	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99558	1.67	8.15	0.21	0.03	0.03	0.12	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99577	0.68	4.00	0.12	0.01	0.01	0.08	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99581	0.64	3.03	0.10	0.02	0.01	0.05	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
99588	0.79	4.17	0.08	0.01	0.02	0.06	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
MEAN	0.86	5.32	0.15	0.02	0.03	0.08		
S.D.	0.362	1.505	0.053	0.010	0.017	0.026		
S.E.	0.115	0.476	0.017	0.003	0.005	0.008		
N	10	10	10	10	10	10		
thous/uL = THOUSANDS/MICROLITER								

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TABLE A10
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP: 150 MG/KG/DAY		FEMALES		
99531	17.9	16.5	13.3	2.36
99536	18.3	17.3	14.7	2.76
99540	18.0	16.2	13.5	2.40
99548	17.5	15.0	13.0	2.48
99554	17.5	13.8	14.3	2.56
99557	18.1	15.5	13.6	2.49
99558	16.6	16.7	12.5	2.82
99577	17.1	14.8	14.0	2.46
99581	16.5	16.1	12.4	2.51
99588	17.8	18.8	11.3	2.09
MEAN	17.5	16.1	13.3	2.49
S.D.	0.62	1.41	1.01	0.204
S.E.	0.20	0.44	0.32	0.064
N	10	10	10	10

g/dL = GRAMS/DECILITER

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TABLE A11
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL SERUM CHEMISTRY VALUES

PAGE 1
WEEK 12

ANIMAL	ALBUMIN	TOTAL PROTEIN	GLOBULIN	A/G RATIO	TOTAL BILI	UREA NITROGEN	CREAT- ININE	ALP	ALT	AST	GGT
	g/dL	g/dL	g/dL		mg/dL	mg/dL	mg/dL	U/L	U/L	U/L	U/L
GROUP:	UNTREATED	MALES									
99466	4.2	6.9	2.8	1.51	0.08	15.7	0.3	106.	57.	117.	0.1
99472	4.0	6.2	2.2	1.84	0.08	13.5	0.3	67.	42.	99.	0.6
99474	4.6	7.5	2.9	1.57	0.12	20.0	0.3	96.	55.	123.	0.5
99491	4.8	7.9	3.1	1.53	0.07	14.6	0.3	113.	59.	128.	0.1
99496	4.5	7.6	3.0	1.50	0.07	13.7	0.3	98.	57.	130.	0.1
99504	4.0	6.3	2.3	1.73	0.06	14.7	0.1	86.	45.	86.	0.6
99505	3.7	6.1	2.4	1.56	0.05	11.9	0.2	72.	51.	97.	0.1
99507	3.4	5.7	2.4	1.41	0.07	12.5	0.2	60.	32.	90.	0.1
99509	4.1	6.1	2.0	2.08	0.07	10.4	0.1	67.	34.	75.	0.1
99515	3.9	6.0	2.1	1.88	0.06	13.2	0.1	91.	45.	97.	0.1
MEAN	4.1	6.6	2.5	1.66	0.07	14.0	0.2	86.	48.	104.	0.2
S.D.	0.42	0.78	0.40	0.213	0.019	2.59	0.09	18.2	9.7	19.0	0.23
S.E.	0.13	0.25	0.13	0.067	0.006	0.82	0.03	5.8	3.1	6.0	0.07
N	10	10	10	10	10	10	10	10	10	10	10

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, g/dL = GRAMS/DECILITER

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TABLE A11
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL SERUM CHEMISTRY VALUES

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WEEK 12

ANIMAL	GLUCOSE	CHOL- ESTEROL	CALCIUM	CHLORIDE	PHOS- PHORUS	POTAS- SIUM	SODIUM	TRIGLY- CERIDE	SDH
	mg/dL	mg/dL	mg/dL	mEq/L	mg/dL	mEq/L	mEq/L	mg/dL	U/L
GROUP:	UNTREATED	MALES							
99466	144.	38.	11.6	103.	10.6	6.57	151.	25.	10.
99472	152.	43.	12.0	102.	8.1	5.82	146.	23.	9.
99474	120.	65.	15.3	103.	16.5	7.59	162.	40.	22.
99491	142.	62.	14.9	103.	14.9	7.87	161.	29.	19.
99496	139.	40.	14.6	103.	15.1	7.08	159.	16.	21.
99504	110.	37.	9.6	101.	8.6	6.36	145.	23.	5.
99505	127.	31.	10.8	105.	6.3	4.33	146.	31.	17.
99507	118.	30.	11.2	105.	7.6	6.14	145.	18.	12.
99509	139.	57.	11.3	103.	7.2	4.59	144.	27.	11.
99515	168.	49.	11.3	103.	6.9	4.40	144.	19.	12.
MEAN	136.	45.	12.3	103.	10.2	6.08	150.	25.	14.
S.D.	17.4	12.5	1.95	1.2	3.87	1.290	7.5	7.1	5.6
S.E.	5.5	4.0	0.62	0.4	1.22	0.408	2.4	2.2	1.8
N	10	10	10	10	10	10	10	10	10

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, mEq/L = MILLIEQUIVALENTS/LITER

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TABLE A11
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL SERUM CHEMISTRY VALUES

PAGE 3
WEEK 12

ANIMAL	ALBUMIN	TOTAL PROTEIN	GLOBULIN	A/G RATIO	TOTAL BILI	UREA NITROGEN	CREAT- ININE	ALP	ALT	AST	GGT
	g/dL	g/dL	g/dL		mg/dL	mg/dL	mg/dL	U/L	U/L	U/L	U/L
GROUP: 0 MG/KG/DAY	MALES										
99467	4.2	6.7	2.5	1.66	0.05	14.7	0.3	84.	45.	75.	0.6
99471	4.2	7.1	2.9	1.48	0.05	14.4	0.4	141.	45.	116.	0.1
99473	3.8	6.4	2.6	1.43	0.07	16.8	0.2	74.	57.	114.	0.1
99498	3.7	5.6	1.9	1.92	0.06	13.5	0.1	79.	47.	74.	0.1
99502	4.6	7.3	2.8	1.65	0.08	13.7	0.3	135.	54.	130.	0.1
99503	3.9	6.5	2.6	1.50	0.06	15.7	0.1	80.	49.	108.	0.1
99506	4.0	6.4	2.5	1.61	0.04	16.9	0.3	114.	53.	100.	0.1
99516	4.1	6.7	2.6	1.59	0.09	15.5	0.1	86.	51.	96.	0.2
99518	4.1	6.6	2.5	1.63	0.07	8.7	0.0	82.	34.	59.	0.1
99519	3.7	5.8	2.1	1.72	0.07	12.3	0.2	63.	43.	105.	0.1
MEAN	4.0	6.5	2.5	1.62	0.06	14.2	0.2	94.	48.	98.	0.2
S.D.	0.28	0.52	0.30	0.139	0.015	2.42	0.12	26.6	6.6	22.1	0.16
S.E.	0.09	0.16	0.09	0.044	0.005	0.77	0.04	8.4	2.1	7.0	0.05
N	10	10	10	10	10	10	10	10	10	10	10

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, g/dL = GRAMS/DECILITER

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TABLE A11
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL SERUM CHEMISTRY VALUES

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WEEK 12

ANIMAL	GLUCOSE	CHOL- ESTEROL	CALCIUM	CHLORIDE	PHOS- PHORUS	POTAS- SIUM	SODIUM	TRIGLY- CERIDE	SDH
	mg/dL	mg/dL	mg/dL	mEq/L	mg/dL	mEq/L	mEq/L	mg/dL	U/L
GROUP: 0 MG/KG/DAY	MALES								
99467	165.	50.	12.3	102.	9.1	6.03	147.	33.	12.
99471	119.	54.	12.3	101.	10.8	5.18	152.	27.	22.
99473	171.	58.	13.2	102.	11.7	6.17	150.	18.	12.
99498	129.	39.	10.8	104.	7.0	4.16	143.	14.	13.
99502	123.	40.	14.1	99.	18.6	8.15	156.	19.	19.
99503	138.	25.	11.3	103.	9.6	6.42	146.	12.	5.
99506	134.	44.	10.5	102.	8.7	6.33	147.	21.	13.
99516	120.	43.	11.5	103.	7.8	4.37	146.	11.	7.
99518	150.	62.	11.7	101.	6.7	4.61	143.	35.	4.
99519	132.	38.	11.7	102.	8.4	4.89	147.	9.	13.
MEAN	138.	45.	11.9	102.	9.8	5.63	148.	20.	12.
S.D.	18.3	10.9	1.09	1.4	3.45	1.223	4.0	9.1	5.7
S.E.	5.8	3.5	0.34	0.4	1.09	0.387	1.3	2.9	1.8
N	10	10	10	10	10	10	10	10	10

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, mEq/L = MILLIEQUIVALENTS/LITER

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mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, g/dL = GRAMS/DECILITER

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ANIMAL	GLUCOSE	CHOL- ESTEROL	CALCIUM	CHLORIDE	PHOS- PHORUS	POTAS- SIUM	SODIUM	TRIGLY- CERIDE	SDH
	mg/dL	mg/dL	mg/dL	mEq/L	mg/dL	mEq/L	mEq/L	mg/dL	U/L
GROUP: 5 MG/KG/DAY		MALES							
99465	181.	43.	12.0	102.	10.0	6.50	149.	18.	9.
99479	131.	29.	12.5	105.	11.3	5.51	155.	22.	17.
99483	144.	47.	12.0	102.	8.6	4.50	147.	22.	20.
99489	194.	61.	12.2	99.	11.1	5.12	147.	19.	13.
99490	160.	27.	12.1	103.	9.5	5.92	147.	9.	9.
99494	150.	38.	11.5	101.	7.5	5.39	144.	37.	13.
99495	114.	50.	10.6	103.	6.4	4.50	145.	17.	9.
99511	106.	41.	11.0	102.	6.7	4.28	146.	29.	6.
99524	144.	48.	11.3	103.	7.1	3.99	145.	20.	8.
99528	158.	27.	11.3	104.	7.9	4.73	146.	19.	6.
MEAN	148.	41.	11.7	102.	8.6	5.04	147.	21.	11.
S.D.	27.3	11.1	0.60	1.6	1.79	0.790	3.1	7.5	4.7
S.E.	8.6	3.5	0.19	0.5	0.56	0.250	1.0	2.4	1.5
N	10	10	10	10	10	10	10	10	10

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, mEq/L = MILLIEQUIVALENTS/LITER

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, g/dL = GRAMS/DECILITER

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ANIMAL	GLUCOSE	CHOL- ESTEROL	CALCIUM	CHLORIDE	PHOS- PHORUS	POTAS- SIUM	SODIUM	TRIGLY- CERIDE	SDH
	mg/dL	mg/dL	mg/dL	mEq/L	mg/dL	mEq/L	mEq/L	mg/dL	U/L
GROUP: 50 MG/KG/DAY		MALES							
99464	151.	98.	11.5	103.	7.1	4.46	146.	36.	16.
99469	137.	52.	11.7	106.	9.6	6.73	150.	19.	11.
99480	207.	56.	12.7	102.	11.2	7.52	148.	24.	16.
99485	215.	48.	13.0	100.	11.0	6.41	146.	14.	24.
99486	177.	85.	13.0	103.	9.2	7.23	147.	8.	14.
99500	155.	63.	12.0	102.	8.5	6.64	144.	56.	8.
99510	111.	46.	11.3	102.	5.6	3.96	145.	30.	5.
99512	133.	36.	11.2	103.	7.0	4.58	145.	21.	24.
99513	140.	122.	11.5	102.	7.7	4.63	144.	24.	16.
99525	119.	33.	11.3	100.	7.3	4.03	146.	23.	8.
MEAN	155.	64.	11.9	102.	8.4	5.62	146.	26.	14.
S.D.	35.1	28.9	0.72	1.7	1.82	1.406	1.9	13.2	6.4
S.E.	11.1	9.1	0.23	0.5	0.58	0.445	0.6	4.2	2.0
N	10	10	10	10	10	10	10	10	10

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, mEq/L = MILLIEQUIVALENTS/LITER

ANIMAL	ALBUMIN	TOTAL PROTEIN	GLOBULIN	A/G RATIO	TOTAL BILI	UREA NITROGEN	CREAT- ININE	ALP	ALT	AST	GGT
	g/dL	g/dL	g/dL		mg/dL	mg/dL	mg/dL	U/L	U/L	U/L	U/L
GROUP: 150 MG/KG/DAY		MALES									
99468	3.6	5.9	2.3	1.53	0.37	35.5	0.4	82.	481.	613.	2.1
99482	3.8	6.3	2.5	1.56	0.11	26.3	0.3	76.	141.	218.	0.9
99487	4.6	7.2	2.7	1.70	0.07	14.6	0.3	73.	31.	99.	0.5
99499	4.0	6.3	2.2	1.83	0.08	17.9	0.3	74.	43.	112.	0.1
99501	4.7	7.3	2.7	1.73	0.07	14.4	0.2	84.	27.	84.	0.7
99517	4.2	6.3	2.1	2.02	0.09	15.1	0.2	61.	39.	89.	1.2
99521	4.4	6.7	2.3	1.86	0.06	12.3	0.2	78.	32.	90.	0.5
99522	3.7	6.0	2.3	1.61	0.05	15.5	0.1	73.	35.	104.	0.1
99523	3.7	6.2	2.5	1.47	0.04	16.2	0.2	71.	39.	108.	0.1
MEAN	4.1	6.5	2.4	1.70	0.10	18.6	0.2	75.	96.	169.	0.7
S.D.	0.41	0.50	0.21	0.179	0.102	7.47	0.09	6.7	148.5	171.6	0.65
S.E.	0.14	0.17	0.07	0.060	0.034	2.49	0.03	2.2	49.5	57.2	0.22
N	9	9	9	9	9	9	9	9	9	9	9
mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, g/dL = GRAMS/DECILITER											

ANIMAL	GLUCOSE	CHOL- ESTEROL	CALCIUM	CHLORIDE	PHOS- PHORUS	POTAS- SIUM	SODIUM	TRIGLY- CERIDE	SDH
	mg/dL	mg/dL	mg/dL	mEq/L	mg/dL	mEq/L	mEq/L	mg/dL	U/L
GROUP: 150 MG/KG/DAY	MALES								
99468	122.	82.	10.8	104.	8.0	6.85	141.	93.	246.
99482	139.	35.	10.7	103.	8.9	5.60	145.	35.	176.
99487	218.	149.	13.4	100.	10.3	6.99	148.	23.	24.
99499	202.	82.	12.6	100.	10.9	5.24	147.	11.	31.
99501	168.	124.	13.0	99.	9.7	6.65	146.	17.	18.
99517	104.	90.	11.1	103.	6.7	4.02	146.	17.	11.
99521	142.	70.	11.6	103.	8.5	5.47	147.	12.	14.
99522	162.	69.	11.0	101.	6.8	5.00	144.	19.	10.
99523	142.	73.	11.1	103.	7.9	6.17	143.	18.	15.
MEAN	155.	86.	11.7	102.	8.6	5.78	145.	27.	61.
S.D.	36.5	33.1	1.03	1.8	1.47	0.977	2.2	25.6	87.3
S.E.	12.2	11.0	0.34	0.6	0.49	0.326	0.7	8.5	29.1
N	9	9	9	9	9	9	9	9	9
mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, mEq/L = MILLIEQUIVALENTS/LITER									

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ANIMAL	ALBUMIN	TOTAL PROTEIN	GLOBULIN	A/G RATIO	TOTAL BILI	UREA NITROGEN	CREAT- ININE	ALP	ALT	AST	GGT
	g/dL	g/dL	g/dL		mg/dL	mg/dL	mg/dL	U/L	U/L	U/L	U/L
GROUP:	UNTREATED	FEMALES									
99535	4.8	7.5	2.7	1.82	0.06	14.7	0.3	50.	155.	239.	1.3
99541	5.4	8.5	3.1	1.73	0.10	13.8	0.4	40.	50.	105.	0.6
99544	4.7	7.3	2.6	1.80	0.10	13.4	0.3	47.	67.	105.	1.0
99547	5.4	7.8	2.3	2.33	0.13	12.9	0.2	55.	50.	105.	1.0
99559	4.8	7.3	2.4	2.00	0.10	13.5	0.2	65.	38.	92.	0.1
99569	4.6	7.2	2.6	1.81	0.10	15.6	0.3	35.	50.	98.	0.3
99579	4.6	7.1	2.6	1.79	0.09	14.3	0.2	42.	54.	103.	0.1
99580	5.3	7.6	2.3	2.37	0.12	10.1	0.2	65.	96.	145.	0.1
99586	4.2	6.8	2.5	1.67	0.09	13.6	0.2	55.	34.	81.	0.8
99593	4.7	6.6	2.0	2.38	0.09	14.1	0.2	45.	32.	81.	0.7
MEAN	4.9	7.4	2.5	1.97	0.10	13.6	0.3	50.	63.	115.	0.6
S.D.	0.40	0.53	0.29	0.282	0.019	1.44	0.07	10.1	37.4	47.0	0.43
S.E.	0.12	0.17	0.09	0.089	0.006	0.46	0.02	3.2	11.8	14.9	0.14
N	10	10	10	10	10	10	10	10	10	10	10

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, g/dL = GRAMS/DECILITER

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ANIMAL	GLUCOSE	CHOL- ESTEROL	CALCIUM	CHLORIDE	PHOS- PHORUS	POTAS- SIUM	SODIUM	TRIGLY- CERIDE	SDH
	mg/dL	mg/dL	mg/dL	mEq/L	mg/dL	mEq/L	mEq/L	mg/dL	U/L
GROUP:	UNTREATED	FEMALES							
99535	124.	94.	12.5	101.	8.7	7.02	147.	34.	36.
99541	181.	76.	14.3	100.	9.9	8.61	147.	42.	14.
99544	163.	61.	13.1	102.	9.0	6.41	148.	25.	16.
99547	153.	61.	13.6	101.	8.9	6.02	148.	27.	18.
99559	123.	44.	13.2	102.	11.1	8.98	146.	26.	9.
99569	126.	64.	11.7	100.	8.1	6.43	142.	30.	7.
99579	119.	65.	11.4	103.	6.8	4.26	144.	23.	10.
99580	133.	81.	11.8	102.	6.5	4.32	143.	25.	24.
99586	132.	66.	11.7	102.	7.9	4.14	146.	25.	10.
99593	132.	53.	12.1	103.	8.0	4.16	145.	19.	9.
MEAN	139.	67.	12.5	102.	8.5	6.04	146.	28.	15.
S.D.	20.3	14.2	0.97	1.1	1.37	1.819	2.1	6.4	8.9
S.E.	6.4	4.5	0.31	0.3	0.43	0.575	0.7	2.0	2.8
N	10	10	10	10	10	10	10	10	10

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, mEq/L = MILLIEQUIVALENTS/LITER

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TABLE A11
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ANIMAL	ALBUMIN	TOTAL PROTEIN	GLOBULIN	A/G RATIO	TOTAL BILI	UREA NITROGEN	CREAT- ININE	ALP	ALT	AST	GGT
	g/dL	g/dL	g/dL		mg/dL	mg/dL	mg/dL	U/L	U/L	U/L	U/L
GROUP: 0 MG/KG/DAY	FEMALES										
99534	5.1	7.6	2.5	2.05	0.10	16.0	0.3	35.	63.	124.	0.6
99561	5.0	7.8	2.9	1.74	0.09	16.5	0.4	62.	60.	113.	0.4
99562	5.3	7.3	2.0	2.72	0.11	16.0	0.3	46.	66.	136.	1.8
99563	5.9	8.7	2.8	2.15	0.13	11.8	0.4	47.	42.	93.	1.1
99572	4.9	7.6	2.7	1.80	0.08	13.0	0.3	60.	45.	106.	1.3
99574	4.9	7.0	2.1	2.28	0.13	13.6	0.2	43.	50.	98.	0.8
99575	5.0	7.2	2.2	2.27	0.11	15.5	0.2	41.	86.	178.	1.3
99576	4.0	6.4	2.4	1.68	0.13	15.2	0.1	51.	40.	92.	0.7
99578	4.1	5.9	1.9	2.15	0.11	12.5	0.1	51.	41.	92.	0.8
99585	5.5	7.8	2.3	2.40	0.17	11.9	0.2	26.	206.	466.	0.1
MEAN	5.0	7.3	2.4	2.12	0.12	14.2	0.3	46.	70.	150.	0.9
S.D.	0.58	0.78	0.34	0.322	0.025	1.83	0.11	10.8	50.0	114.3	0.50
S.E.	0.18	0.25	0.11	0.102	0.008	0.58	0.03	3.4	15.8	36.1	0.16
N	10	10	10	10	10	10	10	10	10	10	10

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, g/dL = GRAMS/DECILITER

ANIMAL	GLUCOSE	CHOL- ESTEROL	CALCIUM	CHLORIDE	PHOS- PHORUS	POTAS- SIUM	SODIUM	TRIGLY- CERIDE	SDH
	mg/dL	mg/dL	mg/dL	mEq/L	mg/dL	mEq/L	mEq/L	mg/dL	U/L
GROUP:	0 MG/KG/DAY	FEMALES							
99534	131.	74.	13.2	101.	9.7	9.02	145.	40.	13.
99561	151.	72.	13.4	104.	14.3	8.43	152.	69.	13.
99562	122.	67.	13.6	105.	9.8	6.67	148.	19.	13.
99563	127.	96.	16.0	101.	16.1	8.85	153.	35.	15.
99572	170.	70.	14.4	101.	13.0	10.75	149.	32.	13.
99574	101.	60.	12.4	102.	8.5	6.66	147.	26.	9.
99575	109.	54.	11.8	100.	11.9	11.05	136.	22.	14.
99576	123.	62.	11.0	104.	6.7	4.10	144.	19.	7.
99578	139.	55.	10.9	104.	7.2	5.00	143.	23.	6.
99585	133.	96.	12.1	100.	7.1	4.49	144.	17.	51.
MEAN	131.	71.	12.9	102.	10.4	7.50	146.	30.	15.
S.D.	19.8	15.0	1.58	1.9	3.27	2.504	4.9	15.6	12.9
S.E.	6.3	4.7	0.50	0.6	1.03	0.792	1.6	4.9	4.1
N	10	10	10	10	10	10	10	10	10

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, mEq/L = MILLIEQUIVALENTS/LITER

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ANIMAL	ALBUMIN	TOTAL PROTEIN	GLOBULIN	A/G RATIO	TOTAL BILI	UREA NITROGEN	CREAT- ININE	ALP	ALT	AST	GGT
	g/dL	g/dL	g/dL		mg/dL	mg/dL	mg/dL	U/L	U/L	U/L	U/L
GROUP: 5 MG/KG/DAY		FEMALES									
99530	5.0	7.7	2.7	1.81	0.12	15.1	0.3	57.	50.	110.	0.8
99532	4.9	7.1	2.2	2.19	0.10	12.1	0.2	35.	44.	97.	0.1
99555	4.8	7.0	2.3	2.10	0.13	16.3	0.3	65.	49.	101.	0.4
99556	4.5	6.9	2.4	1.84	0.11	12.7	0.2	41.	48.	113.	0.1
99566	5.3	7.8	2.5	2.17	0.09	12.2	0.3	32.	54.	82.	0.2
99568	5.2	7.8	2.6	1.98	0.09	14.5	0.2	46.	43.	82.	1.0
99571	4.4	6.9	2.6	1.70	0.09	16.9	0.2	69.	43.	91.	0.9
99582	3.8	6.0	2.2	1.70	0.06	10.3	0.1	79.	38.	97.	0.8
99591	4.5	6.8	2.4	1.88	0.05	13.0	0.1	37.	27.	69.	0.4
99592	4.4	6.9	2.5	1.80	0.08	14.2	0.2	35.	49.	93.	0.5
MEAN	4.7	7.1	2.4	1.92	0.09	13.7	0.2	50.	45.	94.	0.5
S.D.	0.45	0.55	0.17	0.183	0.025	2.05	0.07	16.7	7.6	13.4	0.34
S.E.	0.14	0.18	0.05	0.058	0.008	0.65	0.02	5.3	2.4	4.2	0.11
N	10	10	10	10	10	10	10	10	10	10	10

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, g/dL = GRAMS/DECILITER

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ANIMAL	GLUCOSE	CHOL- ESTEROL	CALCIUM	CHLORIDE	PHOS- PHORUS	POTAS- SIUM	SODIUM	TRIGLY- CERIDE	SDH
	mg/dL	mg/dL	mg/dL	mEq/L	mg/dL	mEq/L	mEq/L	mg/dL	U/L
GROUP: 5 MG/KG/DAY		FEMALES							
99530	101.	64.	13.9	103.	13.5	8.25	149.	31.	10.
99532	152.	62.	12.0	105.	8.5	5.13	147.	21.	12.
99555	127.	49.	11.4	99.	9.7	4.57	147.	19.	12.
99556	105.	54.	11.2	102.	9.0	4.97	145.	21.	12.
99566	155.	89.	13.3	100.	9.4	5.83	148.	25.	10.
99568	141.	68.	12.8	100.	8.8	6.60	145.	30.	7.
99571	123.	50.	11.0	103.	6.8	4.63	145.	18.	9.
99582	141.	65.	11.0	102.	6.0	4.11	141.	18.	3.
99591	115.	28.	11.4	103.	6.6	4.02	142.	17.	5.
99592	134.	75.	11.7	102.	8.0	4.82	144.	23.	9.
MEAN	129.	60.	12.0	102.	8.6	5.29	145.	22.	9.
S.D.	18.6	16.5	1.02	1.8	2.12	1.294	2.5	5.0	3.1
S.E.	5.9	5.2	0.32	0.6	0.67	0.409	0.8	1.6	1.0
N	10	10	10	10	10	10	10	10	10

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, mEq/L = MILLIEQUIVALENTS/LITER

ANIMAL	ALBUMIN	TOTAL PROTEIN	GLOBULIN	A/G RATIO	TOTAL BILI	UREA NITROGEN	CREAT-ININE	ALP	ALT	AST	GGT
	g/dL	g/dL	g/dL		mg/dL	mg/dL	mg/dL	U/L	U/L	U/L	U/L
GROUP:	50 MG/KG/DAY	FEMALES									
99533	5.4	8.0	2.5	2.13	0.10	17.2	0.3	120.	55.	149.	1.9
99538	5.5	8.4	2.8	1.95	0.09	20.6	0.3	97.	44.	104.	1.0
99546	5.3	7.6	2.4	2.25	0.11	16.1	0.4	40.	25.	85.	2.1
99552	6.2	9.0	2.8	2.24	0.10	15.0	0.3	29.	58.	124.	0.4
99553	4.0	6.8	2.8	1.40	0.08	16.4	0.3	55.	36.	97.	1.9
99560	5.0	7.6	2.6	1.94	0.06	15.6	0.3	42.	26.	97.	1.9
99564	4.4	7.0	2.6	1.68	0.05	16.0	0.3	60.	32.	109.	0.1
99567	5.3	7.4	2.1	2.48	0.08	18.5	0.2	42.	60.	103.	0.5
99584	4.1	6.4	2.3	1.79	0.05	15.2	0.1	54.	25.	68.	0.9
99590	5.3	7.4	2.2	2.46	0.09	13.8	0.2	29.	52.	103.	0.1
MEAN	5.1	7.6	2.5	2.03	0.08	16.4	0.3	57.	41.	104.	1.1
S.D.	0.69	0.76	0.26	0.347	0.021	1.94	0.08	29.6	14.2	21.6	0.80
S.E.	0.22	0.24	0.08	0.110	0.007	0.61	0.03	9.4	4.5	6.8	0.25
N	10	10	10	10	10	10	10	10	10	10	10
mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, g/dL = GRAMS/DECILITER											

ANIMAL	GLUCOSE	CHOL- ESTEROL	CALCIUM	CHLORIDE	PHOS- PHORUS	POTAS- SIUM	SODIUM	TRIGLY- CERIDE	SDH
	mg/dL	mg/dL	mg/dL	mEq/L	mg/dL	mEq/L	mEq/L	mg/dL	U/L
GROUP:	50 MG/KG/DAY	FEMALES							
99533	110.	58.	13.9	105.	10.7	9.71	148.	22.	22.
99538	123.	66.	13.4	106.	11.4	9.95	149.	29.	19.
99546	136.	102.	13.0	103.	10.3	7.63	150.	32.	13.
99552	160.	83.	13.8	100.	8.6	5.66	147.	17.	14.
99553	104.	72.	12.4	103.	9.6	7.00	147.	17.	12.
99560	144.	112.	11.7	103.	6.7	4.07	146.	21.	17.
99564	121.	76.	11.7	102.	7.1	5.29	142.	21.	12.
99567	149.	67.	12.6	99.	7.6	4.16	144.	20.	12.
99584	143.	65.	11.5	104.	6.4	3.95	145.	24.	4.
99590	141.	59.	12.1	100.	6.9	4.55	142.	21.	11.
MEAN	133.	76.	12.6	103.	8.5	6.20	146.	22.	14.
S.D.	17.9	18.1	0.88	2.3	1.85	2.277	2.7	4.8	4.9
S.E.	5.7	5.7	0.28	0.7	0.58	0.720	0.9	1.5	1.6
N	10	10	10	10	10	10	10	10	10
mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, mEq/L = MILLIEQUIVALENTS/LITER									

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A11
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL SERUM CHEMISTRY VALUES

PAGE 19
WEEK 12

ANIMAL	ALBUMIN	TOTAL PROTEIN	GLOBULIN	A/G RATIO	TOTAL BILI	UREA NITROGEN	CREAT- ININE	ALP	ALT	AST	GGT
	g/dL	g/dL	g/dL		mg/dL	mg/dL	mg/dL	U/L	U/L	U/L	U/L
GROUP: 150 MG/KG/DAY		FEMALES									
99531	5.8	8.2	2.4	2.42	0.11	18.0	0.4	62.	45.	132.	1.7
99536	5.4	8.4	3.0	1.80	0.06	18.2	0.3	63.	29.	90.	1.7
99540	4.8	7.0	2.2	2.16	0.11	15.5	0.3	50.	37.	117.	1.7
99548	5.8	8.7	2.9	2.02	0.17	18.6	0.4	39.	41.	105.	0.6
99554	5.6	8.1	2.5	2.20	0.11	14.9	0.3	48.	40.	118.	0.5
99557	5.2	7.8	2.6	1.96	0.09	15.9	0.3	50.	39.	110.	0.1
99558	4.8	7.1	2.2	2.17	0.07	18.4	0.2	48.	25.	79.	1.4
99577	5.1	7.5	2.4	2.11	0.10	19.6	0.2	53.	41.	82.	2.6
99581	4.8	6.8	2.1	2.30	0.11	14.3	0.2	36.	34.	97.	0.2
99588	5.1	7.1	2.0	2.63	0.07	20.3	0.2	46.	35.	120.	0.7
MEAN	5.2	7.7	2.4	2.18	0.10	17.4	0.3	50.	37.	105.	1.1
S.D.	0.39	0.66	0.33	0.235	0.031	2.07	0.08	8.6	6.0	17.6	0.82
S.E.	0.12	0.21	0.10	0.074	0.010	0.65	0.02	2.7	1.9	5.6	0.26
N	10	10	10	10	10	10	10	10	10	10	10

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, g/dL = GRAMS/DECILITER

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A11
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL SERUM CHEMISTRY VALUES

PAGE 20
WEEK 12

ANIMAL	GLUCOSE	CHOL- ESTEROL	CALCIUM	CHLORIDE	PHOS- PHORUS	POTAS- SIUM	SODIUM	TRIGLY- CERIDE	SDH
	mg/dL	mg/dL	mg/dL	mEq/L	mg/dL	mEq/L	mEq/L	mg/dL	U/L
GROUP: 150 MG/KG/DAY		FEMALES							
99531	141.	84.	12.8	101.	10.7	9.20	148.	21.	15.
99536	142.	145.	12.7	102.	10.1	8.22	148.	21.	20.
99540	137.	79.	12.5	102.	9.8	5.41	146.	14.	17.
99548	176.	123.	14.9	100.	11.8	8.54	150.	19.	19.
99554	149.	113.	14.5	101.	13.3	8.30	150.	23.	19.
99557	137.	113.	12.5	102.	7.6	5.06	145.	30.	16.
99558	132.	114.	11.9	103.	6.6	4.20	143.	19.	9.
99577	137.	106.	12.3	100.	8.3	5.17	144.	16.	14.
99581	132.	90.	11.3	105.	5.6	3.87	144.	22.	9.
99588	148.	74.	12.0	104.	8.3	4.72	148.	16.	14.
MEAN	143.	104.	12.7	102.	9.2	6.27	147.	20.	15.
S.D.	12.9	22.2	1.13	1.6	2.38	2.042	2.5	4.5	3.9
S.E.	4.1	7.0	0.36	0.5	0.75	0.646	0.8	1.4	1.2
N	10	10	10	10	10	10	10	10	10

mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, mEq/L = MILLIEQUIVALENTS/LITER

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10/13/2011

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A12 (WEEK -1 PRETEST EXAMINATION)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 1

EXAMINER:	DAW INPUT BY: MSH2		EXAM 1 (WEEK -1)				
ANIMAL NO.	DOSE GROUP	SEX	FINDING				GRADE
99466	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL				P
99472	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL				P
99474	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL				P
99491	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL				P
99496	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL				P
99504	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL				P
99505	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL				P
99507	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL				P
99509	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL				P
99515	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL				P
99467	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL				P
99471	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL				P
99473	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL				P
99498	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL				P
99502	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL				P
99503	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL				P
99506	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL				P
99516	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL				P
99518	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL				P
99519	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL				P
99465	5 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL				P
99479	5 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL				P
99483	5 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL				P
99489	5 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL				P

CODE: 1-SLIGHT, 2-MODERATE, 3-SEVERE, P-PRESENT, O.D.-RIGHT EYE, O.S.-LEFT EYE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A12 (WEEK -1 PRETEST EXAMINATION)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 2

EXAMINER: DAW INPUT BY: MSH2			EXAM 1 (WEEK -1)			
ANIMAL NO.	DOSE GROUP	SEX	FINDING	GRADE		
99490	5 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99494	5 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99495	5 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99511	5 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99524	5 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99528	5 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99464	50 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99469	50 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99480	50 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99485	50 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99486	50 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99500	50 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99510	50 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1		
99512	50 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99513	50 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99525	50 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99468	150 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99482	150 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99487	150 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99499	150 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99501	150 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99517	150 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99521	150 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		
99522	150 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P		

CODE: 1-SLIGHT, 2-MODERATE, 3-SEVERE, P-PRESENT, O.D.-RIGHT EYE, O.S.-LEFT EYE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A12 (WEEK -1 PRETEST EXAMINATION)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 3

EXAMINER: DAW INPUT BY: MSH2				EXAM 1 (WEEK -1)		
ANIMAL NO.	DOSE GROUP	SEX	FINDING			GRADE
99523	150 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL			P
99526	150 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL			P
99475	60 MG/KG CPS	MALE	NO OCULAR LESIONS - BILATERAL			P
99477	60 MG/KG CPS	MALE	NO OCULAR LESIONS - BILATERAL			P
99478	60 MG/KG CPS	MALE	NO OCULAR LESIONS - BILATERAL			P
99484	60 MG/KG CPS	MALE	NO OCULAR LESIONS - BILATERAL			P
99488	60 MG/KG CPS	MALE	NO OCULAR LESIONS - BILATERAL			P
99497	60 MG/KG CPS	MALE	NO OCULAR LESIONS - BILATERAL			P
99535	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL			P
99541	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL			P
99544	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL			P
99547	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL			P
99559	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL			P
99569	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL			P
99579	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL			P
99580	UNTREATED	FEMALE	CORNEAL CRYSTALS - BILATERAL			1
99586	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL			P
99593	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL			P
99534	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL			P
99561	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL			P
99562	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL			P
99563	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL			P
99572	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL			P
99574	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL			P

CODE: 1-SLIGHT, 2-MODERATE, 3-SEVERE, P-PRESENT, O.D.-RIGHT EYE, O.S.-LEFT EYE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A12 (WEEK -1 PRETEST EXAMINATION)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 4

EXAMINER: DAW INPUT BY: MSH2			EXAM 1 (WEEK -1)		
ANIMAL NO.	DOSE GROUP	SEX	FINDING	GRADE	
99575	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99576	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99578	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99585	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99530	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99532	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99555	5 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1	
99556	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99566	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99568	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99571	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99582	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99591	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99592	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99533	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99538	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99546	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99552	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99553	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99560	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99564	50 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1	
99567	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99584	50 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1	
99590	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	

CODE: 1-SLIGHT, 2-MODERATE, 3-SEVERE, P-PRESENT, O.D.-RIGHT EYE, O.S.-LEFT EYE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A12 (WEEK -1 PRETEST EXAMINATION)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 5

EXAMINER: DAW INPUT BY: MSH2				EXAM 1 (WEEK -1)		
ANIMAL NO.	DOSE	GROUP	SEX	FINDING	GRADE	
99531	150	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99536	150	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99540	150	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99548	150	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99554	150	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99557	150	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99558	150	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99577	150	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99581	150	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99588	150	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99529	60	MG/KG CPS	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99537	60	MG/KG CPS	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99539	60	MG/KG CPS	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99542	60	MG/KG CPS	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99549	60	MG/KG CPS	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99570	60	MG/KG CPS	FEMALE	NO OCULAR LESIONS - BILATERAL	P	

CODE: 1-SLIGHT, 2-MODERATE, 3-SEVERE, P-PRESENT, O.D.-RIGHT EYE, O.S.-LEFT EYE

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09/04/2011

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A13 (WEEK 12 EXAMINATION)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 1

EXAMINER: BCG INPUT BY: MJS			EXAM 2 (WEEK 12)		GRADE
ANIMAL NO.	DOSE GROUP	SEX	FINDING		
99466	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL		P
99472	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL		P
99474	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL		P
99491	UNTREATED	MALE	CORNEAL CRYSTALS - BILATERAL		1
99496	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL		P
99504	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL		P
99505	UNTREATED	MALE	CORNEAL CRYSTALS - BILATERAL		1
99507	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL		P
99509	UNTREATED	MALE	CORNEAL CRYSTALS - BILATERAL		1
99515	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL		P
99467	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
99471	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
99473	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
99498	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
99502	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
99503	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
99506	0 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL		1
99516	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
99518	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
99519	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
99465	5 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL		1
99479	5 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
99483	5 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL		1
99489	5 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P

CODE: 1-SLIGHT, 2-MODERATE, 3-SEVERE, P-PRESENT, O.D.-RIGHT EYE, O.S.-LEFT EYE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A13 (WEEK 12 EXAMINATION)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 2

EXAMINER: BCG INPUT BY: MJS			EXAM 2 (WEEK 12)		
ANIMAL NO.	DOSE GROUP	SEX	FINDING	GRADE	
99490	5 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
99494	5 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
99495	5 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1	
99511	5 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
99524	5 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1	
99528	5 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
99464	50 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
99469	50 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
99480	50 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
99485	50 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
99486	50 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1	
99500	50 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1	
99510	50 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1	
99512	50 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
99513	50 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
99525	50 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
99468	150 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
99482	150 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1	
99487	150 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
99499	150 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1	
99501	150 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1	
99517	150 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
99521	150 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1	
99522	150 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	

CODE: 1-SLIGHT, 2-MODERATE, 3-SEVERE, P-PRESENT, O.D.-RIGHT EYE, O.S.-LEFT EYE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A13 (WEEK 12 EXAMINATION)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 3

EXAMINER: BCG INPUT BY: MJS		EXAM 2 (WEEK 12)			
ANIMAL NO.	DOSE GROUP	SEX	FINDING	GRADE	
99523	150 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
99535	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99541	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99544	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99547	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99559	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99569	UNTREATED	FEMALE	CORNEAL CRYSTALS - BILATERAL	1	
99579	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99580	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99586	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99593	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99534	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99561	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99562	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99563	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99572	0 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1	
99574	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99575	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99576	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99578	0 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1	
99585	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99530	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99532	5 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1	
99555	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	

CODE: 1-SLIGHT, 2-MODERATE, 3-SEVERE, P-PRESENT, O.D.-RIGHT EYE, O.S.-LEFT EYE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A13 (WEEK 12 EXAMINATION)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 4

EXAMINER: BCG INPUT BY: MJS		EXAM 2 (WEEK 12)			
ANIMAL NO.	DOSE GROUP	SEX	FINDING	GRADE	
99556	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99566	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99568	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99571	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99582	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99591	5 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1	
99592	5 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99533	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99538	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99546	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99552	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99553	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99560	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99564	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99567	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99584	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99590	50 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99531	150 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99536	150 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99540	150 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99548	150 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99554	150 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99557	150 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99558	150 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	

CODE: 1-SLIGHT, 2-MODERATE, 3-SEVERE, P-PRESENT, O.D.-RIGHT EYE, O.S.-LEFT EYE

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A13 (WEEK 12 EXAMINATION)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 5

EXAMINER: BCG INPUT BY: MJS			EXAM 2 (WEEK 12)		
ANIMAL NO.	DOSE GROUP	SEX	FINDING	GRADE	
99577	150 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1	
99581	150 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
99588	150 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	

CODE: 1-SLIGHT, 2-MODERATE, 3-SEVERE, P-PRESENT, O.D.-RIGHT EYE, O.S.-LEFT EYE

PEXv4.03
09/04/2011

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A14 (UNSCHEDULED DEATH)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ANIMAL CAUSE OF DEATH

PAGE 1

		BY CAUSE OF DEATH					
		MALES					
CAUSE OF DEATH	GROUP:	1	2	3	4	5	6

OTHER							
UNDETERMINED						99526	

1- UNTREATED	2- 0 MG/KG/DAY	3- 5 MG/KG/DAY	4- 50 MG/KG/DAY	5- 150 MG/KG/DAY	6- 60 MG/KG CPS		

PPCDv4.11
09/19/2011
R:09/19/2011

ANIMAL NO. 99526 GROUP 5: 150 MG/KG/DAY MALE FOUND DEAD 05/28/11 DATE OF DEATH: 05/28/11 STUDY DAY: 40
POST BY: 886 MICRO BY:1817 TIME OF POST: 11:34

KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE	1
LUNGS	MICRO: INFLAMMATION, CHRONIC	((2))
STOMACH	GROSS: AREA(S), DARK RED	P
	FEW, IRREGULARLY SHAPED, GLANDULAR PORTION	
^==> GROSS UNCONFIRMED		
PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED	
	ONE OF PAIR PRESENT	
THYMUS	GROSS: AREA(S), DARK RED	P
	MULTIPLE, IRREGULARLY SHAPED	
^==> THYMUS: CONGESTION		
THYMUS	MICRO: CONGESTION	((2))
CAUSE OF DEATH	MICRO: UNDETERMINED	P
	COD NOT EVIDENT MICROSCOPICALLY IN SUBMITTED TISSUES	
NO SIGNIFICANT CHANGES OBSERVED	GROSS:ADRENAL GLANDS AORTA FEMUR JOINT	
	BRAIN CECUM COLON DUODENUM	
	EPIDIDYMIDES ESOPHAGUS EYES NERVES, OPTIC	
	HEART ILEUM JEJUNUM KIDNEYS	
	LN, MANDIBULAR LAC. GLAND EXOR LIVER LN, MESENTERIC	
	LUNGS NERVE, SCIATIC PANCREAS PITUITARY	
	PROSTATE RECTUM SPINAL CORD SAL. GLAND MAND	
	SKELETAL MUSCLE SKIN SPLEEN SEMINAL VESICLES	
	TESTES THYROID GLANDS TRACHEA URINARY BLADDER	
	LN, AXILLARY SKIN, TREATED SKIN, UNTREATED	
	MICRO:ADRENAL CORTEX ADRENAL MEDULLA AORTA FEMUR	
	MARROW, FEMUR JOINT BRAIN CECUM	
	COLON DUODENUM EPIDIDYMIDES ESOPHAGUS	
	HEART ILEUM JEJUNUM LN, MANDIBULAR	
	LIVER LN, MESENTERIC NERVE, SCIATIC PANCREAS	

ANIMAL NO. 99526 GROUP 5: 150 MG/KG/DAY MALE FOUND DEAD 05/28/11 DATE OF DEATH: 05/28/11 STUDY DAY: 40
POST BY: 886 MICRO BY:1817 TIME OF POST: 11:34

PITUITARY	PROSTATE	RECTUM	SAL. GLAND MAND
STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN
SEMINAL VESICLES	TESTES	THYROID GLANDS	PARATHYROIDS
TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED
SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PGRHv4.67
09/19/2011
R:09/19/2011

ANIMAL NO.	99466	GROUP	1:	UNTREATED	MALE	SCHEDULED EUTH	07/16/11	DATE OF DEATH: 07/16/11	STUDY DAY: 89
									GRADE

ORGAN WEIGHT	ABS.(G)	REL.	PROSTATE	MICRO: INFLAMMATION, SUBACUTE	((1))
BRAIN	2.15	0.483	NO SIGNIFICANT		
LIVER	10.45	2.348	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA
KIDNEYS	3.05	0.685		BRAIN	CECUM
SPLEEN	0.65	0.146		EPIDIDYIMIDES	ESOPHAGUS
HEART	1.61	0.362		HEART	ILEUM
TESTES	3.32	0.746		LN, MANDIBULAR	LAC. GLAND EXOR
EPIDIDYIMIDES	1.35	0.303		LUNGS	NERVE, SCIATIC
PROSTATE	0.86	0.193		PROSTATE	RECTUM
THYMUS	0.1597	0.036		STOMACH	SKELETAL MUSCLE
ADRENAL GLANDS	0.0712	0.016		SEMINAL VESICLES	TESTES
PITUITARY	0.0156	0.004		TRACHEA	URINARY BLADDER
THYROIDS/PARATHY	0.0156	0.004		SKIN, UNTREATED	LN, AXILLARY
FINAL BODY WT(G)	445.			MICRO:ADRENAL CORTEX	ADRENAL MEDULLA
				MARROW, FEMUR	JOINT
				COLON	DUODENUM
				HEART	ILEUM
				LN, MANDIBULAR	LIVER
				NERVE, SCIATIC	PANCREAS
				SAL. GLAND MAND	STOMACH, GLAN
				SPLEEN	SEMINAL VESICLES
				PARATHYROIDS	THYMUS
				LN, AXILLARY	SKIN, TREATED
					SKIN, UNTREATED

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
 ()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 2

ANIMAL NO. 99472 GROUP 1: UNTREATED MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: CARDIOMYOPATHY				(2)
BRAIN	2.22	0.433	LIVER	MICRO: INFLAMMATION, SUBACUTE				(2)
LIVER	12.73	2.481	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
KIDNEYS	3.13	0.610		ONE OF PAIR PRESENT				
SPLEEN	0.86	0.168	NO SIGNIFICANT					
HEART	1.83	0.357	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
TESTES	3.76	0.733		BRAIN	CECUM	COLON	DUODENUM	
EPIDIDYMIDES	1.45	0.283		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
PROSTATE	1.04	0.203		HEART	ILEUM	JEJUNUM	KIDNEYS	
THYMUS	0.2552	0.050		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
ADRENAL GLANDS	0.0731	0.014		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
PITUITARY	0.0138	0.003		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
THYROIDS/PARATHY	0.0148	0.003		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
FINAL BODY WT(G)	513.			SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS	
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
				PITUITARY	PROSTATE	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				SEMINAL VESICLES	TESTES	THYROID GLANDS	PARATHYROIDS	
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 3

ANIMAL NO. 99474 GROUP 1: UNTREATED MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
BRAIN	2.26	0.474	PANCREAS	MICRO: INFLAMMATION, SUBACUTE				((2))
LIVER	11.81	2.476	THYROID GLANDS	MICRO: INVOLUTION, COLLOID				((2))
KIDNEYS	3.03	0.635	NO SIGNIFICANT					
SPLEEN	0.76	0.159	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
HEART	1.52	0.319		BRAIN	CECUM	COLON	DUODENUM	
TESTES	4.51	0.945		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
EPIDIDYMIDES	1.65	0.346		HEART	ILEUM	JEJUNUM	KIDNEYS	
PROSTATE	0.78	0.164		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
THYMUS	0.3363	0.071		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
ADRENAL GLANDS	0.0695	0.015		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
PITUITARY	0.0127	0.003		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
THYROIDS/PARATHY	0.0105	0.002		SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
FINAL BODY WT(G)	477.			TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS	
				HEART	ILEUM	JEJUNUM	KIDNEYS	
				LN, MANDIBULAR	LN, MESENTERIC	LUNGS	NERVE, SCIATIC	
				PITUITARY	PROSTATE	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				SEMINAL VESICLES	TESTES	THYMUS	TRACHEA	
				URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	

NOT PRESENT FOR EXAMINATION

MICRO:PARATHYROIDS

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
 SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 4

ANIMAL NO. 99491 GROUP 1: UNTREATED MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
 GRADE

ORGAN WEIGHT	ABS. (G)	REL.	HEART	MICRO: CARDIOMYOPATHY			(2)
BRAIN	2.21	0.432	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
LIVER	14.25	2.789	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
KIDNEYS	3.25	0.636		ONE OF PAIR PRESENT			
SPLEEN	0.86	0.168	THYMUS	GROSS: AREA(S), DARK RED			P
HEART	1.86	0.364		FEW, IRREGULARLY SHAPED			
TESTES	3.80	0.744	^==>	THYMUS: CONGESTION			
EPIDIDYMIDES	1.18	0.231	THYMUS	MICRO: CONGESTION			((2))
PROSTATE	1.05	0.205	NO SIGNIFICANT				
THYMUS	0.2589	0.051	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
ADRENAL GLANDS	0.0720	0.014		BRAIN	CECUM	COLON	DUODENUM
PITUITARY	0.0153	0.003		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
THYROIDES/PARATHY	0.0252	0.005		HEART	ILEUM	JEJUNUM	KIDNEYS
FINAL BODY WT(G)	511.			LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC
				LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY
				PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN
				SEMINAL VESICLES	TESTES	THYROID GLANDS	TRACHEA
				URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
				PITUITARY	PROSTATE	RECTUM	SAL. GLAND MAND
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN
				SEMINAL VESICLES	TESTES	THYROID GLANDS	PARATHYROIDES
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED
				SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 5

ANIMAL NO. 99496 GROUP 1: UNTREATED MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: INFLAMMATION, ACUTE	(2)
BRAIN	2.08	0.435		EPICARDIAL	
LIVER	11.17	2.337	LIVER	MICRO: INFLAMMATION, SUBACUTE	((1))
KIDNEYS	3.59	0.751	SKIN	GROSS: SCABBING	P
SPLEEN	0.85	0.178		VENTRAL NECK; CEO SCABBING	
HEART	1.48	0.310	^==>	SKIN: BACTERIAL COLONIES	
TESTES	3.82	0.799	SKIN	MICRO: INFLAMMATION, ACUTE	(3)
EPIDIDYMIDES	1.47	0.308		INTRAEPIDERMAL WITH COLONIES OF COCCI	
PROSTATE	1.33	0.278		BACTERIAL COLONIES	((P))
THYMUS	0.2752	0.058		B&H TISSUE GRAM STAIN EXAMINED - GRAM + COCCI PRESENT	
ADRENAL GLANDS	0.0647	0.014	SEMINAL VESICLES	MICRO: INFLAMMATION, ACUTE	(1)
PITUITARY	0.0154	0.003	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED	
THYROIDS/PARATHY	0.0231	0.005		ONE OF PAIR PRESENT	
FINAL BODY WT(G)	478.		THYMUS	GROSS: DISCOLORATION, DARK RED	P
			^==> GROSS	UNCONFIRMED	
			NO SIGNIFICANT		
			CHANGES OBSERVED	GROSS:ADRENAL GLANDS	
				BRAIN	AORTA
				EPIDIDYMIDES	CECUM
				HEART	ESOPHAGUS
				LN, MANDIBULAR	ILEUM
				LUNGS	LAC. GLAND EXOR
				PROSTATE	NERVE, SCIATIC
				STOMACH	RECTUM
				TESTES	SKELETAL MUSCLE
				LN, AXILLARY	THYROID GLANDS
				MICRO:ADRENAL CORTEX	SKIN, TREATED
				MARROW, FEMUR	ADRENAL MEDULLA
					SKIN, UNTREATED
					AORTA
					BRAIN
					FEMUR
					CECUM
					JOINT
					DUODENUM
					NERVES, OPTIC
					KIDNEYS
					LN, MESENTERIC
					PITUITARY
					SAL. GLAND MAND
					SEMINAL VESICLES
					URINARY BLADDER

ANIMAL NO. 99496 GROUP 1: UNTREATED MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

COLON	DUODENUM	EPIDIDYMITIDES	ESOPHAGUS
ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
PITUITARY	PROSTATE	RECTUM	SAL. GLAND MAND
STOMACH, GLAN	STOMACH, NON	SPLEEN	TESTES
THYROID GLANDS	PARATHYROIDES	THYMUS	TRACHEA
URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99504 GROUP 1: UNTREATED MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LIVER	MICRO: INFLAMMATION, SUBACUTE				(1)
BRAIN	2.27	0.507	PITUITARY	MICRO: CYST, PARS INTERMEDIA				(P)
LIVER	10.99	2.453	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
KIDNEYS	3.22	0.719		ONE OF PAIR PRESENT				
SPLEEN	0.78	0.174	THYMUS	GROSS: AREA(S), DARK RED				P
HEART	1.50	0.335		ONE, IRREGULARLY SHAPED				
TESTES	3.32	0.741	^==>	THYMUS: CONGESTION				
EPIDIDYMIDES	1.41	0.315	THYMUS	MICRO: CONGESTION				(2)
PROSTATE	1.15	0.257	NO SIGNIFICANT					
THYMUS	0.2214	0.049	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
ADRENAL GLANDS	0.0528	0.012		BRAIN	CECUM	COLON	DUODENUM	
PITUITARY	0.0163	0.004		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
THYROIDS/PARATHY	0.0125	0.003		HEART	ILEUM	JEJUNUM	KIDNEYS	
FINAL BODY WT(G)	448.			LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
				PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
				SEMINAL VESICLES	TESTES	THYROID GLANDS	TRACHEA	
				URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS	
				HEART	ILEUM	JEJUNUM	KIDNEYS	
				LN, MANDIBULAR	LN, MESENTERIC	LUNGS	NERVE, SCIATIC	
				PANCREAS	PROSTATE	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				SEMINAL VESICLES	TESTES	THYROID GLANDS	PARATHYROIDS	
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

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^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99505 GROUP 1: UNTREATED MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LUNGS	MICRO: INFLAMMATION, SUBACUTE				((1))
BRAIN	2.08	0.455		SUBPLEURAL				
LIVER	11.43	2.501	THYROID GLANDS	MICRO: INVOLUTION, COLLOID				((2))
KIDNEYS	2.88	0.630	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
SPLEEN	0.74	0.162		ONE OF PAIR PRESENT				
HEART	1.33	0.291	NO SIGNIFICANT					
TESTES	3.15	0.689	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
EPIDIDYIMIDES	1.22	0.267		BRAIN	CECUM	COLON	DUODENUM	
PROSTATE	0.65	0.142		EPIDIDYIMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
THYMUS	0.2100	0.046		HEART	ILEUM	JEJUNUM	KIDNEYS	
ADRENAL GLANDS	0.0573	0.013		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
PITUITARY	0.0113	0.002		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
THYROIDS/PARATHY	0.0169	0.004		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
FINAL BODY WT(G)	457.			STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
				SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYIMIDES	ESOPHAGUS	
				HEART	ILEUM	JEJUNUM	KIDNEYS	
				LN, MANDIBULAR	LIVER	LN, MESENTERIC	NERVE, SCIATIC	
				PANCREAS	PITUITARY	PROSTATE	RECTUM	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN	
				SPLEEN	SEMINAL VESICLES	TESTES	PARATHYROIDS	
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99507 GROUP 1: UNTREATED MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	ADRENAL MEDULLA	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	2.06	0.393		ONE OF PAIR PRESENT			
LIVER	12.08	2.305	HEART	MICRO: CARDIOMYOPATHY			(2)
KIDNEYS	3.50	0.668	LN, MANDIBULAR	MICRO: INFLAMMATION, ACUTE			((2))
SPLEEN	1.04	0.198		PERINODAL			
HEART	1.90	0.363	STOMACH, GLAN	MICRO: DILATATION, GLANDULAR			((2))
TESTES	3.56	0.679	NO SIGNIFICANT				
EPIDIDYIMIDES	1.40	0.267	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
PROSTATE	1.38	0.263		BRAIN	CECUM	COLON	DUODENUM
THYMUS	0.2083	0.040		EPIDIDYIMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
ADRENAL GLANDS	0.0727	0.014		HEART	ILEUM	JEJUNUM	KIDNEYS
PITUITARY	0.0171	0.003		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC
THYROIDS/PARATHY	0.0265	0.005		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY
FINAL BODY WT(G)	524.			PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN
				SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED
				SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	EPIDIDYIMIDES	ESOPHAGUS
				ILEUM	JEJUNUM	KIDNEYS	LIVER
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
				PITUITARY	PROSTATE	RECTUM	SAL. GLAND MAND
				STOMACH, NON	SKIN	SPLEEN	SEMINAL VESICLES
				TESTES	THYROID GLANDS	THYMUS	TRACHEA
				URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED

NOT PRESENT FOR EXAMINATION

MICRO:PARATHYROIDS

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99509 GROUP 1: UNTREATED MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LIVER	MICRO: INFLAMMATION, SUBACUTE					(1)
BRAIN	2.12	0.424	SAL. GLAND MAND	GROSS: PALE					P
LIVER	11.49	2.298		BILATERAL					
KIDNEYS	3.04	0.608	^==>	GROSS UNCONFIRMED					
SPLEEN	0.87	0.174	THYROID GLANDS	MICRO: INVOLUTION, COLLOID					(3)
HEART	1.71	0.342	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED					
TESTES	3.52	0.704		ONE OF PAIR PRESENT					
EPIDIDYMIDES	1.17	0.234	NO SIGNIFICANT						
PROSTATE	1.20	0.240	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT		
THYMUS	0.4295	0.086		BRAIN	CECUM	COLON	DUODENUM		
ADRENAL GLANDS	0.0600	0.012		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC		
PITUITARY	0.0122	0.002		HEART	ILEUM	JEJUNUM	KIDNEYS		
THYROIDS/PARATHY	0.0120	0.002		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC		
FINAL BODY WT(G)	500.			LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY		
				PROSTATE	RECTUM	SPINAL CORD	STOMACH		
				SKELETAL MUSCLE	SKIN	SPLEEN	SEMINAL VESICLES		
				TESTES	THYROID GLANDS	THYMUS	TRACHEA		
				URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR		
				MARROW, FEMUR	JOINT	BRAIN	CECUM		
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS		
				HEART	ILEUM	JEJUNUM	KIDNEYS		
				LN, MANDIBULAR	LN, MESENTERIC	LUNGS	NERVE, SCIATIC		
				PANCREAS	PITUITARY	PROSTATE	RECTUM		
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN		
				SPLEEN	SEMINAL VESICLES	TESTES	PARATHYROIDS		
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY		
				SKIN, TREATED	SKIN, UNTREATED				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

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^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99515 GROUP 1: UNTREATED MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	GENERAL COMMENT	MICRO: NOT EXAMINED PER WIL SOP	P
BRAIN	2.30	0.424	EPIDIDYMIDES	MICRO: INFLAMMATION, CHRONIC	((2))
LIVER	13.65	2.514	KIDNEYS	GROSS: AREA(S), DEPRESSED	P
KIDNEYS	3.63	0.669		FEW, PINPOINT, IN CORTEX, BILATERAL	
SPLEEN	1.01	0.186	^==> GROSS	UNCONFIRMED	
HEART	1.78	0.328	LN, MANDIBULAR	GROSS: ENLARGED	P
TESTES	4.18	0.770		RIGHT	
EPIDIDYMIDES	1.43	0.263	^==> GROSS	UNCONFIRMED	
PROSTATE	1.50	0.276	LIVER	MICRO: INFLAMMATION, SUBACUTE	((1))
THYMUS	0.3876	0.071	SPLEEN	GROSS: ACCESSORY	P
ADRENAL GLANDS	0.0658	0.012		ONE, 2 MM IN DIAMETER	
PITUITARY	0.0161	0.003	^==> GENERAL COMMENT:	NOT EXAMINED PER WIL SOP	
THYROID/SPLEEN	0.0173	0.003	THYROID GLANDS	MICRO: INVOLUTION, COLLOID	((3))
FINAL BODY WT(G)	543.		PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED	
				ONE OF PAIR PRESENT	
			NO SIGNIFICANT CHANGES OBSERVED	GROSS:ADRENAL GLANDS	FEMUR
				BRAIN	CECUM
				EPIDIDYMIDES	ESOPHAGUS
				HEART	ILEUM
				LIVER	LN, MESENTERIC
				PANCREAS	PITUITARY
				SPINAL CORD	SAL. GLAND MAND
				SKIN	SEMINAL VESICLES
				THYMUS	TRACHEA
				SKIN, TREATED	SKIN, UNTREATED
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA
				MARROW, FEMUR	JOINT
				COLON	DUODENUM
				ILEUM	JEJUNUM
				LN, MESENTERIC	LUNGS
					NERVE, SCIATIC
					FEMUR
					CECUM
					HEART
					LN, MANDIBULAR
					PANCREAS

ANIMAL NO. 99515 GROUP 1: UNTREATED MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

PITUITARY	PROSTATE	RECTUM	SAL. GLAND MAND
STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN
SEMINAL VESICLES	TESTES	PARATHYROIDS	THYMUS
TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED
SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99467 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LIVER	MICRO: INFLAMMATION, SUBACUTE				(1)
BRAIN	2.06	0.416	PITUITARY	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
LIVER	13.75	2.778		PARS NERVOSA MISSING				
KIDNEYS	3.17	0.640	SKIN	GROSS: SCABBING				P
SPLEEN	0.83	0.168		VENTRAL NECK; CEO SCABBING				
HEART	1.82	0.368	^==>	SKIN: INFLAMMATION, ACUTE				
TESTES	3.82	0.772	SKIN	MICRO: INFLAMMATION, ACUTE				(3)
EPIDIDYMIDES	1.33	0.269		B&H TISSUE GRAM STAIN EXAMINED - NEGATIVE FOR BACTERIA				
PROSTATE	0.75	0.152	NO SIGNIFICANT					
THYMUS	0.2515	0.051	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
ADRENAL GLANDS	0.0531	0.011		BRAIN	CECUM	COLON	DUODENUM	
PITUITARY	0.0127	0.003		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
THYROIDS/PARATHY	0.0193	0.004		HEART	ILEUM	JEJUNUM	KIDNEYS	
FINAL BODY WT(G)	495.			LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
				PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH	SKELETAL MUSCLE	SPLEEN	SEMINAL VESICLES	
				TESTES	THYROID GLANDS	THYMUS	TRACHEA	
				URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS	
				HEART	ILEUM	JEJUNUM	KIDNEYS	
				LN, MANDIBULAR	LN, MESENTERIC	LUNGS	NERVE, SCIATIC	
				PANCREAS	PITUITARY	PROSTATE	RECTUM	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SPLEEN	
				SEMINAL VESICLES	TESTES	THYROID GLANDS	PARATHYROIDS	
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

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TABLE A16 (SCHEDULED NECROPSY)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99471 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
 GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LIVER	MICRO: INFLAMMATION, SUBACUTE			
BRAIN	2.09	0.416	NO SIGNIFICANT				((1))
LIVER	12.40	2.465	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
KIDNEYS	2.82	0.561		BRAIN	CECUM	COLON	DUODENUM
SPLEEN	0.84	0.167		EPIDIDYIMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
HEART	1.63	0.324		HEART	ILEUM	JEJUNUM	KIDNEYS
TESTES	3.55	0.706		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC
EPIDIDYIMIDES	1.17	0.233		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY
PROSTATE	0.96	0.191		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND
THYMUS	0.2837	0.056		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN
ADRENAL GLANDS	0.0580	0.012		SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS
PITUITARY	0.0124	0.002		TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED
THYROIDS/PARATHY	0.0154	0.003		SKIN, UNTREATED			
FINAL BODY WT(G)	503.			MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	EPIDIDYIMIDES	ESOPHAGUS
				HEART	ILEUM	JEJUNUM	KIDNEYS
				LN, MANDIBULAR	LN, MESENTERIC	LUNGS	NERVE, SCIATIC
				PANCREAS	PITUITARY	PROSTATE	RECTUM
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN
				SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS
				PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99473 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
BRAIN	2.25	0.425	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
LIVER	14.34	2.706	NO SIGNIFICANT					
KIDNEYS	3.07	0.579	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
SPLEEN	0.96	0.181		BRAIN	CECUM	COLON	DUODENUM	
HEART	1.48	0.279		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
TESTES	3.75	0.708		HEART	ILEUM	JEJUNUM	KIDNEYS	
EPIDIDYMIDES	1.40	0.264		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
PROSTATE	0.87	0.164		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
THYMUS	0.2488	0.047		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
ADRENAL GLANDS	0.0519	0.010		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
PITUITARY	0.0153	0.003		SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
THYROIDS/PARATHY	0.0190	0.004		TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
FINAL BODY WT(G)	530.			SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
				PITUITARY	PROSTATE	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				SEMINAL VESICLES	TESTES	THYROID GLANDS	PARATHYROIDS	
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
() - FOCAL/SOLITARY, (()) - MULTIFOCAL/MULTIPLE, NO PARENTHESES - NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99498 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LIVER	MICRO: INFLAMMATION, SUBACUTE				
BRAIN	2.01	0.511	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				(2)
LIVER	9.72	2.473		ONE OF PAIR PRESENT				
KIDNEYS	2.83	0.720	NO SIGNIFICANT					
SPLEEN	0.64	0.163	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
HEART	1.53	0.389		BRAIN	CECUM	COLON	DUODENUM	
TESTES	3.50	0.891		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
EPIDIDYMIDES	1.24	0.316		HEART	ILEUM	JEJUNUM	KIDNEYS	
PROSTATE	0.93	0.237		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
THYMUS	0.2132	0.054		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
ADRENAL GLANDS	0.0531	0.014		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
PITUITARY	0.0105	0.003		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
THYROIDS/PARATHY	0.0112	0.003		SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
FINAL BODY WT(G)	393.			TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS	
				HEART	ILEUM	JEJUNUM	KIDNEYS	
				LN, MANDIBULAR	LN, MESENTERIC	LUNGS	NERVE, SCIATIC	
				PANCREAS	PITUITARY	PROSTATE	RECTUM	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN	
				SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	
				PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 17

ANIMAL NO. 99502 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	TESTES	MICRO: INFLAMMATION, SUBACUTE			
BRAIN	1.96	0.497	NO SIGNIFICANT				((1))
LIVER	9.47	2.404	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
KIDNEYS	2.81	0.713		BRAIN	CECUM	COLON	DUODENUM
SPLEEN	0.42	0.107		EPIDIDYIMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
HEART	1.31	0.332		HEART	ILEUM	JEJUNUM	KIDNEYS
TESTES	3.38	0.858		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC
EPIDIDYIMIDES	1.16	0.294		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY
PROSTATE	1.08	0.274		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND
THYMUS	0.1650	0.042		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN
ADRENAL GLANDS	0.0570	0.014		SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS
PITUITARY	0.0170	0.004		TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED
THYROIDS/PARATHY	0.0118	0.003		SKIN, UNTREATED			
FINAL BODY WT(G)	394.			MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	EPIDIDYIMIDES	ESOPHAGUS
				HEART	ILEUM	JEJUNUM	KIDNEYS
				LN, MANDIBULAR	LIVER	LN, MESENTERIC	LUNGS
				NERVE, SCIATIC	PANCREAS	PITUITARY	PROSTATE
				RECTUM	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON
				SKIN	SPLEEN	SEMINAL VESICLES	THYROID GLANDS
				PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99506 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: REGENERATION, RENAL TUBULAR			((1))
BRAIN	2.11	0.493	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
LIVER	10.79	2.521	NO SIGNIFICANT				
KIDNEYS	3.05	0.713	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
SPLEEN	0.73	0.171		BRAIN	CECUM	COLON	DUODENUM
HEART	1.53	0.357		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
TESTES	2.87	0.671		HEART	ILEUM	JEJUNUM	KIDNEYS
EPIDIDYMIDES	1.30	0.304		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC
PROSTATE	1.11	0.259		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY
THYMUS	0.2720	0.064		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND
ADRENAL GLANDS	0.0582	0.014		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN
PITUITARY	0.0166	0.004		SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS
THYROIDS/PARATHY	0.0084	0.002		TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED
FINAL BODY WT(G)	428.			SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
				PITUITARY	PROSTATE	RECTUM	SAL. GLAND MAND
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN
				SEMINAL VESICLES	TESTES	THYROID GLANDS	PARATHYROIDS
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY
				SKIN, TREATED	SKIN, UNTREATED		

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99516 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE INTERSTITIAL				(2)
BRAIN	2.09	0.510						
LIVER	9.51	2.320	NO SIGNIFICANT					
KIDNEYS	2.95	0.720	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
SPLEEN	0.61	0.149		BRAIN	CECUM	COLON	DUODENUM	
HEART	1.37	0.334		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
TESTES	3.22	0.785		HEART	ILEUM	JEJUNUM	KIDNEYS	
EPIDIDYMIDES	1.25	0.305		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
PROSTATE	0.93	0.227		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
THYMUS	0.1510	0.037		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
ADRENAL GLANDS	0.0547	0.013		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
PITUITARY	0.0119	0.003		SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
THYROIDS/PARATHY	0.0087	0.002		TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
FINAL BODY WT(G)	410.			SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LIVER	LN, MESENTERIC	LUNGS	NERVE, SCIATIC	
				PANCREAS	PITUITARY	PROSTATE	RECTUM	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN	
				SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	
				PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		

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SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99518 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	GROSS: AREA(S), DEPRESSED				P
BRAIN	2.11	0.431		MULTIPLE, PINPOINT, IN CORTEX, BILATERAL				
LIVER	13.34	2.728	^==>	GROSS UNCONFIRMED				
KIDNEYS	3.85	0.787	NO SIGNIFICANT					
SPLEEN	0.80	0.164	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
HEART	1.64	0.335		BRAIN	CECUM	COLON	DUODENUM	
TESTES	3.58	0.732		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
EPIDIDYMIDES	1.47	0.301		HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
PROSTATE	1.24	0.254		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
THYMUS	0.3477	0.071		NERVE, SCIATIC	PANCREAS	PITUITARY	PROSTATE	
ADRENAL GLANDS	0.0515	0.011		RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH	
PITUITARY	0.0132	0.003		SKELETAL MUSCLE	SKIN	SPLEEN	SEMINAL VESICLES	
THYROIDS/PARATHY	0.0153	0.003		TESTES	THYROID GLANDS	THYMUS	TRACHEA	
FINAL BODY WT(G)	489.			URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS	
				HEART	ILEUM	JEJUNUM	KIDNEYS	
				LN, MANDIBULAR	LIVER	LN, MESENTERIC	LUNGS	
				NERVE, SCIATIC	PANCREAS	PITUITARY	PROSTATE	
				RECTUM	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	
				SKIN	SPLEEN	SEMINAL VESICLES	TESTES	
				THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA	
				URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	

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MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99519 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				1
BRAIN	2.13	0.453	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
LIVER	12.14	2.583		ONE OF PAIR PRESENT				
KIDNEYS	3.42	0.728	NO SIGNIFICANT					
SPLEEN	0.81	0.172	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
HEART	1.67	0.355		BRAIN	CECUM	COLON	DUODENUM	
TESTES	3.41	0.726		EPIDIDYIMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
EPIDIDYIMIDES	1.25	0.266		HEART	ILEUM	JEJUNUM	KIDNEYS	
PROSTATE	1.21	0.257		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
THYMUS	0.2253	0.048		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
ADRENAL GLANDS	0.0702	0.015		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
PITUITARY	0.0124	0.003		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
THYROIDES/PARATHY	0.0188	0.004		SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
FINAL BODY WT(G)	470.			TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYIMIDES	ESOPHAGUS	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LIVER	LN, MESENTERIC	LUNGS	NERVE, SCIATIC	
				PANCREAS	PITUITARY	PROSTATE	RECTUM	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN	
				SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	
				PARATHYROIDES	THYMUS	TRACHEA	URINARY BLADDER	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

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SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 23

ANIMAL NO. 99465 GROUP 3: 5 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	HEART	MICRO: CARDIOMYOPATHY				
BRAIN	1.98	0.474	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				((1))
LIVER	11.09	2.653		ONE OF PAIR PRESENT				
KIDNEYS	2.66	0.636	NO SIGNIFICANT					
SPLEEN	0.66	0.158	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
HEART	1.48	0.354		BRAIN	CECUM	COLON	DUODENUM	
TESTES	3.66	0.876		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
EPIDIDYMIDES	1.42	0.340		HEART	ILEUM	JEJUNUM	KIDNEYS	
PROSTATE	1.33	0.318		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
THYMUS	0.2892	0.069		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
ADRENAL GLANDS	0.0591	0.014		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
PITUITARY	0.0104	0.002		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
THYROIDS/PARATHY	0.0145	0.003		SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
FINAL BODY WT(G)	418.			TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS	
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
				LIVER	LN, MESENTERIC	LUNGS	NERVE, SCIATIC	
				PANCREAS	PITUITARY	PROSTATE	RECTUM	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN	
				SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	
				PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		

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MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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TABLE A16 (SCHEDULED NECROPSY)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 24

ANIMAL NO. 99479 GROUP 3: 5 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
 GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LIVER	MICRO: INFLAMMATION, SUBACUTE			
BRAIN	2.09	0.537	NO SIGNIFICANT				((1))
LIVER	9.81	2.522	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
KIDNEYS	2.49	0.640		BRAIN	CECUM	COLON	DUODENUM
SPLEEN	0.70	0.180		EPIDIDYIMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
HEART	1.47	0.378		HEART	ILEUM	JEJUNUM	KIDNEYS
TESTES	3.42	0.879		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC
EPIDIDYIMIDES	1.30	0.334		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY
PROSTATE	1.04	0.267		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND
THYMUS	0.1649	0.042		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN
ADRENAL GLANDS	0.0537	0.014		SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS
PITUITARY	0.0118	0.003		TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED
THYROIDS/PARATHY	0.0154	0.004		SKIN, UNTREATED			
FINAL BODY WT(G)	389.			MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	EPIDIDYIMIDES	ESOPHAGUS
				HEART	ILEUM	JEJUNUM	KIDNEYS
				LN, MANDIBULAR	LN, MESENTERIC	LUNGS	NERVE, SCIATIC
				PANCREAS	PITUITARY	PROSTATE	RECTUM
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN
				SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS
				PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
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TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99489 GROUP 3: 5 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	HEART	MICRO: CARDIOMYOPATHY				(2)
BRAIN	2.08	0.485	LIVER	MICRO: INFLAMMATION, SUBACUTE				(1)
LIVER	11.10	2.587	NO SIGNIFICANT					
KIDNEYS	2.70	0.629	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
SPLEEN	0.86	0.200		BRAIN	CECUM	COLON	DUODENUM	
HEART	1.40	0.326		EPIDIDYIMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
TESTES	3.81	0.888		HEART	ILEUM	JEJUNUM	KIDNEYS	
EPIDIDYIMIDES	1.35	0.315		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
PROSTATE	0.83	0.193		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
THYMUS	0.3332	0.078		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
ADRENAL GLANDS	0.0586	0.014		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
PITUITARY	0.0109	0.003		SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
THYROIDS/PARATHY	0.0123	0.003		TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
FINAL BODY WT(G)	429.			SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYIMIDES	ESOPHAGUS	
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
				PITUITARY	PROSTATE	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				SEMINAL VESICLES	TESTES	THYROID GLANDS	PARATHYROIDS	
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

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SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99490 GROUP 3: 5 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: CARDIOMYOPATHY				
BRAIN	2.17	0.465	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				((2))
LIVER	12.82	2.745	LIVER	MICRO: INFLAMMATION, SUBACUTE				2
KIDNEYS	3.24	0.694	NO SIGNIFICANT					((2))
SPLEEN	0.78	0.167	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
HEART	1.65	0.353		BRAIN	CECUM	COLON	DUODENUM	
TESTES	3.19	0.683		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
EPIDIDYMIDES	1.41	0.302		HEART	ILEUM	JEJUNUM	KIDNEYS	
PROSTATE	1.02	0.218		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
THYMUS	0.2671	0.057		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
ADRENAL GLANDS	0.0844	0.018		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
PITUITARY	0.0157	0.003		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
THYROIDS/PARATHY	0.0146	0.003		SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
FINAL BODY WT(G)	467.			TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
				PROSTATE	RECTUM	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKIN	SPLEEN	SEMINAL VESICLES	
				TESTES	THYROID GLANDS	PARATHYROIDS	THYMUS	
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				

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SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99494 GROUP 3: 5 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: CARDIOMYOPATHY				(2)
BRAIN	2.08	0.408	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE				(2)
LIVER	12.79	2.508	LIVER	MICRO: INFLAMMATION, SUBACUTE				(2)
KIDNEYS	2.87	0.563	LUNGS	MICRO: INFLAMMATION, SUBACUTE				(2)
SPLEEN	0.90	0.176	SAL. GLAND MAND	MICRO: INFLAMMATION, SUBACUTE				(2)
HEART	1.67	0.327	URINARY BLADDER	MICRO: INFLAMMATION, SUBACUTE				(1)
TESTES	3.45	0.676	NO SIGNIFICANT					
EPIDIDYIMIDES	1.40	0.275	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
PROSTATE	1.35	0.265		BRAIN	CECUM	COLON	DUODENUM	
THYMUS	0.2859	0.056		EPIDIDYIMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
ADRENAL GLANDS	0.0651	0.013		HEART	ILEUM	JEJUNUM	KIDNEYS	
PITUITARY	0.0155	0.003		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
THYROIDS/PARATHY	0.0181	0.004		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
FINAL BODY WT(G)	510.			PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
				SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYIMIDES	ESOPHAGUS	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				NERVE, SCIATIC	PANCREAS	PITUITARY	PROSTATE	
				RECTUM	STOMACH, GLAN	STOMACH, NON	SKIN	
				SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	
				PARATHYROIDS	THYMUS	TRACHEA	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

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TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99495 GROUP 3: 5 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE	(2)
BRAIN	2.10	0.444	LN, MANDIBULAR	GROSS: ENLARGED	P
LIVER	11.94	2.524		BILATERAL	
KIDNEYS	3.22	0.681	^==> LN, MANDIBULAR	HYPERPLASIA, LYMPHOID	
SPLEEN	0.69	0.146	LN, MANDIBULAR	MICRO: HYPERPLASIA, LYMPHOID	3
HEART	1.75	0.370	LIVER	MICRO: INFLAMMATION, SUBACUTE	(2)
TESTES	3.32	0.702	PROSTATE	MICRO: INFLAMMATION, ACUTE	(1)
EPIDIDYMIDES	1.30	0.275	STOMACH, GLAN	MICRO: DILATATION, GLANDULAR	P
PROSTATE	1.12	0.237	SKIN	GROSS: SCABBING	
THYMUS	0.2073	0.044		VENTRAL NECK; CEO SCABBING	
ADRENAL GLANDS	0.0548	0.012	^==>	SKIN: INFLAMMATION, ACUTE	
PITUITARY	0.0132	0.003	SKIN	GROSS: HAIR LOSS	P
THYROIDS/PARATHY	0.0220	0.005		VENTRAL NECK; CEO HAIR LOSS	
FINAL BODY WT(G)	473.		^==>	SKIN: INFLAMMATION, ACUTE	(3)
			SKIN	MICRO: INFLAMMATION, ACUTE	P
				ULCER	
				BACTERIAL COLONIES	
				B&H TISSUE GRAM STAIN EXAMINED - GRAM + COCCI PRESENT	
			PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED	
				ONE OF PAIR PRESENT	
			NO SIGNIFICANT CHANGES OBSERVED	GROSS:ADRENAL GLANDS	
				AORTA	FEMUR
				BRAIN	CECUM
				EPIDIDYMIDES	ESOPHAGUS
				HEART	ILEUM
				LAC. GLAND EXOR	LIVER
				NERVE, SCIATIC	PANCREAS
				RECTUM	SPINAL CORD
				SKELETAL MUSCLE	SPLEEN
					FEMUR
					COLON
					EYES
					JEJUNUM
					LN, MESENTERIC
					PITUITARY
					SAL. GLAND MAND
					SEMINAL VESICLES
					JOINT
					DUODENUM
					NERVES, OPTIC
					KIDNEYS
					LUNGS
					PROSTATE
					STOMACH
					TESTES

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TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99495 GROUP 3: 5 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

THYROID GLANDS	THYMUS	TRACHEA	URINARY BLADDER
LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
MARROW, FEMUR	JOINT	BRAIN	CECUM
COLON	DUODENUM	EPIDIDYIMIDES	ESOPHAGUS
HEART	ILEUM	JEJUNUM	LN, MESENTERIC
LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY
RECTUM	SAL. GLAND MAND	STOMACH, NON	SPLEEN
SEMINAL VESICLES	TESTES	THYROID GLANDS	PARATHYROIDS
THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY
SKIN, TREATED	SKIN, UNTREATED		

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^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

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TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99511 GROUP 3: 5 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE				((2))
BRAIN	2.27	0.470	LN, MANDIBULAR	GROSS: ENLARGED				P
LIVER	10.81	2.238		BILATERAL				
KIDNEYS	3.59	0.743	^==>	GROSS UNCONFIRMED				
SPLEEN	0.85	0.176	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
HEART	1.53	0.317	LUNGS	MICRO: INFLAMMATION, SUBACUTE				((1))
TESTES	3.71	0.768	PROSTATE	GROSS: AREA(S), YELLOW				P
EPIDIDYIMIDES	1.33	0.275		ONE, 3 MM IN DIAMETER				
PROSTATE	1.26	0.261	^==>	GROSS UNCONFIRMED				
THYMUS	0.1783	0.037	NO SIGNIFICANT					
ADRENAL GLANDS	0.0604	0.013	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
PITUITARY	0.0164	0.003		BRAIN	CECUM	COLON	DUODENUM	
THYROIDS/PARATHY	0.0139	0.003		EPIDIDYIMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
FINAL BODY WT(G)	483.			HEART	ILEUM	JEJUNUM	KIDNEYS	
				LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
				NERVE, SCIATIC	PANCREAS	PITUITARY	RECTUM	
				SPINAL CORD	SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	
				SKIN	SPLEEN	SEMINAL VESICLES	TESTES	
				THYROID GLANDS	THYMUS	TRACHEA	URINARY BLADDER	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYIMIDES	ESOPHAGUS	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LN, MESENTERIC	NERVE, SCIATIC	PANCREAS	PITUITARY	
				PROSTATE	RECTUM	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKIN	SPLEEN	SEMINAL VESICLES	
				TESTES	THYROID GLANDS	PARATHYROIDS	THYMUS	
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				

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TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99524 GROUP 3: 5 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LIVER	MICRO: INFLAMMATION, SUBACUTE			
BRAIN	2.10	0.397	LUNGS	MICRO: INFLAMMATION, SUBACUTE			((2))
LIVER	13.69	2.588	NO SIGNIFICANT				((1))
KIDNEYS	3.31	0.626	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
SPLEEN	1.07	0.202		BRAIN	CECUM	COLON	DUODENUM
HEART	1.59	0.301		EPIDIDYIMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
TESTES	3.99	0.754		HEART	ILEUM	JEJUNUM	KIDNEYS
EPIDIDYIMIDES	1.47	0.278		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC
PROSTATE	1.07	0.202		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY
THYMUS	0.3508	0.066		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND
ADRENAL GLANDS	0.0748	0.014		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN
PITUITARY	0.0172	0.003		SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS
THYROIDS/PARATHY	0.0135	0.003		TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED
FINAL BODY WT(G)	529.			SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	EPIDIDYIMIDES	ESOPHAGUS
				HEART	ILEUM	JEJUNUM	KIDNEYS
				LN, MANDIBULAR	LN, MESENTERIC	NERVE, SCIATIC	PANCREAS
				PITUITARY	PROSTATE	RECTUM	SAL. GLAND MAND
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN
				SEMINAL VESICLES	TESTES	THYROID GLANDS	PARATHYROIDS
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY
				SKIN, TREATED	SKIN, UNTREATED		

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TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99528 GROUP 3: 5 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	HEART	MICRO: CARDIOMYOPATHY			(2)
BRAIN	1.99	0.481	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			1
LIVER	10.81	2.611	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
KIDNEYS	3.11	0.751	LUNGS	MICRO: INFLAMMATION, SUBACUTE			((2))
SPLEEN	0.61	0.147	PITUITARY	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
HEART	1.44	0.348		ONLY PARS GLANDULARIS PRESENT			
TESTES	3.28	0.792	STOMACH, GLAN	MICRO: DILATATION, GLANDULAR			((1))
EPIDIDYMIDES	1.30	0.314	NO SIGNIFICANT				
PROSTATE	0.94	0.227	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
THYMUS	0.1735	0.042		BRAIN	CECUM	COLON	DUODENUM
ADRENAL GLANDS	0.0611	0.015		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
PITUITARY	0.0121	0.003		HEART	ILEUM	JEJUNUM	KIDNEYS
THYROIDS/PARATHY	0.0100	0.002		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC
FINAL BODY WT(G)	414.			LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY
				PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN
				SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED
				SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC
				NERVE, SCIATIC	PANCREAS	PITUITARY	PROSTATE
				RECTUM	SAL. GLAND MAND	STOMACH, NON	SKIN
				SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS
				PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99464 GROUP 4: 50 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				
BRAIN	2.06	0.442	LIVER	MICRO: INFLAMMATION, SUBACUTE				1
LIVER	16.31	3.500	PITUITARY	MICRO: NO SIGNIFICANT CHANGES OBSERVED				((1))
KIDNEYS	3.10	0.665		PARS NERVOSA MISSING				
SPLEEN	1.04	0.223	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
HEART	1.60	0.343		ONE OF PAIR PRESENT				
TESTES	4.32	0.927	NO SIGNIFICANT					
EPIDIDYMIDES	1.54	0.330	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
PROSTATE	0.67	0.144		BRAIN	CECUM	COLON	DUODENUM	
THYMUS	0.1831	0.039		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
ADRENAL GLANDS	0.0668	0.014		HEART	ILEUM	JEJUNUM	KIDNEYS	
PITUITARY	0.0150	0.003		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
THYROIDES/PARATHY	0.0245	0.005		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
FINAL BODY WT(G)	466.			PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
				SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
				PITUITARY	PROSTATE	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				SEMINAL VESICLES	TESTES	THYROID GLANDS	PARATHYROIDES	
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99469 GROUP 4: 50 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				1
BRAIN	2.01	0.439	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
LIVER	14.50	3.166	LUNGS	MICRO: INFLAMMATION, SUBACUTE				((1))
KIDNEYS	3.32	0.725	THYMUS	GROSS: AREA(S), DARK RED				P
SPLEEN	1.00	0.218		FEW, IRREGULARLY SHAPED				
HEART	1.50	0.328	^==> GROSS UNCONFIRMED					
TESTES	3.43	0.749	NO SIGNIFICANT					
EPIDIDYMIDES	1.35	0.295	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
PROSTATE	0.96	0.210		BRAIN	CECUM	COLON	DUODENUM	
THYMUS	0.2149	0.047		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
ADRENAL GLANDS	0.0719	0.016		HEART	ILEUM	JEJUNUM	KIDNEYS	
PITUITARY	0.0174	0.004		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
THYROIDS/PARATHY	0.0189	0.004		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
FINAL BODY WT(G)	458.			PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
				SEMINAL VESICLES	TESTES	THYROID GLANDS	TRACHEA	
				URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LN, MESENTERIC	NERVE, SCIATIC	PANCREAS	PITUITARY	
				PROSTATE	RECTUM	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKIN	SPLEEN	SEMINAL VESICLES	
				TESTES	THYROID GLANDS	PARATHYROIDS	THYMUS	
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.: WIL-402022
 SPONSOR: AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99480 GROUP 4: 50 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
 GRADE

ORGAN WEIGHT	ABS. (G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE	(1)
BRAIN	2.01	0.378	LIVER	MICRO: INFLAMMATION, SUBACUTE	((1))
LIVER	15.04	2.827	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED	
KIDNEYS	3.24	0.609		ONE OF PAIR PRESENT	
SPLEEN	1.08	0.203	NO SIGNIFICANT		
HEART	1.88	0.353	CHANGES OBSERVED	GROSS: ADRENAL GLANDS	AORTA
TESTES	3.63	0.682		BRAIN	CECUM
EPIDIDYMIDES	1.31	0.246		EPIDIDYMIDES	ESOPHAGUS
PROSTATE	0.92	0.173		HEART	ILEUM
THYMUS	0.1426	0.027		LN, MANDIBULAR	LAC. GLAND EXOR
ADRENAL GLANDS	0.0627	0.012		LUNGS	NERVE, SCIATIC
PITUITARY	0.0159	0.003		PROSTATE	RECTUM
THYROIDS/PARATHY	0.0185	0.003		STOMACH	SKELETAL MUSCLE
FINAL BODY WT (G)	532.			SEMINAL VESICLES	TESTES
				TRACHEA	URINARY BLADDER
				SKIN, UNTREATED	LN, AXILLARY
				MICRO: ADRENAL CORTEX	SKIN, TREATED
				MARROW, FEMUR	ADRENAL MEDULLA
				COLON	AORTA
				HEART	BRAIN
				LN, MESENTERIC	CECUM
				PITUITARY	EPIDIDYMIDES
				STOMACH, GLAN	ESOPHAGUS
				SEMINAL VESICLES	LN, MANDIBULAR
				THYMUS	PANCREAS
				SKIN, TREATED	SAL. GLAND MAND
					SPLEEN
					PARATHYROIDS
					LN, AXILLARY

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

() - FOCAL/SOLITARY, (()) - MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 37

ANIMAL NO. 99485 GROUP 4: 50 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE				((1))
BRAIN	2.27	0.495	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
LIVER	14.80	3.224	LUNGS	MICRO: INFLAMMATION, SUBACUTE				((1))
KIDNEYS	3.56	0.776	PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
SPLEEN	0.92	0.200		ONE OF PAIR PRESENT				
HEART	1.52	0.331	NO SIGNIFICANT					
TESTES	4.02	0.876	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
EPIDIDYMIDES	1.57	0.342		BRAIN	CECUM	COLON	DUODENUM	
PROSTATE	1.14	0.248		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
THYMUS	0.1744	0.038		HEART	ILEUM	JEJUNUM	KIDNEYS	
ADRENAL GLANDS	0.0700	0.015		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
PITUITARY	0.0159	0.003		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
THYROID/PARATHY	0.0213	0.005		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
FINAL BODY WT(G)	459.			STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
				SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LN, MESENTERIC	NERVE, SCIATIC	PANCREAS	PITUITARY	
				PROSTATE	RECTUM	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKIN	SPLEEN	SEMINAL VESICLES	
				TESTES	THYROID GLANDS	PARATHYROID	THYMUS	
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99486 GROUP 4: 50 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	HEART	MICRO: CARDIOMYOPATHY				((2))
BRAIN	2.09	0.448	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				1
LIVER	15.78	3.386	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
KIDNEYS	3.07	0.659	LUNGS	MICRO: INFLAMMATION, SUBACUTE				((1))
SPLEEN	1.08	0.232	NO SIGNIFICANT					
HEART	1.40	0.300	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
TESTES	3.71	0.796		BRAIN	CECUM	COLON	DUODENUM	
EPIDIDYIMIDES	1.23	0.264		EPIDIDYIMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
PROSTATE	0.96	0.206		HEART	ILEUM	JEJUNUM	KIDNEYS	
THYMUS	0.1460	0.031		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
ADRENAL GLANDS	0.0587	0.013		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
PITUITARY	0.0144	0.003		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
THYROIDS/PARATHY	0.0133	0.003		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
FINAL BODY WT(G)	466.			SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYIMIDES	ESOPHAGUS	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				NERVE, SCIATIC	PANCREAS	PITUITARY	PROSTATE	
				RECTUM	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	
				SKIN	SPLEEN	SEMINAL VESICLES	TESTES	
				THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA	
				URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99500 GROUP 4: 50 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	ADRENAL MEDULLA	MICRO: DILATATION				(2)
BRAIN	2.00	0.385		VASCULAR				
LIVER	15.26	2.940	HEART	MICRO: CARDIOMYOPATHY				(1)
KIDNEYS	3.59	0.692	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				1
SPLEEN	1.24	0.239	LIVER	MICRO: INFLAMMATION, SUBACUTE				(1)
HEART	1.84	0.355	LUNGS	MICRO: INFLAMMATION, SUBACUTE				(1)
TESTES	3.91	0.753	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
EPIDIDYMIDES	1.41	0.272		ONE OF PAIR PRESENT				
PROSTATE	1.17	0.225	NO SIGNIFICANT					
THYMUS	0.2039	0.039	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
ADRENAL GLANDS	0.0704	0.014		BRAIN	CECUM	COLON	DUODENUM	
PITUITARY	0.0143	0.003		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
THYROIDES/PARATHY	0.0196	0.004		HEART	ILEUM	JEJUNUM	KIDNEYS	
FINAL BODY WT(G)	519.			LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
				PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
				SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	AORTA	FEMUR	MARROW, FEMUR	
				JOINT	BRAIN	CECUM	COLON	
				DUODENUM	EPIDIDYMIDES	ESOPHAGUS	ILEUM	
				JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	NERVE, SCIATIC	
				PANCREAS	PITUITARY	PROSTATE	RECTUM	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN	
				SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	
				PARATHYROIDES	THYMUS	TRACHEA	URINARY BLADDER	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99510 GROUP 4: 50 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE	1
BRAIN	2.17	0.491	LIVER	MICRO: INFLAMMATION, SUBACUTE	((1))
LIVER	12.75	2.885	LUNGS	MICRO: INFLAMMATION, SUBACUTE	((1))
KIDNEYS	3.32	0.751	NO SIGNIFICANT		
SPLEEN	0.69	0.156	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	
HEART	1.57	0.355		AORTA	FEMUR
TESTES	3.68	0.833		BRAIN	COLON
EPIDIDYMIDES	1.30	0.294		EPIDIDYMIDES	ESOPHAGUS
PROSTATE	1.00	0.226		HEART	ILEUM
THYMUS	0.2297	0.052		LN, MANDIBULAR	LAC. GLAND EXOR
ADRENAL GLANDS	0.0559	0.013		LUNGS	NERVE, SCIATIC
PITUITARY	0.0125	0.003		PROSTATE	RECTUM
THYROIDS/PARATHY	0.0135	0.003		STOMACH	SKELETAL MUSCLE
FINAL BODY WT(G)	442.			SEMINAL VESICLES	TESTES
				TRACHEA	URINARY BLADDER
				SKIN, UNTREATED	LN, AXILLARY
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA
				MARROW, FEMUR	JOINT
				COLON	DUODENUM
				HEART	ILEUM
				LN, MESENTERIC	NERVE, SCIATIC
				PROSTATE	RECTUM
				STOMACH, NON	SKIN
				TESTES	THYROID GLANDS
				TRACHEA	URINARY BLADDER
				SKIN, UNTREATED	LN, AXILLARY
					FEMUR
					CECUM
					ESOPHAGUS
					LN, MANDIBULAR
					PITUITARY
					STOMACH, GLAN
					SEMINAL VESICLES
					THYMUS
					SKIN, TREATED

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99512 GROUP 4: 50 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: CARDIOMYOPATHY	(2)
BRAIN	2.06	0.465	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE	1
LIVER	14.33	3.235	LIVER	MICRO: INFLAMMATION, SUBACUTE	((2))
KIDNEYS	3.18	0.718	LUNGS	MICRO: INFLAMMATION, SUBACUTE	((1))
SPLEEN	0.95	0.214	NO SIGNIFICANT		
HEART	1.51	0.341	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	
TESTES	3.75	0.847		AORTA	FEMUR
EPIDIDYMIDES	1.43	0.323		BRAIN	COLON
PROSTATE	1.08	0.244		EPIDIDYMIDES	ESOPHAGUS
THYMUS	0.2291	0.052		HEART	JEJUNUM
ADRENAL GLANDS	0.0691	0.016		LN, MANDIBULAR	LIVER
PITUITARY	0.0129	0.003		LUNGS	PANCREAS
THYROIDS/PARATHY	0.0247	0.006		PROSTATE	SPINAL CORD
FINAL BODY WT(G)	443.			STOMACH	SKIN
				SEMINAL VESICLES	THYROID GLANDS
				TRACHEA	LN, AXILLARY
				SKIN, UNTREATED	SKIN, TREATED
				MICRO:ADRENAL CORTEX	
				MARROW, FEMUR	ADRENAL MEDULLA
				COLON	JOINT
				ILEUM	BRAIN
				NERVE, SCIATIC	DUODENUM
				RECTUM	EPIDIDYMIDES
				SKIN	ESOPHAGUS
				THYROID GLANDS	LN, MANDIBULAR
				URINARY BLADDER	LN, MESENTERIC
					PITUITARY
					PROSTATE
					STOMACH, GLAN
					STOMACH, NON
					TESTES
					TRACHEA
					SKIN, UNTREATED

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
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TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99513 GROUP 4: 50 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE	2
BRAIN	2.06	0.520	LIVER	GROSS: AREA(S), WHITE	P
LIVER	13.12	3.313		ONE, 3 X 1 MM, IN MEDIAN CLEFT	
KIDNEYS	2.94	0.742	^==>	LIVER: VACUOLATION, HEPATOCELLULAR	
SPLEEN	0.98	0.247	LIVER	MICRO: INFLAMMATION, SUBACUTE	((1))
HEART	1.47	0.371		VACUOLATION, HEPATOCELLULAR	(3)
TESTES	3.26	0.823	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED	
EPIDIDYMIDES	1.22	0.308		ONE OF PAIR PRESENT	
PROSTATE	1.08	0.273	NO SIGNIFICANT		
THYMUS	0.1740	0.044	CHANGES OBSERVED	GROSS:ADRENAL GLANDS AORTA FEMUR JOINT	
ADRENAL GLANDS	0.0646	0.016		BRAIN CECUM COLON DUODENUM	
PITUITARY	0.0142	0.004		EPIDIDYMIDES ESOPHAGUS EYES NERVES, OPTIC	
THYROIDES/PARATHY	0.0131	0.003		HEART ILEUM JEJUNUM KIDNEYS	
FINAL BODY WT(G)	396.			LN, MANDIBULAR LAC. GLAND EXOR LN, MESENTERIC LUNGS	
				NERVE, SCIATIC PANCREAS PITUITARY PROSTATE	
				RECTUM SPINAL CORD SAL. GLAND MAND STOMACH	
				SKELETAL MUSCLE SKIN SPLEEN SEMINAL VESICLES	
				TESTES THYROID GLANDS THYMUS TRACHEA	
				URINARY BLADDER LN, AXILLARY SKIN, TREATED SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX ADRENAL MEDULLA AORTA FEMUR	
				MARROW, FEMUR JOINT BRAIN CECUM	
				COLON DUODENUM EPIDIDYMIDES ESOPHAGUS	
				HEART ILEUM JEJUNUM LN, MANDIBULAR	
				LN, MESENTERIC LUNGS NERVE, SCIATIC PANCREAS	
				PITUITARY PROSTATE RECTUM SAL. GLAND MAND	
				STOMACH, GLAN STOMACH, NON SKIN SPLEEN	
				SEMINAL VESICLES TESTES THYROID GLANDS PARATHYROIDES	
				THYMUS TRACHEA URINARY BLADDER LN, AXILLARY	
				SKIN, TREATED SKIN, UNTREATED	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.: WIL-402022
 SPONSOR: AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99525 GROUP 4: 50 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
 GRADE

ORGAN WEIGHT	ABS. (G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE				(2)
BRAIN	2.07	0.520	LIVER	MICRO: INFLAMMATION, SUBACUTE				(1)
LIVER	12.33	3.098	PANCREAS	MICRO: INFLAMMATION, SUBACUTE				(2)
KIDNEYS	3.25	0.817	SEMINAL VESICLES	MICRO: INFLAMMATION, SUBACUTE				(1)
SPLEEN	0.79	0.198	NO SIGNIFICANT					
HEART	1.30	0.327	CHANGES OBSERVED	GROSS: ADRENAL GLANDS	AORTA	FEMUR	JOINT	
TESTES	3.44	0.864		BRAIN	CECUM	COLON	DUODENUM	
EPIDIDYMIDES	1.20	0.302		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
PROSTATE	0.82	0.206		HEART	ILEUM	JEJUNUM	KIDNEYS	
THYMUS	0.2159	0.054		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
ADRENAL GLANDS	0.0600	0.015		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
PITUITARY	0.0107	0.003		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
THYROIDS/PARATHY	0.0148	0.004		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
FINAL BODY WT (G)	398.			SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO: ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PITUITARY	
				PROSTATE	RECTUM	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKIN	SPLEEN	TESTES	
				THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA	
				URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
 ()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99468 GROUP 5: 150 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	HEART	MICRO: CARDIOMYOPATHY			(2)
BRAIN	2.07	0.516	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			(2)
LIVER	13.44	3.352	LIVER	MICRO: NECROSIS, HEPATOCELLULAR, CENTRILOBULAR			(3)
KIDNEYS	2.89	0.721		INFLAMMATION, SUBACUTE			(2)
SPLEEN	1.11	0.277	LUNGS	MICRO: INFLAMMATION, SUBACUTE			(2)
HEART	2.18	0.544	PITUITARY	GROSS: PALE			P
TESTES	3.14	0.783	^==> GROSS	UNCONFIRMED			
EPIDIDYMIDES	1.28	0.319	PROSTATE	GROSS: PALE			P
PROSTATE	1.06	0.264	^==> GROSS	UNCONFIRMED			
THYMUS	0.0896	0.022	SPLEEN	GROSS: ROUGH SURFACE			P
ADRENAL GLANDS	0.0702	0.018	^==> GROSS	UNCONFIRMED			
PITUITARY	0.0128	0.003	NO SIGNIFICANT				
THYROIDS/PARATHY	0.0169	0.004	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
FINAL BODY WT(G)	401.			BRAIN	CECUM	COLON	DUODENUM
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
				HEART	ILEUM	JEJUNUM	KIDNEYS
				LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC
				LUNGS	NERVE, SCIATIC	PANCREAS	RECTUM
				SPINAL CORD	SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE
				SKIN	SEMINAL VESICLES	TESTES	THYROID GLANDS
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY
				SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC
				NERVE, SCIATIC	PANCREAS	PITUITARY	PROSTATE
				RECTUM	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON
				SKIN	SPLEEN	SEMINAL VESICLES	TESTES
				THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA
				URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

ANIMAL NO.	99482	GROUP	5:	150 MG/KG/DAY	MALE	SCHEDULED EUTH	07/16/11	DATE OF DEATH: 07/16/11	STUDY DAY: 89
									GRADE

ORGAN WEIGHT	ABS. (G)	REL.	HEART	MICRO: CARDIOMYOPATHY					((2))
BRAIN	2.03	0.439	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE					2
LIVER	17.94	3.883	LIVER	MICRO: NECROSIS, HEPATOCELLULAR, CENTRILOBULAR					((2))
KIDNEYS	3.38	0.732		INFLAMMATION, SUBACUTE					((2))
SPLEEN	1.52	0.329	LUNGS	MICRO: INFLAMMATION, SUBACUTE					((2))
HEART	2.10	0.455	PITUITARY	GROSS: PALE					P
TESTES	3.65	0.790	^==>	GROSS UNCONFIRMED					
EPIDIDYMIDES	1.23	0.266	PROSTATE	GROSS: PALE					P
PROSTATE	1.15	0.249	^==>	GROSS UNCONFIRMED					
THYMUS	0.1062	0.023	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED					
ADRENAL GLANDS	0.0634	0.014		ONE OF PAIR PRESENT					
PITUITARY	0.0153	0.003	NO SIGNIFICANT						
THYROIDS/PARATHY	0.0190	0.004	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT		
FINAL BODY WT(G)	462.			BRAIN	CECUM	COLON	DUODENUM		
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC		
				HEART	ILEUM	JEJUNUM	KIDNEYS		
				LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC		
				LUNGS	NERVE, SCIATIC	PANCREAS	RECTUM		
				SPINAL CORD	SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE		
				SKIN	SPLEEN	SEMINAL VESICLES	TESTES		
				THYROID GLANDS	THYMUS	TRACHEA	URINARY BLADDER		
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR		
				MARROW, FEMUR	JOINT	BRAIN	CECUM		
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS		
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC		
				NERVE, SCIATIC	PANCREAS	PITUITARY	PROSTATE		
				RECTUM	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON		
				SKIN	SPLEEN	SEMINAL VESICLES	TESTES		
				THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA		
				URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99482 GROUP 5: 150 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

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ORGAN WEIGHT	ABS. (G)	REL.	HEART	MICRO: CARDIOMYOPATHY					(1)
BRAIN	2.11	0.431	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE					(2)
LIVER	19.79	4.047	LIVER	MICRO: INFLAMMATION, SUBACUTE					(1)
KIDNEYS	3.33	0.681	LUNGS	MICRO: INFLAMMATION, SUBACUTE					(1)
SPLEEN	1.00	0.204	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED					
HEART	1.59	0.325		ONE OF PAIR PRESENT					
TESTES	3.65	0.746	THYMUS	GROSS: AREA(S), DARK RED					P
EPIDIDYMIDES	1.11	0.227		FEW, IRREGULARLY SHAPED					
PROSTATE	1.06	0.217	^==> GROSS	UNCONFIRMED					
THYMUS	0.1094	0.022	NO SIGNIFICANT						
ADRENAL GLANDS	0.0625	0.013	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT		
PITUITARY	0.0169	0.003		BRAIN	CECUM	COLON	DUODENUM		
THYROIDS/PARATHY	0.0219	0.004		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC		
FINAL BODY WT(G)	489.			HEART	ILEUM	JEJUNUM	KIDNEYS		
				LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC		
				LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY		
				PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND		
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN		
				SEMINAL VESICLES	TESTES	THYROID GLANDS	TRACHEA		
				URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR		
				MARROW, FEMUR	JOINT	BRAIN	CECUM		
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS		
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC		
				NERVE, SCIATIC	PANCREAS	PITUITARY	PROSTATE		
				RECTUM	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON		
				SKIN	SPLEEN	SEMINAL VESICLES	TESTES		
				THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA		
				URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED
^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99499 GROUP 5: 150 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				((2))
BRAIN	1.94	0.407	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
LIVER	17.89	3.751		VACUOLATION, HEPATOCELLULAR				((2))
KIDNEYS	3.21	0.673	LUNGS	MICRO: INFLAMMATION, SUBACUTE				((1))
SPLEEN	1.02	0.214	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
HEART	1.72	0.361		ONE OF PAIR PRESENT				
TESTES	3.48	0.730	NO SIGNIFICANT					
EPIDIDYIMIDES	1.35	0.283	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
PROSTATE	0.93	0.195		BRAIN	CECUM	COLON	DUODENUM	
THYMUS	0.1066	0.022		EPIDIDYIMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
ADRENAL GLANDS	0.0634	0.013		HEART	ILEUM	JEJUNUM	KIDNEYS	
PITUITARY	0.0157	0.003		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
THYROIDES/PARATHY	0.0110	0.002		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
FINAL BODY WT(G)	477.			PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
				SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYIMIDES	ESOPHAGUS	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LN, MESENTERIC	NERVE, SCIATIC	PANCREAS	PITUITARY	
				PROSTATE	RECTUM	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKIN	SPLEEN	SEMINAL VESICLES	
				TESTES	THYROID GLANDS	PARATHYROIDES	THYMUS	
				TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
 SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99501 GROUP 5: 150 MG/KG/DAY MALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
 GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE	(1)
BRAIN	2.05	0.445	LIVER	MICRO: INFLAMMATION, SUBACUTE	(1)
LIVER	17.52	3.800		VACUOLATION, HEPATOCELLULAR	(2)
KIDNEYS	3.07	0.666	THYMUS	GROSS: SMALL	P
SPLEEN	1.10	0.239	^==> GROSS UNCONFIRMED		
HEART	1.73	0.375	NO SIGNIFICANT		
TESTES	3.73	0.809	CHANGES OBSERVED	GROSS:ADRENAL GLANDS AORTA FEMUR JOINT	
EPIDIDYMIDES	1.37	0.297		BRAIN CECUM COLON DUODENUM	
PROSTATE	1.15	0.249		EPIDIDYMIDES ESOPHAGUS EYES NERVES, OPTIC	
THYMUS	0.0768	0.017		HEART ILEUM JEJUNUM KIDNEYS	
ADRENAL GLANDS	0.0711	0.015		LN, MANDIBULAR LAC. GLAND EXOR LIVER LN, MESENTERIC	
PITUITARY	0.0148	0.003		LUNGS NERVE, SCIATIC PANCREAS PITUITARY	
THYROIDS/PARATHY	0.0210	0.005		PROSTATE RECTUM SPINAL CORD SAL. GLAND MAND	
FINAL BODY WT(G)	461.			STOMACH SKELETAL MUSCLE SKIN SPLEEN	
				SEMINAL VESICLES TESTES THYROID GLANDS TRACHEA	
				URINARY BLADDER LN, AXILLARY SKIN, TREATED SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX ADRENAL MEDULLA AORTA FEMUR	
				MARROW, FEMUR JOINT BRAIN CECUM	
				COLON DUODENUM EPIDIDYMIDES ESOPHAGUS	
				HEART ILEUM JEJUNUM LN, MANDIBULAR	
				LN, MESENTERIC LUNGS NERVE, SCIATIC PANCREAS	
				PITUITARY PROSTATE RECTUM SAL. GLAND MAND	
				STOMACH, GLAN STOMACH, NON SKIN SPLEEN	
				SEMINAL VESICLES TESTES THYROID GLANDS PARATHYROIDS	
				THYMUS TRACHEA URINARY BLADDER LN, AXILLARY	
				SKIN, TREATED SKIN, UNTREATED	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99517 GROUP 5: 150 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	GROSS: DILATED PELVIS			3
BRAIN	2.04	0.492		RIGHT			
LIVER	13.58	3.272	^==>	GROSS UNCONFIRMED			
KIDNEYS	2.95	0.711	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			((2))
SPLEEN	1.01	0.243	LIVER	MICRO: ALTERATION, CYTOPLASMIC			(2)
HEART	1.40	0.337		INFLAMMATION, SUBACUTE			((1))
TESTES	3.50	0.843	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
EPIDIDYIMIDES	1.24	0.299		ONE OF PAIR PRESENT			
PROSTATE	1.15	0.277	NO SIGNIFICANT				
THYMUS	0.0808	0.019	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
ADRENAL GLANDS	0.0622	0.015		BRAIN	CECUM	COLON	DUODENUM
PITUITARY	0.0153	0.004		EPIDIDYIMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
THYROIDES/PARATHY	0.0181	0.004		HEART	ILEUM	JEJUNUM	LN, MANDIBULAR
FINAL BODY WT(G)	415.			LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS
				NERVE, SCIATIC	PANCREAS	PITUITARY	PROSTATE
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH
				SKELETAL MUSCLE	SKIN	SPLEEN	SEMINAL VESICLES
				TESTES	THYROID GLANDS	THYMUS	TRACHEA
				URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	EPIDIDYIMIDES	ESOPHAGUS
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
				PITUITARY	PROSTATE	RECTUM	SAL. GLAND MAND
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN
				SEMINAL VESICLES	TESTES	THYROID GLANDS	PARATHYROIDES
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY
				SKIN, TREATED	SKIN, UNTREATED	URETERS	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
 SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99521 GROUP 5: 150 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
 GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				(1)
BRAIN	2.03	0.469	LIVER	MICRO: INFLAMMATION, SUBACUTE				(2)
LIVER	15.88	3.667	NO SIGNIFICANT					
KIDNEYS	3.32	0.767	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
SPLEEN	1.18	0.273		BRAIN	CECUM	COLON	DUODENUM	
HEART	1.59	0.367		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
TESTES	3.20	0.739		HEART	ILEUM	JEJUNUM	KIDNEYS	
EPIDIDYMIDES	1.17	0.270		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
PROSTATE	1.03	0.238		LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
THYMUS	0.1016	0.023		PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
ADRENAL GLANDS	0.0652	0.015		STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
PITUITARY	0.0146	0.003		SEMINAL VESICLES	TESTES	THYROID GLANDS	THYMUS	
THYROIDS/PARATHY	0.0194	0.004		TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
FINAL BODY WT(G)	433.			SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	EPIDIDYMIDES	ESOPHAGUS	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
				PITUITARY	PROSTATE	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				SEMINAL VESICLES	TESTES	THYROID GLANDS	PARATHYROIDS	
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
 () - FOCAL/SOLITARY, (()) - MULTIFOCAL/MULTIPLE, NO PARENTHESES - NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99522 GROUP 5: 150 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE	1
BRAIN	2.13	0.489	LIVER	MICRO: INFLAMMATION, SUBACUTE	((1))
LIVER	15.31	3.511	THYMUS	GROSS: SMALL	P
KIDNEYS	3.06	0.702	^==> GROSS	UNCONFIRMED	
SPLEEN	0.89	0.204	NO SIGNIFICANT		
HEART	1.86	0.427	CHANGES OBSERVED	GROSS:ADRENAL GLANDS AORTA FEMUR JOINT	
TESTES	3.50	0.803		BRAIN CECUM COLON DUODENUM	
EPIDIDYMIDES	1.36	0.312		EPIDIDYMIDES ESOPHAGUS EYES NERVES, OPTIC	
PROSTATE	1.37	0.314		HEART ILEUM JEJUNUM KIDNEYS	
THYMUS	0.0832	0.019		LN, MANDIBULAR LAC. GLAND EXOR LIVER LN, MESENTERIC	
ADRENAL GLANDS	0.0552	0.013		LUNGS NERVE, SCIATIC PANCREAS PITUITARY	
PITUITARY	0.0144	0.003		PROSTATE RECTUM SPINAL CORD SAL. GLAND MAND	
THYROIDS/PARATHY	0.0235	0.005		STOMACH SKELETAL MUSCLE SKIN SPLEEN	
FINAL BODY WT(G)	436.			SEMINAL VESICLES TESTES THYROID GLANDS TRACHEA	
				URINARY BLADDER LN, AXILLARY SKIN, TREATED SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX ADRENAL MEDULLA AORTA FEMUR	
				MARROW, FEMUR JOINT BRAIN CECUM	
				COLON DUODENUM EPIDIDYMIDES ESOPHAGUS	
				HEART ILEUM JEJUNUM LN, MANDIBULAR	
				LN, MESENTERIC LUNGS NERVE, SCIATIC PANCREAS	
				PITUITARY PROSTATE RECTUM SAL. GLAND MAND	
				STOMACH, GLAN STOMACH, NON SKIN SPLEEN	
				SEMINAL VESICLES TESTES THYROID GLANDS THYMUS	
				TRACHEA URINARY BLADDER LN, AXILLARY SKIN, TREATED	
				SKIN, UNTREATED	

NOT PRESENT FOR EXAMINATION

MICRO:PARATHYROIDS

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

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^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99523 GROUP 5: 150 MG/KG/DAY MALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE	1
BRAIN	2.19	0.485	LUNGS	MICRO: INFLAMMATION, SUBACUTE	((1))
LIVER	14.99	3.316	PITUITARY	MICRO: VACUOLATION	((2))
KIDNEYS	3.08	0.681		PARS NERVOSA	
SPLEEN	0.87	0.192	THYROID GLANDS	MICRO: INVOLUTION, COLLOID	((3))
HEART	1.50	0.332	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED	
TESTES	3.67	0.812		ONE OF PAIR PRESENT	
EPIDIDYMIDES	1.48	0.327	THYMUS	GROSS: SMALL	P
PROSTATE	1.47	0.325	^==> GROSS	UNCONFIRMED	
THYMUS	0.0711	0.016	NO SIGNIFICANT		
ADRENAL GLANDS	0.0614	0.014	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	
PITUITARY	0.0162	0.004		AORTA	FEMUR
THYROID/PARATHY	0.0145	0.003		BRAIN	JOINT
FINAL BODY WT(G)	452.			CECUM	DUODENUM
				EPIDIDYMIDES	ESOPHAGUS
				HEART	EYES
				LN, MANDIBULAR	JEJUNUM
				LUNGS	LIVER
				NERVE, SCIATIC	LN, MESENTERIC
				PROSTATE	PITUITARY
				RECTUM	PANCREAS
				SKIN	SPINAL CORD
				TESTES	SAL. GLAND MAND
				THYROID GLANDS	SPLEEN
				SKIN, TREATED	TRACHEA
				ADRENAL MEDULLA	SKIN, UNTREATED
				JOINT	FEMUR
				DUODENUM	CECUM
				ILEUM	ESOPHAGUS
				LN, MESENTERIC	LN, MANDIBULAR
				RECTUM	PANCREAS
				SKIN	STOMACH, GLAN
				PARATHYROIDES	SEMINAL VESICLES
				LN, AXILLARY	TRACHEA
				SKIN, TREATED	SKIN, UNTREATED

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

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^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

ORGAN WEIGHT	ABS. (G)	REL.	LIVER	MICRO: INFLAMMATION, SUBACUTE					((1))
BRAIN	2.02	0.711	PITUITARY	GROSS: ENLARGED					P
LIVER	8.89	3.130		6 X 4 X 2 MM					
KIDNEYS	1.82	0.641	^==> GROSS	UNCONFIRMED					
SPLEEN	0.59	0.208	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED					
HEART	1.11	0.391		ONE OF PAIR PRESENT					
UTERUS	0.44	0.155	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS					P
THYMUS	0.2383	0.084	NO SIGNIFICANT						
ADRENAL GLANDS	0.0687	0.024	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT		
OVARIES/OVIDUCTS	0.1236	0.044		BRAIN	CECUM	COLON	DUODENUM		
PITUITARY	0.0204	0.007		ESOPHAGUS	EYES	NERVES, OPTIC	HEART		
THYROIDS/PARATHY	0.0115	0.004		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR		
FINAL BODY WT (G)	284.			LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS		
				MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES		
				PANCREAS	RECTUM	SPINAL CORD	SAL. GLAND MAND		
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN		
				THYROID GLANDS	THYMUS	TRACHEA	URINARY BLADDER		
				UTERUS	VAGINA	CERVIX	LN, AXILLARY		
				SKIN, TREATED	SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR		
				MARROW, FEMUR	JOINT	BRAIN	CECUM		
				COLON	DUODENUM	ESOPHAGUS	HEART		
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR		
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	OVIDUCTS		
				OVARIES	PANCREAS	PITUITARY	RECTUM		
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN		
				SPLEEN	THYROID GLANDS	PARATHYROIDS	THYMUS		
				TRACHEA	URINARY BLADDER	UTERUS	CERVIX		
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED			

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ORGAN	WEIGHT	ABS. (G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE				((1))
BRAIN		2.01	0.674	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
LIVER		8.38	2.812		ONE OF PAIR PRESENT				
KIDNEYS		2.48	0.832	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				
SPLEEN		0.49	0.164	NO SIGNIFICANT					
HEART		1.32	0.443	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
UTERUS		0.67	0.225		BRAIN	CECUM	COLON	DUODENUM	
THYMUS		0.2557	0.086		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
ADRENAL GLANDS		0.0722	0.024		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
OVARIES/OVIDUCTS		0.1427	0.048		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
PITUITARY		0.0203	0.007		MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
THYROIDS/PARATHY		0.0146	0.005		PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
FINAL BODY WT (G)		298.			SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
					SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
					URINARY BLADDER	UTERUS	VAGINA	CERVIX	
					LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
					MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
					MARROW, FEMUR	JOINT	BRAIN	CECUM	
					COLON	DUODENUM	ESOPHAGUS	HEART	
					ILEUM	JEJUNUM	LN, MANDIBULAR	LIVER	
					LN, MESENTERIC	LUNGS	NERVE, SCIATIC	OVIDUCTS	
					OVARIES	PANCREAS	PITUITARY	RECTUM	
					SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN	
					SPLEEN	THYROID GLANDS	PARATHYROIDS	THYMUS	
					TRACHEA	URINARY BLADDER	UTERUS	CERVIX	
					LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		

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SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99544 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION			(1)
BRAIN	1.99	0.672	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
LIVER	7.38	2.493	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS			P
KIDNEYS	1.81	0.611	NO SIGNIFICANT				
SPLEEN	0.54	0.182	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
HEART	1.26	0.426		BRAIN	CECUM	COLON	DUODENUM
UTERUS	0.95	0.321		ESOPHAGUS	EYES	NERVES, OPTIC	HEART
THYMUS	0.2327	0.079		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
ADRENAL GLANDS	0.0868	0.029		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS
OVARIES/OVIDUCTS	0.1680	0.057		MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES
PITUITARY	0.0202	0.007		PANCREAS	PITUITARY	RECTUM	SPINAL CORD
THYROIDS/PARATHY	0.0159	0.005		SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN
FINAL BODY WT(G)	296.			SPLEEN	THYROID GLANDS	THYMUS	TRACHEA
				URINARY BLADDER	UTERUS	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	ESOPHAGUS	HEART
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN
				THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA
				URINARY BLADDER	UTERUS	CERVIX	LN, AXILLARY
				SKIN, TREATED	SKIN, UNTREATED		

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TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99547 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	GENERAL COMMENT	GROSS: ORGAN DAMAGED AT NECROPSY	P
BRAIN	1.97	0.738		PITUITARY	
LIVER	7.13	2.670	^==> GROSS UNCONFIRMED		
KIDNEYS	1.94	0.727	KIDNEYS	MICRO: MINERALIZATION	(1)
SPLEEN	0.44	0.165	LIVER	MICRO: INFLAMMATION, SUBACUTE	((1))
HEART	1.01	0.378	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED	
UTERUS	1.18	0.442		ONE OF PAIR PRESENT	
THYMUS	0.2445	0.092	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS	P
ADRENAL GLANDS	0.0686	0.026	NO SIGNIFICANT		
OVARIES/OVIDUCTS	0.1384	0.052	CHANGES OBSERVED	GROSS:ADRENAL GLANDS AORTA FEMUR JOINT	
PITUITARY	0.0183	0.007		BRAIN CECUM COLON DUODENUM	
THYROIDES/PARATHY	0.0125	0.005		ESOPHAGUS EYES NERVES, OPTIC HEART	
FINAL BODY WT(G)	267.			ILEUM JEJUNUM KIDNEYS LN, MANDIBULAR	
				LAC. GLAND EXOR LIVER LN, MESENTERIC LUNGS	
				MAMMARY GLAND NERVE, SCIATIC OVIDUCTS OVARIES	
				PANCREAS PITUITARY RECTUM SPINAL CORD	
				SAL. GLAND MAND STOMACH SKELETAL MUSCLE SKIN	
				SPLEEN THYROID GLANDS THYMUS TRACHEA	
				URINARY BLADDER UTERUS VAGINA CERVIX	
				LN, AXILLARY SKIN, TREATED SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX ADRENAL MEDULLA AORTA FEMUR	
				MARROW, FEMUR JOINT BRAIN CECUM	
				COLON DUODENUM ESOPHAGUS HEART	
				ILEUM JEJUNUM LN, MANDIBULAR LN, MESENTERIC	
				LUNGS NERVE, SCIATIC OVIDUCTS OVARIES	
				PANCREAS PITUITARY RECTUM SAL. GLAND MAND	
				STOMACH, GLAN STOMACH, NON SKIN SPLEEN	
				THYROID GLANDS PARATHYROIDES THYMUS TRACHEA	
				URINARY BLADDER UTERUS CERVIX LN, AXILLARY	
				SKIN, TREATED SKIN, UNTREATED	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99559 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE				((1))
BRAIN	1.92	0.787	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
LIVER	6.92	2.836	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
KIDNEYS	1.79	0.734		ONE OF PAIR PRESENT				
SPLEEN	0.43	0.176	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				P
HEART	0.93	0.381	NO SIGNIFICANT					
UTERUS	0.45	0.184	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
THYMUS	0.2174	0.089		BRAIN	CECUM	COLON	DUODENUM	
ADRENAL GLANDS	0.0618	0.025		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
OVARIES/OVIDUCTS	0.1321	0.054		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
PITUITARY	0.0161	0.007		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
THYROIDS/PARATHY	0.0118	0.005		MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
FINAL BODY WT(G)	244.			PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99569 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	HEART	MICRO: CARDIOMYOPATHY			(2)
BRAIN	1.96	0.624	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
LIVER	8.11	2.583	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
KIDNEYS	1.97	0.627		ONE OF PAIR PRESENT			
SPLEEN	0.61	0.194	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS			P
HEART	1.05	0.334	NO SIGNIFICANT				
UTERUS	0.68	0.217	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
THYMUS	0.2868	0.091		BRAIN	CECUM	COLON	DUODENUM
ADRENAL GLANDS	0.0642	0.020		ESOPHAGUS	EYES	NERVES, OPTIC	HEART
OVARIES/OVIDUCTS	0.1554	0.049		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
PITUITARY	0.0218	0.007		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS
THYROIDS/PARATHY	0.0157	0.005		MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES
FINAL BODY WT (G)	314.			PANCREAS	PITUITARY	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA
				URINARY BLADDER	UTERUS	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	ESOPHAGUS	ILEUM
				JEJUNUM	KIDNEYS	LN, MANDIBULAR	LN, MESENTERIC
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN
				THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA
				URINARY BLADDER	UTERUS	CERVIX	LN, AXILLARY
				SKIN, TREATED	SKIN, UNTREATED		

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
() -FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
 SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99579 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
 GRADE

ORGAN WEIGHT	ABS. (G)	REL.	KIDNEYS	MICRO: MINERALIZATION				(2)
BRAIN	1.81	0.699	LIVER	MICRO: INFLAMMATION, SUBACUTE				(1)
LIVER	6.71	2.591	PANCREAS	MICRO: INFLAMMATION, SUBACUTE				(2)
KIDNEYS	1.91	0.737	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
SPLEEN	0.61	0.236		ONE OF PAIR PRESENT				
HEART	1.03	0.398	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS				P
UTERUS	0.68	0.263	NO SIGNIFICANT					
THYMUS	0.1854	0.072	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
ADRENAL GLANDS	0.0562	0.022		BRAIN	CECUM	COLON	DUODENUM	
OVARIES/OVIDUCTS	0.1142	0.044		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
PITUITARY	0.0145	0.006		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
THYROIDS/PARATHY	0.0114	0.004		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
FINAL BODY WT (G)	259.			MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PITUITARY	RECTUM	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKIN	SPLEEN	THYROID GLANDS	
				PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER	
				UTERUS	CERVIX	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
 SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99580 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
 GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LIVER	MICRO: INFLAMMATION, SUBACUTE				
BRAIN	2.01	0.761	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				((1))
LIVER	7.61	2.883	NO SIGNIFICANT					P
KIDNEYS	1.99	0.754	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
SPLEEN	0.52	0.197		BRAIN	CECUM	COLON	DUODENUM	
HEART	1.21	0.458		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
UTERUS	0.71	0.269		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
THYMUS	0.2403	0.091		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
ADRENAL GLANDS	0.0576	0.022		MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
OVARIES/OVIDUCTS	0.1058	0.040		PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
PITUITARY	0.0190	0.007		SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
THYROIDS/PARATHY	0.0181	0.007		SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
FINAL BODY WT(G)	264.			URINARY BLADDER	UTERUS	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	OVIDUCTS	
				OVARIES	PANCREAS	PITUITARY	RECTUM	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN	
				SPLEEN	THYROID GLANDS	PARATHYROIDS	THYMUS	
				TRACHEA	URINARY BLADDER	UTERUS	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99586 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION				
BRAIN	1.86	0.691	LN, MANDIBULAR	GROSS: ENLARGED				((2))
LIVER	6.70	2.491		RIGHT				P
KIDNEYS	1.81	0.673	^==>	GROSS UNCONFIRMED				
SPLEEN	0.49	0.182	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
HEART	1.05	0.390	UTERUS	GROSS: CONTENTS, CLEAR FLUID				P
UTERUS	1.60	0.595		BOTH HORNS				
THYMUS	0.2991	0.111	^==>	GROSS UNCONFIRMED				
ADRENAL GLANDS	0.0610	0.023	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
OVARIES/OVIDUCTS	0.1314	0.049	NO SIGNIFICANT					
PITUITARY	0.0169	0.006	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
THYROIDS/PARATHY	0.0144	0.005		BRAIN	CECUM	COLON	DUODENUM	
FINAL BODY WT(G)	269.			ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
				ILEUM	JEJUNUM	KIDNEYS	LAC. GLAND EXOR	
				LIVER	LN, MESENTERIC	LUNGS	MAMMARY GLAND	
				NERVE, SCIATIC	OVIDUCTS	OVARIES	PANCREAS	
				PITUITARY	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
				THYROID GLANDS	THYMUS	TRACHEA	URINARY BLADDER	
				VAGINA	CERVIX	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

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^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99593 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION				(2)
BRAIN	1.88	0.639	LIVER	MICRO: INFLAMMATION, SUBACUTE				(1)
LIVER	8.24	2.803	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
KIDNEYS	1.97	0.670		ONE OF PAIR PRESENT				
SPLEEN	0.63	0.214	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				P
HEART	1.14	0.388	NO SIGNIFICANT					
UTERUS	0.50	0.170	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
THYMUS	0.2971	0.101		BRAIN	CECUM	COLON	DUODENUM	
ADRENAL GLANDS	0.0674	0.023		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
OVARIES/OVIDUCTS	0.1355	0.046		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
PITUITARY	0.0210	0.007		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
THYROIDS/PARATHY	0.0084	0.003		MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
FINAL BODY WT(G)	294.			PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99534 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	LIVER	MICRO: INFLAMMATION, SUBACUTE				(2)
BRAIN	1.84	0.733	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				P
LIVER	7.58	3.020	NO SIGNIFICANT					
KIDNEYS	2.05	0.817	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
SPLEEN	0.49	0.195		BRAIN	CECUM	COLON	DUODENUM	
HEART	1.08	0.430		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
UTERUS	0.61	0.243		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
THYMUS	0.1811	0.072		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
ADRENAL GLANDS	0.0608	0.024		MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
OVARIES/OVIDUCTS	0.1257	0.050		PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
PITUITARY	0.0150	0.006		SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
THYROIDS/PARATHY	0.0145	0.006		SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
FINAL BODY WT (G)	251.			URINARY BLADDER	UTERUS	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	OVIDUCTS	
				OVARIES	PANCREAS	PITUITARY	RECTUM	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN	
				SPLEEN	THYROID GLANDS	PARATHYROIDS	THYMUS	
				TRACHEA	URINARY BLADDER	UTERUS	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99561 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE			(1)
BRAIN	1.88	0.629	LIVER	MICRO: INFLAMMATION, SUBACUTE			(2)
LIVER	7.57	2.532	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
KIDNEYS	1.79	0.599		ONE OF PAIR PRESENT			
SPLEEN	0.47	0.157	THYMUS	GROSS: AREA(S), DARK RED			P
HEART	0.97	0.324		MULTIPLE, PINPOINT			
UTERUS	0.66	0.221	^==>	THYMUS: CONGESTION			
THYMUS	0.2147	0.072	THYMUS	MICRO: CONGESTION			(2)
ADRENAL GLANDS	0.0789	0.026	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS			P
OVARIES/OVIDUCTS	0.1592	0.053	NO SIGNIFICANT				
PITUITARY	0.0188	0.006	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
THYROIDS/PARATHY	0.0168	0.006		BRAIN	CECUM	COLON	DUODENUM
FINAL BODY WT(G)	299.			ESOPHAGUS	EYES	NERVES, OPTIC	HEART
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
				LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS
				MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN
				SPLEEN	THYROID GLANDS	TRACHEA	URINARY BLADDER
				UTERUS	VAGINA	CERVIX	LN, AXILLARY
				SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	ESOPHAGUS	HEART
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN
				THYROID GLANDS	PARATHYROIDS	TRACHEA	URINARY BLADDER
				UTERUS	CERVIX	LN, AXILLARY	SKIN, TREATED
				SKIN, UNTREATED			

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 66

ANIMAL NO. 99561 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED
^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

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MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.: WIL-402022
 SPONSOR: AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99563 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
 GRADE

ORGAN WEIGHT	ABS. (G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE			
BRAIN	1.88	0.729		MINERALIZATION			((1))
LIVER	7.45	2.888	LIVER	GROSS: AREA(S), WHITE			((1))
KIDNEYS	2.26	0.876		ONE, 1 MM IN DIAMETER, IN MEDIAN CLEFT			P
SPLEEN	0.54	0.209	^==>	GROSS UNCONFIRMED			
HEART	0.98	0.380	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
UTERUS	0.41	0.159	LUNGS	MICRO: INFLAMMATION, SUBACUTE			((1))
THYMUS	0.1778	0.069	THYMUS	GROSS: AREA(S), DARK RED			P
ADRENAL GLANDS	0.0567	0.022		MULTIPLE, PINPOINT			
OVARIES/OVIDUCTS	0.1242	0.048	^==>	THYMUS: CONGESTION			
PITUITARY	0.0186	0.007	THYMUS	MICRO: CONGESTION			((2))
THYROID/SPLEEN	0.0138	0.005	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS			P
FINAL BODY WT (G)	258.		NO SIGNIFICANT CHANGES OBSERVED	GROSS: ADRENAL GLANDS	AORTA	FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
				LAC. GLAND EXOR	LN, MESENTERIC	LUNGS	MAMMARY GLAND
				NERVE, SCIATIC	OVIDUCTS	OVARIES	PANCREAS
				PITUITARY	RECTUM	SPINAL CORD	SAL. GLAND MAND
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN
				THYROID GLANDS	TRACHEA	URINARY BLADDER	UTERUS
				VAGINA	CERVIX	LN, AXILLARY	SKIN, TREATED
				SKIN, UNTREATED			
				MICRO: ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	ESOPHAGUS	HEART
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC
				NERVE, SCIATIC	OVIDUCTS	OVARIES	PANCREAS
				PITUITARY	RECTUM	SAL. GLAND MAND	STOMACH, GLAN
				STOMACH, NON	SKIN	SPLEEN	THYROID GLANDS
				PARATHYROID	TRACHEA	URINARY BLADDER	UTERUS

ANIMAL NO. 99563 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

CERVIX	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED
GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT			
MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT			
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED			
^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING			

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99572 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION				
BRAIN	1.86	0.674	LIVER	GROSS: AREA(S), WHITE				((1))
LIVER	7.76	2.812		ONE, IRREGULARLY SHAPED, IN MEDIAN CLEFT				P
KIDNEYS	2.21	0.801	^==>	GROSS UNCONFIRMED				
SPLEEN	0.54	0.196	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
HEART	1.05	0.380	PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
UTERUS	0.92	0.333		ONE OF PAIR PRESENT				
THYMUS	0.2860	0.104	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
ADRENAL GLANDS	0.0730	0.026	NO SIGNIFICANT					
OVARIES/OVIDUCTS	0.1470	0.053	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
PITUITARY	0.0200	0.007		BRAIN	CECUM	COLON	DUODENUM	
THYROID/PARATHY	0.0198	0.007		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
FINAL BODY WT(G)	276.			ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
				LAC. GLAND EXOR	LN, MESENTERIC	LUNGS	MAMMARY GLAND	
				NERVE, SCIATIC	OVIDUCTS	OVARIES	PANCREAS	
				PITUITARY	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
				THYROID GLANDS	THYMUS	TRACHEA	URINARY BLADDER	
				UTERUS	VAGINA	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				THYROID GLANDS	PARATHYROID	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED
^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99574 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	HEART	MICRO: CARDIOMYOPATHY	(1)
BRAIN	2.04	0.711	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE	(2)
LIVER	7.59	2.645		MINERALIZATION	(1)
KIDNEYS	2.13	0.742	LIVER	MICRO: INFLAMMATION, SUBACUTE	(2)
SPLEEN	0.52	0.181	SPLEEN	GROSS: CYST(S)	P
HEART	1.01	0.352		TWO, 2 MM IN DIAMETER	
UTERUS	0.45	0.157	^==> GROSS	UNCONFIRMED	
THYMUS	0.2153	0.075	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS	P
ADRENAL GLANDS	0.0731	0.025	NO SIGNIFICANT		
OVARIES/OVIDUCTS	0.1302	0.045	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	
PITUITARY	0.0231	0.008		AORTA	FEMUR
THYROIDS/PARATHY	0.0141	0.005		BRAIN	CECUM
FINAL BODY WT(G)	287.			ESOPHAGUS	EYES
				ILEUM	JEJUNUM
				LAC. GLAND EXOR	LIVER
				MAMMARY GLAND	NERVE, SCIATIC
				PANCREAS	PITUITARY
				SAL. GLAND MAND	STOMACH
				THYROID GLANDS	THYMUS
				UTERUS	VAGINA
				SKIN, TREATED	SKIN, UNTREATED
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA
				MARROW, FEMUR	JOINT
				COLON	DUODENUM
				JEJUNUM	LN, MANDIBULAR
				NERVE, SCIATIC	OVIDUCTS
				PITUITARY	RECTUM
				STOMACH, NON	SKIN
				PARATHYROIDS	THYMUS
				UTERUS	CERVIX
				SKIN, UNTREATED	
					FEMUR
					CECUM
					ESOPHAGUS
					LN, MESENTERIC
					OVARIES
					PANCREAS
					STOMACH, GLAN
					THYROID GLANDS
					URINARY BLADDER
					SKIN, TREATED

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99575 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LN, MANDIBULAR	GROSS: ENLARGED				
BRAIN	2.06	0.710		RIGHT				P
LIVER	7.43	2.562	^==>	GROSS UNCONFIRMED				
KIDNEYS	2.29	0.790	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
SPLEEN	0.61	0.210	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				P
HEART	1.05	0.362	NO SIGNIFICANT					
UTERUS	0.42	0.145	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
THYMUS	0.2819	0.097		BRAIN	CECUM	COLON	DUODENUM	
ADRENAL GLANDS	0.0564	0.019		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
OVARIES/OVIDUCTS	0.1241	0.043		ILEUM	JEJUNUM	KIDNEYS	LAC. GLAND EXOR	
PITUITARY	0.0231	0.008		LIVER	LN, MESENTERIC	LUNGS	MAMMARY GLAND	
THYROIDS/PARATHY	0.0157	0.005		NERVE, SCIATIC	OVIDUCTS	OVARIES	PANCREAS	
FINAL BODY WT(G)	290.			PITUITARY	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
				THYROID GLANDS	THYMUS	TRACHEA	URINARY BLADDER	
				UTERUS	VAGINA	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	OVIDUCTS	
				OVARIES	PANCREAS	PITUITARY	RECTUM	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN	
				SPLEEN	THYROID GLANDS	PARATHYROIDS	THYMUS	
				TRACHEA	URINARY BLADDER	UTERUS	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED
^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99576 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LN, MANDIBULAR	GROSS: ENLARGED				
BRAIN	2.02	0.774		BILATERAL				P
LIVER	6.03	2.310	^==>	GROSS UNCONFIRMED				
KIDNEYS	1.74	0.667	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
SPLEEN	0.48	0.184	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				P
HEART	1.14	0.437	NO SIGNIFICANT					
UTERUS	0.53	0.203	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
THYMUS	0.2288	0.088		BRAIN	CECUM	COLON	DUODENUM	
ADRENAL GLANDS	0.0640	0.025		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
OVARIES/OVIDUCTS	0.1067	0.041		ILEUM	JEJUNUM	KIDNEYS	LAC. GLAND EXOR	
PITUITARY	0.0183	0.007		LIVER	LN, MESENTERIC	LUNGS	MAMMARY GLAND	
THYROIDS/PARATHY	0.0139	0.005		NERVE, SCIATIC	OVIDUCTS	OVARIES	PANCREAS	
FINAL BODY WT(G)	261.			PITUITARY	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
				THYROID GLANDS	THYMUS	TRACHEA	URINARY BLADDER	
				UTERUS	VAGINA	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	OVIDUCTS	
				OVARIES	PANCREAS	PITUITARY	RECTUM	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN	
				SPLEEN	THYROID GLANDS	PARATHYROIDS	THYMUS	
				TRACHEA	URINARY BLADDER	UTERUS	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED
^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99578 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE	(2)
BRAIN	1.78	0.721	LIVER	MICRO: INFILTRATE, MONONUCLEAR	((1))
LIVER	6.92	2.802	LUNGS	MICRO: INFLAMMATION, SUBACUTE	((2))
KIDNEYS	1.78	0.721	OVIDUCTS	GROSS: CYST(S)	P
SPLEEN	0.59	0.239		ONE, 1 MM IN DIAMETER, BILATERAL	
HEART	0.97	0.393	^==> GROSS UNCONFIRMED		
UTERUS	0.66	0.267	RECTUM	MICRO: INFILTRATE, MONONUCLEAR, SUBMUCOSAL	((2))
THYMUS	0.1960	0.079	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS	P
ADRENAL GLANDS	0.0687	0.028	NO SIGNIFICANT		
OVARIES/OVIDUCTS	0.1320	0.053	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	
PITUITARY	0.0195	0.008		AORTA	FEMUR
THYROIDS/PARATHY	0.0121	0.005		BRAIN	CECUM
FINAL BODY WT(G)	247.			ESOPHAGUS	EYES
				ILEUM	JEJUNUM
				LAC. GLAND EXOR	LIVER
				MAMMARY GLAND	NERVE, SCIATIC
				PITUITARY	RECTUM
				STOMACH	SKELETAL MUSCLE
				THYROID GLANDS	THYMUS
				UTERUS	VAGINA
				SKIN, TREATED	SKIN, UNTREATED
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA
				MARROW, FEMUR	JOINT
				COLON	DUODENUM
				ILEUM	JEJUNUM
				NERVE, SCIATIC	OVIDUCTS
				PITUITARY	SAL. GLAND MAND
				SKIN	SPLEEN
				THYMUS	TRACHEA
				CERVIX	LN, AXILLARY
					FEMUR
					CECUM
					HEART
					LN, MESENTERIC
					PANCREAS
					STOMACH, GLAN
					THYROID GLANDS
					URINARY BLADDER
					SKIN, TREATED
					SKIN, UNTREATED

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99585 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE				(2)
BRAIN	2.04	0.816		MINERALIZATION				(1)
LIVER	8.06	3.224	LIVER	MICRO: INFLAMMATION, SUBACUTE				(2)
KIDNEYS	1.99	0.796	PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
SPLEEN	0.50	0.200		ONE OF PAIR PRESENT				
HEART	1.11	0.444	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS				P
UTERUS	0.76	0.304	NO SIGNIFICANT					
THYMUS	0.2949	0.118	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
ADRENAL GLANDS	0.0660	0.026		BRAIN	CECUM	COLON	DUODENUM	
OVARIES/OVIDUCTS	0.0837	0.033		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
PITUITARY	0.0268	0.011		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
THYROID/PARATHY	0.0126	0.005		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
FINAL BODY WT(G)	250.			MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				THYROID GLANDS	PARATHYROID	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99530 GROUP 3: 5 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	HEART	MICRO: MYXOMATOUS CHANGE			(2)
BRAIN	1.88	0.726		VALVE			
LIVER	7.13	2.753	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE			(1)
KIDNEYS	1.88	0.726		MINERALIZATION			(1)
SPLEEN	0.54	0.208	LIVER	MICRO: INFILTRATE, MONONUCLEAR			(2)
HEART	1.06	0.409	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
UTERUS	0.54	0.208		ONE OF PAIR PRESENT			
THYMUS	0.2522	0.097	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS			P
ADRENAL GLANDS	0.0684	0.026	NO SIGNIFICANT				
OVARIES/OVIDUCTS	0.1194	0.046	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
PITUITARY	0.0185	0.007		BRAIN	CECUM	COLON	DUODENUM
THYROIDS/PARATHY	0.0104	0.004		ESOPHAGUS	EYES	NERVES, OPTIC	HEART
FINAL BODY WT (G)	259.			ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
				LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS
				MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA
				URINARY BLADDER	UTERUS	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	ESOPHAGUS	ILEUM
				JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	LUNGS
				NERVE, SCIATIC	OVIDUCTS	OVARIES	PANCREAS
				PITUITARY	RECTUM	SAL. GLAND MAND	STOMACH, GLAN
				STOMACH, NON	SKIN	SPLEEN	THYROID GLANDS
				PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER
				UTERUS	CERVIX	LN, AXILLARY	SKIN, TREATED
				SKIN, UNTREATED			

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99530 GROUP 3: 5 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99532 GROUP 3: 5 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: MYXOMATOUS CHANGE			(2)
BRAIN	2.02	0.650		VALVE			
LIVER	8.11	2.608	LIVER	MICRO: INFILTRATE, MONONUCLEAR			(2)
KIDNEYS	2.15	0.691	STOMACH, GLAN	MICRO: EDEMA, SUBMUCOSAL			(2)
SPLEEN	0.61	0.196	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS			P
HEART	1.17	0.376	NO SIGNIFICANT				
UTERUS	1.01	0.325	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
THYMUS	0.2396	0.077		BRAIN	CECUM	COLON	DUODENUM
ADRENAL GLANDS	0.0700	0.023		ESOPHAGUS	EYES	NERVES, OPTIC	HEART
OVARIES/OVIDUCTS	0.1159	0.037		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
PITUITARY	0.0275	0.009		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS
THYROIDS/PARATHY	0.0125	0.004		MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES
FINAL BODY WT(G)	311.			PANCREAS	PITUITARY	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA
				URINARY BLADDER	UTERUS	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	ESOPHAGUS	ILEUM
				JEJUNUM	KIDNEYS	LN, MANDIBULAR	LN, MESENTERIC
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND
				STOMACH, NON	SKIN	SPLEEN	THYROID GLANDS
				PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER
				UTERUS	CERVIX	LN, AXILLARY	SKIN, TREATED
				SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
() -FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99555 GROUP 3: 5 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	AORTA	MICRO: HYPERPLASIA, ENDOTHELIAL			(2)
BRAIN	1.85	0.627		HEART SECTION			
LIVER	7.72	2.617	KIDNEYS	MICRO: MINERALIZATION			((2))
KIDNEYS	1.80	0.610	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
SPLEEN	0.63	0.214	STOMACH, GLAN	MICRO: INFLAMMATION, CHRONIC			((2))
HEART	0.99	0.336		SEROSAL			
UTERUS	0.50	0.169	STOMACH, NON	MICRO: INFLAMMATION, SUBACUTE			((2))
THYMUS	0.2019	0.068		TUNICA MUSCULARIS			
ADRENAL GLANDS	0.0849	0.029	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
OVARIES/OVIDUCTS	0.1167	0.040		ONE OF PAIR PRESENT			
PITUITARY	0.0175	0.006	VAGINA	MICRO: ESTROUS CYCLE: DIELSTRUS			P
THYROIDS/PARATHY	0.0154	0.005	NO SIGNIFICANT				
FINAL BODY WT(G)	295.		CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
				LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS
				MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA
				URINARY BLADDER	UTERUS	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	FEMUR	MARROW, FEMUR
				JOINT	BRAIN	CECUM	COLON
				DUODENUM	ESOPHAGUS	HEART	ILEUM
				JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	LUNGS
				NERVE, SCIATIC	OVIDUCTS	OVARIES	PANCREAS

ANIMAL NO. 99555 GROUP 3: 5 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89

GRADE

PITUITARY	RECTUM	SAL. GLAND MAND	SKIN
SPLEEN	THYROID GLANDS	PARATHYROIDS	THYMUS
TRACHEA	URINARY BLADDER	UTERUS	CERVIX
LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99556 GROUP 3: 5 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				1
BRAIN	1.87	0.700	LIVER	MICRO: INFILTRATE, MONONUCLEAR				((2))
LIVER	6.99	2.618	LUNGS	MICRO: INFLAMMATION, SUBACUTE				((1))
KIDNEYS	2.15	0.805	STOMACH, GLAN	MICRO: EDEMA, SUBMUCOSAL				(2)
SPLEEN	0.49	0.184	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				P
HEART	1.00	0.375	NO SIGNIFICANT					
UTERUS	0.48	0.180	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
THYMUS	0.1470	0.055		BRAIN	CECUM	COLON	DUODENUM	
ADRENAL GLANDS	0.0626	0.023		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
OVARIES/OVIDUCTS	0.1273	0.048		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
PITUITARY	0.0171	0.006		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
THYROIDS/PARATHY	0.0117	0.004		MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
FINAL BODY WT(G)	267.			PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				NERVE, SCIATIC	OVIDUCTS	OVARIES	PANCREAS	
				PITUITARY	RECTUM	SAL. GLAND MAND	STOMACH, NON	
				SKIN	SPLEEN	THYROID GLANDS	PARATHYROIDS	
				THYMUS	TRACHEA	URINARY BLADDER	UTERUS	
				CERVIX	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
 SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99566 GROUP 3: 5 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
 GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION				(1)
BRAIN	1.95	0.699	LIVER	MICRO: INFLAMMATION, SUBACUTE				(2)
LIVER	7.87	2.821	THYROID GLANDS	MICRO: INVOLUTION, COLLOID				(2)
KIDNEYS	1.76	0.631	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
SPLEEN	0.53	0.190		ONE OF PAIR PRESENT				
HEART	1.22	0.437	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
UTERUS	0.74	0.265	NO SIGNIFICANT					
THYMUS	0.2571	0.092	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
ADRENAL GLANDS	0.0825	0.030		BRAIN	CECUM	COLON	DUODENUM	
OVARIES/OVIDUCTS	0.1426	0.051		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
PITUITARY	0.0186	0.007		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
THYROIDS/PARATHY	0.0150	0.005		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
FINAL BODY WT(G)	279.			MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER	
				UTERUS	CERVIX	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
 ()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99568 GROUP 3: 5 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	GROSS: AREA(S), DEPRESSED	
BRAIN	1.90	0.676		FEW, PINPOINT, IN CORTEX, BILATERAL	P
LIVER	7.76	2.762	^==>	KIDNEYS: NEPHROPATHY, CHRONIC PROGRESSIVE	
KIDNEYS	1.96	0.698	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE	2
SPLEEN	0.66	0.235	LIVER	MICRO: INFLAMMATION, SUBACUTE	(2)
HEART	1.04	0.370	STOMACH, GLAN	MICRO: EDEMA, SUBMUCOSAL	(2)
UTERUS	1.44	0.512	PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED	
THYMUS	0.2129	0.076		ONE OF PAIR PRESENT	
ADRENAL GLANDS	0.0651	0.023	UTERUS	GROSS: CONTENTS, CLEAR FLUID	P
OVARIES/OVIDUCTS	0.1284	0.046		BOTH HORNS	
PITUITARY	0.0208	0.007	^==>	UTERUS: DILATATION, LUMEN	
THYROID/PARATHY	0.0116	0.004	UTERUS	MICRO: DILATATION, LUMEN	3
FINAL BODY WT(G)	281.		VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS	P
			NO SIGNIFICANT CHANGES OBSERVED	GROSS:ADRENAL GLANDS	
				AORTA	FEMUR
				BRAIN	COLON
				ESOPHAGUS	EYES
				ILEUM	JEJUNUM
				LIVER	LN, MESENTERIC
				NERVE, SCIATIC	OVIDUCTS
				PITUITARY	RECTUM
				STOMACH	SKELETAL MUSCLE
				THYROID GLANDS	THYMUS
				VAGINA	CERVIX
				SKIN, UNTREATED	LN, AXILLARY
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA
				MARROW, FEMUR	JOINT
				COLON	DUODENUM
				ILEUM	JEJUNUM
				LUNGS	NERVE, SCIATIC
				PANCREAS	PITUITARY
					RECTUM
					AORTA
					BRAIN
					ESOPHAGUS
					LN, MANDIBULAR
					OVIDUCTS
					RECTUM
					FEMUR
					CECUM
					HEART
					LN, MESENTERIC
					OVARIES
					SAL. GLAND MAND

ANIMAL NO. 99568 GROUP 3: 5 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

STOMACH, NON	SKIN	SPLEEN	THYROID GLANDS
PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER
CERVIX	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED
^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
 SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
 A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
 INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99571 GROUP 3: 5 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
 GRADE

ORGAN WEIGHT	ABS. (G)	REL.	KIDNEYS	MICRO: MINERALIZATION				((1))
BRAIN	1.94	0.761		INFLAMMATION, SUBACUTE				((2))
LIVER	6.57	2.576	LIVER	MICRO: INFILTRATE, MONONUCLEAR				((1))
KIDNEYS	1.71	0.671	PITUITARY	MICRO: VACUOLATION				((3))
SPLEEN	0.40	0.157		PARS NERVOSA				
HEART	0.98	0.384	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
UTERUS	0.79	0.310	NO SIGNIFICANT					
THYMUS	0.2744	0.108	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
ADRENAL GLANDS	0.0590	0.023		BRAIN	CECUM	COLON	DUODENUM	
OVARIES/OVIDUCTS	0.1186	0.047		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
PITUITARY	0.0174	0.007		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
THYROIDS/PARATHY	0.0125	0.005		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
FINAL BODY WT (G)	255.			MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	RECTUM	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKIN	SPLEEN	THYROID GLANDS	
				THYMUS	TRACHEA	URINARY BLADDER	UTERUS	
				CERVIX	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	

NOT PRESENT FOR EXAMINATION

MICRO:PARATHYROIDS

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99582 GROUP 3: 5 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: CARDIOMYOPATHY			(2)
BRAIN	1.92	0.738		METAPLASIA, CHONDRO-OSSEOUS			(2)
LIVER	7.51	2.888		AV JUNCTION			
KIDNEYS	1.97	0.758	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
SPLEEN	0.63	0.242		MINERALIZATION			((1))
HEART	1.12	0.431	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
UTERUS	0.74	0.285		PIGMENT, BROWN			(1)
THYMUS	0.2110	0.081	LUNGS	MICRO: INFLAMMATION, ACUTE			((2))
ADRENAL GLANDS	0.0759	0.029		PERIVASCULAR			
OVARIES/OVIDUCTS	0.1274	0.049	PITUITARY	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
PITUITARY	0.0189	0.007		ONLY PARS GLANDULARIS PRESENT			
THYROIDS/PARATHY	0.0206	0.008	STOMACH, GLAN	MICRO: DILATATION, GLANDULAR			((1))
FINAL BODY WT(G)	260.		STOMACH, NON	MICRO: HYPERKERATOSIS			(2)
				ORTHOKERATOSIS			
			VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS			P
			NO SIGNIFICANT				
			CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
				LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS
				MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA
				URINARY BLADDER	UTERUS	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR

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SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99582 GROUP 3: 5 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

MARROW, FEMUR	JOINT	BRAIN	CECUM
COLON	DUODENUM	ESOPHAGUS	ILEUM
JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	NERVE, SCIATIC
OVIDUCTS	OVARIES	PANCREAS	PITUITARY
RECTUM	SAL. GLAND MAND	SKIN	SPLEEN
THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA
URINARY BLADDER	UTERUS	CERVIX	LN, AXILLARY
SKIN, TREATED	SKIN, UNTREATED		

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

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SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99591 GROUP 3: 5 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	HEART	MICRO: MYXOMATOUS CHANGE			(2)
BRAIN	1.92	0.676		VALVE			
LIVER	7.21	2.539	KIDNEYS	MICRO: MINERALIZATION			(1)
KIDNEYS	1.98	0.697		NEPHROPATHY, CHRONIC PROGRESSIVE			1
SPLEEN	0.58	0.204	LIVER	MICRO: INFLAMMATION, SUBACUTE			(2)
HEART	1.06	0.373	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
UTERUS	0.54	0.190		ONE OF PAIR PRESENT			
THYMUS	0.3415	0.120	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS			P
ADRENAL GLANDS	0.0709	0.025	NO SIGNIFICANT				
OVARIES/OVIDUCTS	0.1306	0.046	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
PITUITARY	0.0176	0.006		BRAIN	CECUM	COLON	DUODENUM
THYROIDS/PARATHY	0.0125	0.004		ESOPHAGUS	EYES	NERVES, OPTIC	HEART
FINAL BODY WT (G)	284.			ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
				LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS
				MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA
				URINARY BLADDER	UTERUS	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	ESOPHAGUS	ILEUM
				JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	LUNGS
				NERVE, SCIATIC	OVIDUCTS	OVARIES	PANCREAS
				PITUITARY	RECTUM	SAL. GLAND MAND	STOMACH, GLAN
				STOMACH, NON	SKIN	SPLEEN	THYROID GLANDS
				PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER
				UTERUS	CERVIX	LN, AXILLARY	SKIN, TREATED
				SKIN, UNTREATED			

ANIMAL NO. 99591 GROUP 3: 5 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99592 GROUP 3: 5 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LIVER	MICRO: INFLAMMATION, SUBACUTE					(1)
BRAIN	1.96	0.781	PITUITARY	MICRO: NO SIGNIFICANT CHANGES OBSERVED					
LIVER	7.58	3.020		PARS NERVOSA MISSING					
KIDNEYS	1.66	0.661	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS					P
SPLEEN	0.56	0.223	NO SIGNIFICANT						
HEART	0.99	0.394	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT		
UTERUS	0.54	0.215		BRAIN	CECUM	COLON	DUODENUM		
THYMUS	0.2437	0.097		ESOPHAGUS	EYES	NERVES, OPTIC	HEART		
ADRENAL GLANDS	0.0517	0.021		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR		
OVARIES/OVIDUCTS	0.1113	0.044		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS		
PITUITARY	0.0183	0.007		MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES		
THYROIDS/PARATHY	0.0120	0.005		PANCREAS	PITUITARY	RECTUM	SPINAL CORD		
FINAL BODY WT(G)	251.			SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN		
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA		
				URINARY BLADDER	UTERUS	VAGINA	CERVIX		
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR		
				MARROW, FEMUR	JOINT	BRAIN	CECUM		
				COLON	DUODENUM	ESOPHAGUS	HEART		
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR		
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	OVIDUCTS		
				OVARIES	PANCREAS	PITUITARY	RECTUM		
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN		
				SPLEEN	THYROID GLANDS	PARATHYROIDS	THYMUS		
				TRACHEA	URINARY BLADDER	UTERUS	CERVIX		
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99533 GROUP 4: 50 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LIVER	MICRO: INFLAMMATION, SUBACUTE			(2)
BRAIN	2.02	0.669	LUNGS	MICRO: INFLAMMATION, SUBACUTE			(2)
LIVER	9.01	2.983	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS			P
KIDNEYS	2.04	0.675	NO SIGNIFICANT				
SPLEEN	0.64	0.212	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
HEART	1.11	0.368		BRAIN	CECUM	COLON	DUODENUM
UTERUS	0.39	0.129		ESOPHAGUS	EYES	NERVES, OPTIC	HEART
THYMUS	0.1547	0.051		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
ADRENAL GLANDS	0.0672	0.022		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS
OVARIES/OVIDUCTS	0.1246	0.041		MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES
PITUITARY	0.0152	0.005		PANCREAS	PITUITARY	RECTUM	SPINAL CORD
THYROIDS/PARATHY	0.0141	0.005		SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN
FINAL BODY WT(G)	302.			SPLEEN	THYROID GLANDS	THYMUS	TRACHEA
				URINARY BLADDER	UTERUS	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	ESOPHAGUS	HEART
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
				LN, MESENTERIC	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN
				THYROID GLANDS	THYMUS	TRACHEA	URINARY BLADDER
				UTERUS	CERVIX	LN, AXILLARY	SKIN, TREATED
				SKIN, UNTREATED			

NOT PRESENT FOR EXAMINATION

MICRO:PARATHYROIDS

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99538 GROUP 4: 50 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION			(1)
BRAIN	1.81	0.761		HYPERPLASIA, RENAL TUBULE, SIMPLE			(2)
LIVER	7.84	3.294	LIVER	MICRO: INFILTRATE, MONONUCLEAR			(2)
KIDNEYS	1.83	0.769	THYMUS	GROSS: AREA(S), DARK RED			P
SPLEEN	0.62	0.261		MULTIPLE, PINPOINT TO 2 MM IN DIAMETER			
HEART	0.96	0.403	^==>	THYMUS: CONGESTION			
UTERUS	0.51	0.214	THYMUS	MICRO: CONGESTION			(2)
THYMUS	0.1469	0.062	VAGINA	MICRO: ESTROUS CYCLE: DIELSTRUS			P
ADRENAL GLANDS	0.0775	0.033	NO SIGNIFICANT				
OVARIES/OVIDUCTS	0.0986	0.041	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
PITUITARY	0.0189	0.008		BRAIN	CECUM	COLON	DUODENUM
THYROIDS/PARATHY	0.0136	0.006		ESOPHAGUS	EYES	NERVES, OPTIC	HEART
FINAL BODY WT(G)	238.			ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
				LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS
				MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN
				SPLEEN	THYROID GLANDS	TRACHEA	URINARY BLADDER
				UTERUS	VAGINA	CERVIX	LN, AXILLARY
				SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	ESOPHAGUS	HEART
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN
				THYROID GLANDS	PARATHYROIDS	TRACHEA	URINARY BLADDER
				UTERUS	CERVIX	LN, AXILLARY	SKIN, TREATED
				SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED
^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99546 GROUP 4: 50 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION				((2))
BRAIN	1.73	0.749	LIVER	MICRO: INFILTRATE, MONONUCLEAR				((2))
LIVER	8.55	3.701	UTERUS	GROSS: CONTENTS, CLEAR FLUID				P
KIDNEYS	1.73	0.749		BOTH HORNS				
SPLEEN	0.56	0.242	^==>	GROSS UNCONFIRMED				
HEART	0.99	0.429	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
UTERUS	1.13	0.489	NO SIGNIFICANT					
THYMUS	0.1330	0.058	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
ADRENAL GLANDS	0.0542	0.023		BRAIN	CECUM	COLON	DUODENUM	
OVARIES/OVIDUCTS	0.0994	0.043		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
PITUITARY	0.0161	0.007		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
THYROIDS/PARATHY	0.0142	0.006		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
FINAL BODY WT(G)	231.			MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
				URINARY BLADDER	VAGINA	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				THYROID GLANDS	THYMUS	TRACHEA	URINARY BLADDER	
				UTERUS	CERVIX	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				

NOT PRESENT FOR EXAMINATION

MICRO:PARATHYROIDS

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99552 GROUP 4: 50 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: HYPERPLASIA, RENAL TUBULE, SIMPLE	(2)
BRAIN	1.93	0.801	LIVER	MICRO: INFLAMMATION, SUBACUTE	(2)
LIVER	9.22	3.826	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS	P
KIDNEYS	1.79	0.743	NO SIGNIFICANT		
SPLEEN	0.46	0.191	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	
HEART	1.08	0.448		AORTA	FEMUR
UTERUS	0.66	0.274		BRAIN	CECUM
THYMUS	0.1650	0.068		ESOPHAGUS	COLON
ADRENAL GLANDS	0.0840	0.035		ILEUM	NERVES, OPTIC
OVARIES/OVIDUCTS	0.0867	0.036		LAC. GLAND EXOR	KIDNEYS
PITUITARY	0.0284	0.012		MAMMARY GLAND	LN, MESENTERIC
THYROID/SPLEEN	0.0152	0.006		PANCREAS	OVIDUCTS
FINAL BODY WT(G)	241.			PITUITARY	RECTUM
				SAL. GLAND MAND	SPINAL CORD
				STOMACH	SKIN
				SPLEEN	TRACHEA
				THYROID GLANDS	CERVIX
				UTERUS	
				VAGINA	
				SKIN, TREATED	
				SKIN, UNTREATED	
				ADRENAL MEDULLA	
				AORTA	FEMUR
				BRAIN	CECUM
				ESOPHAGUS	HEART
				LN, MANDIBULAR	LN, MESENTERIC
				OVIDUCTS	OVARIES
				RECTUM	SAL. GLAND MAND
				SKIN	SPLEEN
				THYMUS	TRACHEA
				CERVIX	LN, AXILLARY
				SKIN, UNTREATED	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99553 GROUP 4: 50 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	GENERAL COMMENT	GROSS: ORGAN DAMAGED AT NECROPSY					
BRAIN	1.88	0.797			MANDIBULAR SALIVARY GLAND, RIGHT				P
LIVER	7.73	3.275	^==>	GROSS UNCONFIRMED					
KIDNEYS	1.74	0.737	KIDNEYS	GROSS: AREA(S), DEPRESSED					P
SPLEEN	0.64	0.271		FEW, PINPOINT, IN CORTEX, BILATERAL					
HEART	0.92	0.390	^==>	KIDNEYS: INFLAMMATION, CHRONIC					
UTERUS	0.56	0.237	KIDNEYS	MICRO: INFLAMMATION, CHRONIC					((2))
THYMUS	0.2377	0.101		MINERALIZATION					((2))
ADRENAL GLANDS	0.0574	0.024	LN, MANDIBULAR	GROSS: ENLARGED					P
OVARIES/OVIDUCTS	0.1108	0.047		RIGHT					
PITUITARY	0.0183	0.008	^==>	GROSS UNCONFIRMED					
THYROIDS/PARATHY	0.0102	0.004	LIVER	MICRO: INFILTRATE, MONONUCLEAR					((1))
FINAL BODY WT(G)	236.		THYMUS	GROSS: AREA(S), DARK RED					P
				FEW, 1 MM IN DIAMETER					
			^==>	THYMUS: CONGESTION					
			THYMUS	MICRO: CONGESTION					((2))
			VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS					P
			NO SIGNIFICANT						
			CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT		
				BRAIN	CECUM	COLON	DUODENUM		
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART		
				ILEUM	JEJUNUM	LAC. GLAND EXOR	LIVER		
				LN, MESENTERIC	LUNGS	MAMMARY GLAND	NERVE, SCIATIC		
				OVIDUCTS	OVARIES	PANCREAS	PITUITARY		
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH		
				SKELETAL MUSCLE	SKIN	SPLEEN	THYROID GLANDS		
				TRACHEA	URINARY BLADDER	UTERUS	VAGINA		
				CERVIX	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR		
				MARROW, FEMUR	JOINT	BRAIN	CECUM		
				COLON	DUODENUM	ESOPHAGUS	HEART		
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC		

ANIMAL NO. 99553 GROUP 4: 50 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES
PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND
STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN
THYROID GLANDS	PARATHYROIDS	TRACHEA	URINARY BLADDER
UTERUS	CERVIX	LN, AXILLARY	SKIN, TREATED
SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99560 GROUP 4: 50 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE					(1)
BRAIN	2.01	0.734		MINERALIZATION					(1)
LIVER	8.76	3.197	LIVER	MICRO: INFLAMMATION, SUBACUTE					(1)
KIDNEYS	1.90	0.693	STOMACH, GLAN	MICRO: EDEMA, SUBMUCOSAL					(2)
SPLEEN	0.50	0.182	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS					P
HEART	1.05	0.383	NO SIGNIFICANT						
UTERUS	0.65	0.237	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT		
THYMUS	0.2734	0.100		BRAIN	CECUM	COLON	DUODENUM		
ADRENAL GLANDS	0.0716	0.026		ESOPHAGUS	EYES	NERVES, OPTIC	HEART		
OVARIES/OVIDUCTS	0.1011	0.037		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR		
PITUITARY	0.0199	0.007		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS		
THYROID/SPLEEN	0.0153	0.006		MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES		
FINAL BODY WT(G)	274.			PANCREAS	PITUITARY	RECTUM	SPINAL CORD		
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN		
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA		
				URINARY BLADDER	UTERUS	VAGINA	CERVIX		
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR		
				MARROW, FEMUR	JOINT	BRAIN	CECUM		
				COLON	DUODENUM	ESOPHAGUS	HEART		
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC		
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES		
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND		
				STOMACH, NON	SKIN	SPLEEN	THYROID GLANDS		
				PARATHYROID	THYMUS	TRACHEA	URINARY BLADDER		
				UTERUS	CERVIX	LN, AXILLARY	SKIN, TREATED		
				SKIN, UNTREATED					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
() -FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99564 GROUP 4: 50 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	HEART	MICRO: CARDIOMYOPATHY	(1)
BRAIN	2.03	0.674	KIDNEYS	GROSS: AREA(S), DEPRESSED	P
LIVER	8.99	2.987		FEW, PINPOINT, IN CORTEX, BILATERAL	
KIDNEYS	2.04	0.678	^==>	KIDNEYS: NEPHROPATHY, CHRONIC PROGRESSIVE	
SPLEEN	0.52	0.173	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE	((2))
HEART	1.15	0.382	LIVER	MICRO: INFILTRATE, MONONUCLEAR	((2))
UTERUS	0.46	0.153	LUNGS	MICRO: INFLAMMATION, SUBACUTE	((2))
THYMUS	0.1163	0.039	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED	
ADRENAL GLANDS	0.0692	0.023		ONE OF PAIR PRESENT	
OVARIES/OVIDUCTS	0.1383	0.046	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS	P
PITUITARY	0.0195	0.006	NO SIGNIFICANT		
THYROIDS/PARATHY	0.0149	0.005	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	
FINAL BODY WT(G)	301.			AORTA	FEMUR
				BRAIN	COLON
				ESOPHAGUS	EYES
				ILEUM	JEJUNUM
				LIVER	LN, MESENTERIC
				NERVE, SCIATIC	OVIDUCTS
				PITUITARY	RECTUM
				STOMACH	SKELETAL MUSCLE
				THYROID GLANDS	THYMUS
				UTERUS	VAGINA
				SKIN, TREATED	SKIN, UNTREATED
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA
				MARROW, FEMUR	JOINT
				COLON	DUODENUM
				JEJUNUM	LN, MANDIBULAR
				OVIDUCTS	OVARIES
				RECTUM	SAL. GLAND MAND
				SKIN	SPLEEN
				THYMUS	TRACHEA
				CERVIX	LN, AXILLARY
					FEMUR
					CECUM
					ESOPHAGUS
					LN, MESENTERIC
					PANCREAS
					STOMACH, GLAN
					THYROID GLANDS
					URINARY BLADDER
					SKIN, TREATED
					SKIN, UNTREATED

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SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99564 GROUP 4: 50 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED
^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
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ANIMAL NO. 99567 GROUP 4: 50 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				1
BRAIN	1.85	0.698		MINERALIZATION				((1))
LIVER	9.14	3.449	LIVER	MICRO: INFILTRATE, MONONUCLEAR				((1))
KIDNEYS	1.89	0.713	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
SPLEEN	0.61	0.230		ONE OF PAIR PRESENT				
HEART	1.04	0.392	THYMUS	GROSS: SMALL				P
UTERUS	0.69	0.260	^==> GROSS	UNCONFIRMED				
THYMUS	0.1192	0.045	VAGINA	MICRO: ESTROUS CYCLE: DIELSTRUS				P
ADRENAL GLANDS	0.0800	0.030	NO SIGNIFICANT					
OVARIES/OVIDUCTS	0.1401	0.053	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
PITUITARY	0.0168	0.006		BRAIN	CECUM	COLON	DUODENUM	
THYROIDS/PARATHY	0.0154	0.006		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
FINAL BODY WT(G)	265.			ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
				LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
				MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
				SPLEEN	THYROID GLANDS	TRACHEA	URINARY BLADDER	
				UTERUS	VAGINA	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED
^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

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SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99584 GROUP 4: 50 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION				(2)
BRAIN	1.97	0.788	LIVER	MICRO: INFILTRATE, MONONUCLEAR				(1)
LIVER	8.25	3.300	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
KIDNEYS	1.72	0.688	NO SIGNIFICANT					
SPLEEN	0.47	0.188	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
HEART	1.04	0.416		BRAIN	CECUM	COLON	DUODENUM	
UTERUS	0.80	0.320		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
THYMUS	0.1576	0.063		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
ADRENAL GLANDS	0.0717	0.029		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
OVARIES/OVIDUCTS	0.1055	0.042		MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
PITUITARY	0.0101	0.004		PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
THYROIDS/PARATHY	0.0128	0.005		SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
FINAL BODY WT(G)	250.			SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

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SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99590 GROUP 4: 50 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	GROSS: AREA(S), DEPRESSED				P
BRAIN	1.96	0.800		FEW, IRREGULARLY SHAPED, IN CORTEX, BILATERAL				
LIVER	8.72	3.559	^==>	GROSS UNCONFIRMED				
KIDNEYS	1.73	0.706	LIVER	MICRO: INFILTRATE, MONONUCLEAR				((1))
SPLEEN	0.70	0.286	PITUITARY	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
HEART	1.01	0.412		PARS NERVOSA MISSING				
UTERUS	1.43	0.584	UTERUS	GROSS: CONTENTS, CLEAR FLUID				P
THYMUS	0.1232	0.050		BOTH HORNS				
ADRENAL GLANDS	0.0916	0.037	^==>	GROSS UNCONFIRMED				
OVARIES/OVIDUCTS	0.1185	0.048	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS				P
PITUITARY	0.0218	0.009	NO SIGNIFICANT					
THYROIDS/PARATHY	0.0121	0.005	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
FINAL BODY WT(G)	245.			BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LIVER	LN, MESENTERIC	LUNGS	MAMMARY GLAND	
				NERVE, SCIATIC	OVIDUCTS	OVARIES	PANCREAS	
				PITUITARY	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN	
				THYROID GLANDS	THYMUS	TRACHEA	URINARY BLADDER	
				VAGINA	CERVIX	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	OVIDUCTS	
				OVARIES	PANCREAS	PITUITARY	RECTUM	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN	
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	CERVIX	LN, AXILLARY	

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SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99590 GROUP 4: 50 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

SKIN, TREATED SKIN, UNTREATED

NOT PRESENT FOR EXAMINATION

MICRO:PARATHYROIDS

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99531 GROUP 5: 150 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	GROSS: AREA(S), DEPRESSED			P
BRAIN	2.02	0.818		ONE, PINPOINT, IN CORTEX, RIGHT			
LIVER	9.58	3.879	^==>	GROSS UNCONFIRMED			
KIDNEYS	1.97	0.798	KIDNEYS	MICRO: MINERALIZATION			((2))
SPLEEN	0.54	0.219	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
HEART	0.99	0.401	THYMUS	GROSS: AREA(S), DARK RED			P
UTERUS	0.55	0.223		FEW, PINPOINT			
THYMUS	0.1052	0.043	^==>	THYMUS: CONGESTION			
ADRENAL GLANDS	0.0595	0.024	THYMUS	MICRO: CONGESTION			((2))
OVARIES/OVIDUCTS	0.1161	0.047	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS			P
PITUITARY	0.0146	0.006	SKIN, TREATED	MICRO: HYPERKERATOSIS			((1))
THYROIDS/PARATHY	0.0156	0.006		ORTHOKERATOTIC			
FINAL BODY WT(G)	247.		NO SIGNIFICANT CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LIVER	LN, MESENTERIC	LUNGS	MAMMARY GLAND
				NERVE, SCIATIC	OVIDUCTS	OVARIES	PANCREAS
				PITUITARY	RECTUM	SPINAL CORD	SAL. GLAND MAND
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN
				THYROID GLANDS	TRACHEA	URINARY BLADDER	UTERUS
				VAGINA	CERVIX	LN, AXILLARY	SKIN, TREATED
				SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	ESOPHAGUS	HEART
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN

ANIMAL NO. 99531 GROUP 5: 150 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89

GRADE

-----				THYROID GLANDS	PARATHYROIDS	TRACHEA	URINARY BLADDER
				UTERUS	CERVIX	LN, AXILLARY	SKIN, UNTREATED
GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT							
MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT							
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED							
^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING							

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SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99536 GROUP 5: 150 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION				(2)
BRAIN	1.93	0.775		INFLAMMATION, SUBACUTE				(1)
LIVER	11.13	4.470	LUNGS	MICRO: INFLAMMATION, SUBACUTE				(1)
KIDNEYS	1.99	0.799	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				P
SPLEEN	0.71	0.285	NO SIGNIFICANT					
HEART	1.05	0.422	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
UTERUS	0.75	0.301		BRAIN	CECUM	COLON	DUODENUM	
THYMUS	0.1342	0.054		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
ADRENAL GLANDS	0.0673	0.027		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
OVARIES/OVIDUCTS	0.1640	0.066		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
PITUITARY	0.0142	0.006		MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
THYROIDS/PARATHY	0.0154	0.006		PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
FINAL BODY WT(G)	249.			SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LIVER	
				LN, MESENTERIC	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

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SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99540 GROUP 5: 150 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	HEART	MICRO: CHONDROPLASIA			
BRAIN	1.88	0.699		AV JUNCTION			((2))
LIVER	9.61	3.572	KIDNEYS	MICRO: MINERALIZATION			((1))
KIDNEYS	1.86	0.691	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
SPLEEN	0.72	0.268	LUNGS	MICRO: INFLAMMATION, SUBACUTE			((1))
HEART	0.98	0.364	SPLEEN	GROSS: CYST(S)			P
UTERUS	0.61	0.227		ONE, 2 MM IN DIAMETER			
THYMUS	0.1115	0.041	^==> GROSS	UNCONFIRMED			
ADRENAL GLANDS	0.0658	0.024	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
OVARIES/OVIDUCTS	0.1424	0.053		ONE OF PAIR PRESENT			
PITUITARY	0.0202	0.008	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS			P
THYROIDES/PARATHY	0.0105	0.004	NO SIGNIFICANT				
FINAL BODY WT (G)	269.		CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
				LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS
				MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN
				THYROID GLANDS	THYMUS	TRACHEA	URINARY BLADDER
				UTERUS	VAGINA	CERVIX	LN, AXILLARY
				SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	ESOPHAGUS	ILEUM
				JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	NERVE, SCIATIC
				OVIDUCTS	OVARIES	PANCREAS	PITUITARY
				RECTUM	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON
				SKIN	SPLEEN	THYROID GLANDS	PARATHYROIDES

ANIMAL NO. 99540 GROUP 5: 150 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

THYMUS TRACHEA URINARY BLADDER UTERUS
CERVIX LN, AXILLARY SKIN, TREATED SKIN, UNTREATED

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99548 GROUP 5: 150 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE				((1))
BRAIN	1.88	0.704	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
LIVER	10.72	4.015	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
KIDNEYS	1.87	0.700		ONE OF PAIR PRESENT				
SPLEEN	0.50	0.187	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				P
HEART	1.15	0.431	NO SIGNIFICANT					
UTERUS	0.45	0.169	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
THYMUS	0.1426	0.053		BRAIN	CECUM	COLON	DUODENUM	
ADRENAL GLANDS	0.0592	0.022		ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
OVARIES/OVIDUCTS	0.1330	0.050		ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
PITUITARY	0.0150	0.006		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
THYROIDES/PARATHY	0.0094	0.004		MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
FINAL BODY WT(G)	267.			PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN	
				THYROID GLANDS	PARATHYROIDES	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
() -FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99554 GROUP 5: 150 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
BRAIN	1.77	0.839	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
LIVER	9.32	4.417	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
KIDNEYS	1.78	0.844		ONE OF PAIR PRESENT			
SPLEEN	0.51	0.242	THYMUS	GROSS: AREA(S), DARK RED			P
HEART	0.73	0.346		FEW, IRREGULARLY SHAPED			
UTERUS	0.58	0.275	^==>	THYMUS: CONGESTION			
THYMUS	0.0753	0.036	THYMUS	MICRO: CONGESTION			((2))
ADRENAL GLANDS	0.0660	0.031	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS			P
OVARIES/OVIDUCTS	0.1039	0.049	NO SIGNIFICANT				
PITUITARY	0.0138	0.007	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
THYROIDS/PARATHY	0.0110	0.005		BRAIN	CECUM	COLON	DUODENUM
FINAL BODY WT(G)	211.			ESOPHAGUS	EYES	NERVES, OPTIC	HEART
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
				LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS
				MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN
				SPLEEN	THYROID GLANDS	TRACHEA	URINARY BLADDER
				UTERUS	VAGINA	CERVIX	LN, AXILLARY
				SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	ESOPHAGUS	HEART
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN
				THYROID GLANDS	PARATHYROIDS	TRACHEA	URINARY BLADDER
				UTERUS	CERVIX	LN, AXILLARY	SKIN, TREATED
				SKIN, UNTREATED			

ANIMAL NO. 99554 GROUP 5: 150 MG/KG/DAY FEMALE SCHEDULED EUTH 07/16/11 DATE OF DEATH: 07/16/11 STUDY DAY: 89
GRADE

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99557 GROUP 5: 150 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE				(1)
BRAIN	1.96	0.731		MINERALIZATION				(1)
LIVER	10.15	3.787	LIVER	MICRO: INFLAMMATION, SUBACUTE				(2)
KIDNEYS	1.92	0.716	LUNGS	MICRO: INFLAMMATION, SUBACUTE				(2)
SPLEEN	0.55	0.205	PANCREAS	MICRO: INFLAMMATION, SUBACUTE				(1)
HEART	1.09	0.407	THYROID GLANDS	GROSS: SMALL				P
UTERUS	0.68	0.254		LEFT				
THYMUS	0.0944	0.035	^==> GROSS	UNCONFIRMED				
ADRENAL GLANDS	0.0613	0.023	THYROID GLANDS	MICRO: INFLAMMATION, SUBACUTE				(1)
OVARIES/OVIDUCTS	0.1206	0.045	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
PITUITARY	0.0171	0.006	NO SIGNIFICANT					
THYROIDS/PARATHY	0.0161	0.006	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
FINAL BODY WT (G)	268.			BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
				LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
				MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
				SPLEEN	THYMUS	TRACHEA	URINARY BLADDER	
				UTERUS	VAGINA	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				NERVE, SCIATIC	OVIDUCTS	OVARIES	PITUITARY	
				RECTUM	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	
				SKIN	SPLEEN	PARATHYROIDS	THYMUS	
				TRACHEA	URINARY BLADDER	UTERUS	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

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^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

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MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99577 GROUP 5: 150 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	GROSS: AREA(S), DEPRESSED			P
BRAIN	2.09	0.690		FEW, IRREGULARLY SHAPED, IN CORTEX, BILATERAL			
LIVER	12.17	4.017	^==>	GROSS UNCONFIRMED			
KIDNEYS	2.06	0.680	KIDNEYS	MICRO: MINERALIZATION			((2))
SPLEEN	0.55	0.182	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
HEART	1.23	0.406	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS			P
UTERUS	0.45	0.149	NO SIGNIFICANT				
THYMUS	0.1413	0.047	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
ADRENAL GLANDS	0.0614	0.020		BRAIN	CECUM	COLON	DUODENUM
OVARIES/OVIDUCTS	0.1700	0.056		ESOPHAGUS	EYES	NERVES, OPTIC	HEART
PITUITARY	0.0167	0.006		ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
THYROIDS/PARATHY	0.0184	0.006		LIVER	LN, MESENTERIC	LUNGS	MAMMARY GLAND
FINAL BODY WT(G)	303.			NERVE, SCIATIC	OVIDUCTS	OVARIES	PANCREAS
				PITUITARY	RECTUM	SPINAL CORD	SAL. GLAND MAND
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN
				THYROID GLANDS	THYMUS	TRACHEA	URINARY BLADDER
				UTERUS	VAGINA	CERVIX	LN, AXILLARY
				SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	ESOPHAGUS	HEART
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND
				STOMACH, GLAN	STOMACH, NON	SKIN	SPLEEN
				THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA
				URINARY BLADDER	UTERUS	CERVIX	LN, AXILLARY
				SKIN, TREATED	SKIN, UNTREATED		

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99581 GROUP 5: 150 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	HEART	MICRO: CARDIOMYOPATHY			(2)
BRAIN	1.67	0.766	KIDNEYS	MICRO: MINERALIZATION			((2))
LIVER	8.44	3.872		INFLAMMATION, SUBACUTE			((2))
KIDNEYS	1.63	0.748	LIVER	GROSS: AREA(S), WHITE			P
SPLEEN	0.41	0.188		ONE, 1 MM IN DIAMETER, IN MEDIAN CLEFT			
HEART	0.93	0.427	^==>	GROSS UNCONFIRMED			
UTERUS	0.77	0.353	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
THYMUS	0.0893	0.041	THYMUS	GROSS: SMALL			P
ADRENAL GLANDS	0.0583	0.027	^==>	GROSS UNCONFIRMED			
OVARIES/OVIDUCTS	0.1012	0.046	UTERUS	GROSS: CONTENTS, CLEAR FLUID			P
PITUITARY	0.0142	0.007		BOTH HORNS			
THYROID/SPLEEN	0.0110	0.005	^==>	GROSS UNCONFIRMED			
FINAL BODY WT (G)	218.		VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS			P
			NO SIGNIFICANT				
			CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
				LAC. GLAND EXOR	LN, MESENTERIC	LUNGS	MAMMARY GLAND
				NERVE, SCIATIC	OVIDUCTS	OVARIES	PANCREAS
				PITUITARY	RECTUM	SPINAL CORD	SAL. GLAND MAND
				STOMACH	SKELETAL MUSCLE	SKIN	SPLEEN
				THYROID GLANDS	TRACHEA	URINARY BLADDER	VAGINA
				CERVIX	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR
				MARROW, FEMUR	JOINT	BRAIN	CECUM
				COLON	DUODENUM	ESOPHAGUS	ILEUM
				JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	LUNGS
				NERVE, SCIATIC	OVIDUCTS	OVARIES	PANCREAS
				PITUITARY	RECTUM	SAL. GLAND MAND	STOMACH, GLAN
				STOMACH, NON	SKIN	SPLEEN	THYROID GLANDS
				PARATHYROID	THYMUS	TRACHEA	URINARY BLADDER

ANIMAL NO. 99581 GROUP 5: 150 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90

GRADE

UTERUS CERVIX LN, AXILLARY SKIN, TREATED

SKIN, UNTREATED

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

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TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99588 GROUP 5: 150 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS. (G)	REL.	GENERAL COMMENT	GROSS: ORGAN DAMAGED AT NECROPSY				P
BRAIN	1.68	0.753		BRAIN				
LIVER	8.04	3.605	^==> GROSS UNCONFIRMED					
KIDNEYS	1.58	0.709	KIDNEYS	MICRO: MINERALIZATION				((1))
SPLEEN	0.38	0.170	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
HEART	0.90	0.404	SKIN	MICRO: CYST, EPIDERMAL INCLUSION				((P))
UTERUS	0.40	0.179	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
THYMUS	0.1351	0.061		ONE OF PAIR PRESENT				
ADRENAL GLANDS	0.0539	0.024	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS				P
OVARIES/OVIDUCTS	0.1056	0.047	NO SIGNIFICANT					
PITUITARY	0.0129	0.006	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	FEMUR	JOINT	
THYROIDS/PARATHY	0.0162	0.007		BRAIN	CECUM	COLON	DUODENUM	
FINAL BODY WT (G)	223.			ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
				LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
				MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
				URINARY BLADDER	UTERUS	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	FEMUR	
				MARROW, FEMUR	JOINT	BRAIN	CECUM	
				COLON	DUODENUM	ESOPHAGUS	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SPLEEN	THYROID GLANDS	
				PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER	
				UTERUS	CERVIX	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 99588 GROUP 5: 150 MG/KG/DAY FEMALE SCHEDULED EUTH 07/17/11 DATE OF DEATH: 07/17/11 STUDY DAY: 90
GRADE

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
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TABLE A17
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 1

MALE GROUP: UNTREATED

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART	TESTES
99466	445.	2.15	10.45	3.05	0.65	1.61	3.32
99472	513.	2.22	12.73	3.13	0.86	1.83	3.76
99474	477.	2.26	11.81	3.03	0.76	1.52	4.51
99491	511.	2.21	14.25	3.25	0.86	1.86	3.80
99496	478.	2.08	11.17	3.59	0.85	1.48	3.82
99504	448.	2.27	10.99	3.22	0.78	1.50	3.32
99505	457.	2.08	11.43	2.88	0.74	1.33	3.15
99507	524.	2.06	12.08	3.50	1.04	1.90	3.56
99509	500.	2.12	11.49	3.04	0.87	1.71	3.52
99515	543.	2.30	13.65	3.63	1.01	1.78	4.18
MEAN	490.	2.18	12.01	3.23	0.84	1.65	3.69
S.D.	33.7	0.088	1.204	0.259	0.119	0.192	0.416
S.E.	10.7	0.028	0.381	0.082	0.038	0.061	0.132
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

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SPONSOR:AMERICAN PETROLEUM

TABLE A17
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 2

MALE GROUP: 0 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART	TESTES
99467	495.	2.06	13.75	3.17	0.83	1.82	3.82
99471	503.	2.09	12.40	2.82	0.84	1.63	3.55
99473	530.	2.25	14.34	3.07	0.96	1.48	3.75
99498	393.	2.01	9.72	2.83	0.64	1.53	3.50
99502	394.	1.96	9.47	2.81	0.42	1.31	3.38
99503	390.	2.15	9.60	2.76	0.74	1.42	3.41
99506	428.	2.11	10.79	3.05	0.73	1.53	2.87
99516	410.	2.09	9.51	2.95	0.61	1.37	3.22
99518	489.	2.11	13.34	3.85	0.80	1.64	3.58
99519	470.	2.13	12.14	3.42	0.81	1.67	3.41
MEAN	450.	2.10	11.51	3.07	0.74	1.54	3.45
S.D.	52.9	0.078	1.918	0.340	0.151	0.154	0.270
S.E.	16.7	0.025	0.606	0.107	0.048	0.049	0.085
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

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SPONSOR:AMERICAN PETROLEUM

TABLE A17
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 3

MALE GROUP: 5 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART	TESTES
99465	418.	1.98	11.09	2.66	0.66	1.48	3.66
99479	389.	2.09	9.81	2.49	0.70	1.47	3.42
99483	486.	2.07	13.12	3.07	0.81	1.85	2.92
99489	429.	2.08	11.10	2.70	0.86	1.40	3.81
99490	467.	2.17	12.82	3.24	0.78	1.65	3.19
99494	510.	2.08	12.79	2.87	0.90	1.67	3.45
99495	473.	2.10	11.94	3.22	0.69	1.75	3.32
99511	483.	2.27	10.81	3.59	0.85	1.53	3.71
99524	529.	2.10	13.69	3.31	1.07	1.59	3.99
99528	414.	1.99	10.81	3.11	0.61	1.44	3.28
MEAN	460.	2.09	11.80	3.03	0.79	1.58	3.48
S.D.	45.4	0.083	1.259	0.340	0.136	0.146	0.320
S.E.	14.4	0.026	0.398	0.108	0.043	0.046	0.101
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A17
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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MALE GROUP: 50 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART	TESTES
99464	466.	2.06	16.31	3.10	1.04	1.60	4.32
99469	458.	2.01	14.50	3.32	1.00	1.50	3.43
99480	532.	2.01	15.04	3.24	1.08	1.88	3.63
99485	459.	2.27	14.80	3.56	0.92	1.52	4.02
99486	466.	2.09	15.78	3.07	1.08	1.40	3.71
99500	519.	2.00	15.26	3.59	1.24	1.84	3.91
99510	442.	2.17	12.75	3.32	0.69	1.57	3.68
99512	443.	2.06	14.33	3.18	0.95	1.51	3.75
99513	396.	2.06	13.12	2.94	0.98	1.47	3.26
99525	398.	2.07	12.33	3.25	0.79	1.30	3.44
MEAN	458.	2.08	14.42	3.26	0.98	1.56	3.72
S.D.	43.8	0.083	1.313	0.205	0.155	0.180	0.311
S.E.	13.8	0.026	0.415	0.065	0.049	0.057	0.098
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A17
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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MALE GROUP: UNTREATED

ANIMAL	EPIDID YMIDES	PROS TATE	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
99466	1.35	0.86	0.1597	0.0712	0.0156	0.0156
99472	1.45	1.04	0.2552	0.0731	0.0138	0.0148
99474	1.65	0.78	0.3363	0.0695	0.0127	0.0105
99491	1.18	1.05	0.2589	0.0720	0.0153	0.0252
99496	1.47	1.33	0.2752	0.0647	0.0154	0.0231
99504	1.41	1.15	0.2214	0.0528	0.0163	0.0125
99505	1.22	0.65	0.2100	0.0573	0.0113	0.0169
99507	1.40	1.38	0.2083	0.0727	0.0171	0.0265
99509	1.17	1.20	0.4295	0.0600	0.0122	0.0120
99515	1.43	1.50	0.3876	0.0658	0.0161	0.0173
MEAN	1.37	1.09	0.2742	0.0659	0.0146	0.0174
S.D.	0.149	0.273	0.08550	0.00713	0.00196	0.00565
S.E.	0.047	0.086	0.02704	0.00226	0.00062	0.00179
N	10	10	10	10	10	10

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A17
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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MALE GROUP: 0 MG/KG/DAY

ANIMAL	EPIDID YMIDES	PROS TATE	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROID S /PARATHY
99467	1.33	0.75	0.2515	0.0531	0.0127	0.0193
99471	1.17	0.96	0.2837	0.0580	0.0124	0.0154
99473	1.40	0.87	0.2488	0.0519	0.0153	0.0190
99498	1.24	0.93	0.2132	0.0531	0.0105	0.0112
99502	1.16	1.08	0.1650	0.0570	0.0170	0.0118
99503	1.42	1.23	0.2061	0.0598	0.0108	0.0144
99506	1.30	1.11	0.2720	0.0582	0.0166	0.0084
99516	1.25	0.93	0.1510	0.0547	0.0119	0.0087
99518	1.47	1.24	0.3477	0.0515	0.0132	0.0153
99519	1.25	1.21	0.2253	0.0702	0.0124	0.0188
MEAN	1.30	1.03	0.2364	0.0568	0.0133	0.0142
S.D.	0.105	0.168	0.05797	0.00554	0.00228	0.00410
S.E.	0.033	0.053	0.01833	0.00175	0.00072	0.00130
N	10	10	10	10	10	10

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SPONSOR:AMERICAN PETROLEUM

TABLE A17
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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MALE GROUP: 5 MG/KG/DAY

ANIMAL	EPIDID YMIDES	PROS TATE	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
99465	1.42	1.33	0.2892	0.0591	0.0104	0.0145
99479	1.30	1.04	0.1649	0.0537	0.0118	0.0154
99483	1.13	0.98	0.2800	0.0564	0.0152	0.0173
99489	1.35	0.83	0.3332	0.0586	0.0109	0.0123
99490	1.41	1.02	0.2671	0.0844	0.0157	0.0146
99494	1.40	1.35	0.2859	0.0651	0.0155	0.0181
99495	1.30	1.12	0.2073	0.0548	0.0132	0.0220
99511	1.33	1.26	0.1783	0.0604	0.0164	0.0139
99524	1.47	1.07	0.3508	0.0748	0.0172	0.0135
99528	1.30	0.94	0.1735	0.0611	0.0121	0.0100
MEAN	1.34	1.09	0.2530	0.0628	0.0138	0.0152
S.D.	0.095	0.172	0.06755	0.00968	0.00245	0.00333
S.E.	0.030	0.054	0.02136	0.00306	0.00077	0.00105
N	10	10	10	10	10	10

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SPONSOR:AMERICAN PETROLEUM

TABLE A17
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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MALE GROUP: 50 MG/KG/DAY

ANIMAL	EPIDID YMIDES	PROS TATE	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROID S /PARATHY
99464	1.54	0.67	0.1831	0.0668	0.0150	0.0245
99469	1.35	0.96	0.2149	0.0719	0.0174	0.0189
99480	1.31	0.92	0.1426	0.0627	0.0159	0.0185
99485	1.57	1.14	0.1744	0.0700	0.0159	0.0213
99486	1.23	0.96	0.1460	0.0587	0.0144	0.0133
99500	1.41	1.17	0.2039	0.0704	0.0143	0.0196
99510	1.30	1.00	0.2297	0.0559	0.0125	0.0135
99512	1.43	1.08	0.2291	0.0691	0.0129	0.0247
99513	1.22	1.08	0.1740	0.0646	0.0142	0.0131
99525	1.20	0.82	0.2159	0.0600	0.0107	0.0148
MEAN	1.36	0.98	0.1914	0.0650	0.0143	0.0182
S.D.	0.130	0.152	0.03215	0.00553	0.00193	0.00444
S.E.	0.041	0.048	0.01017	0.00175	0.00061	0.00141
N	10	10	10	10	10	10

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SPONSOR:AMERICAN PETROLEUM

TABLE A17
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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MALE GROUP: 150 MG/KG/DAY

ANIMAL	EPIDID YMIDES	PROS TATE	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
99468	1.28	1.06	0.0896	0.0702	0.0128	0.0169
99482	1.23	1.15	0.1062	0.0634	0.0153	0.0190
99487	1.11	1.06	0.1094	0.0625	0.0169	0.0219
99499	1.35	0.93	0.1066	0.0634	0.0157	0.0110
99501	1.37	1.15	0.0768	0.0711	0.0148	0.0210
99517	1.24	1.15	0.0808	0.0622	0.0153	0.0181
99521	1.17	1.03	0.1016	0.0652	0.0146	0.0194
99522	1.36	1.37	0.0832	0.0552	0.0144	0.0235
99523	1.48	1.47	0.0711	0.0614	0.0162	0.0145
MEAN	1.29	1.15	0.0917	0.0638	0.0151	0.0184
S.D.	0.114	0.169	0.01451	0.00475	0.00117	0.00385
S.E.	0.038	0.056	0.00484	0.00158	0.00039	0.00128
N	9	9	9	9	9	9

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FEMALE GROUP: UNTREATED

ANIMAL	FBW (G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART
99535	284.	2.02	8.89	1.82	0.59	1.11
99541	298.	2.01	8.38	2.48	0.49	1.32
99544	296.	1.99	7.38	1.81	0.54	1.26
99547	267.	1.97	7.13	1.94	0.44	1.01
99559	244.	1.92	6.92	1.79	0.43	0.93
99569	314.	1.96	8.11	1.97	0.61	1.05
99579	259.	1.81	6.71	1.91	0.61	1.03
99580	264.	2.01	7.61	1.99	0.52	1.21
99586	269.	1.86	6.70	1.81	0.49	1.05
99593	294.	1.88	8.24	1.97	0.63	1.14
MEAN	279.	1.94	7.61	1.95	0.54	1.11
S.D.	21.7	0.072	0.766	0.202	0.073	0.122
S.E.	6.8	0.023	0.242	0.064	0.023	0.039
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A17
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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FEMALE GROUP: 0 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART
99534	251.	1.84	7.58	2.05	0.49	1.08
99561	299.	1.88	7.57	1.79	0.47	0.97
99562	285.	1.88	7.81	1.96	0.53	1.08
99563	258.	1.88	7.45	2.26	0.54	0.98
99572	276.	1.86	7.76	2.21	0.54	1.05
99574	287.	2.04	7.59	2.13	0.52	1.01
99575	290.	2.06	7.43	2.29	0.61	1.05
99576	261.	2.02	6.03	1.74	0.48	1.14
99578	247.	1.78	6.92	1.78	0.59	0.97
99585	250.	2.04	8.06	1.99	0.50	1.11
MEAN	270.	1.93	7.42	2.02	0.53	1.04
S.D.	19.2	0.101	0.571	0.204	0.046	0.060
S.E.	6.1	0.032	0.181	0.064	0.014	0.019
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

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SPONSOR:AMERICAN PETROLEUM

TABLE A17
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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FEMALE GROUP: 5 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART
99530	259.	1.88	7.13	1.88	0.54	1.06
99532	311.	2.02	8.11	2.15	0.61	1.17
99555	295.	1.85	7.72	1.80	0.63	0.99
99556	267.	1.87	6.99	2.15	0.49	1.00
99566	279.	1.95	7.87	1.76	0.53	1.22
99568	281.	1.90	7.76	1.96	0.66	1.04
99571	255.	1.94	6.57	1.71	0.40	0.98
99582	260.	1.92	7.51	1.97	0.63	1.12
99591	284.	1.92	7.21	1.98	0.58	1.06
99592	251.	1.96	7.58	1.66	0.56	0.99
MEAN	274.	1.92	7.45	1.90	0.56	1.06
S.D.	19.3	0.050	0.465	0.171	0.078	0.083
S.E.	6.1	0.016	0.147	0.054	0.025	0.026
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

FEMALE GROUP: 50 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART
99533	302.	2.02	9.01	2.04	0.64	1.11
99538	238.	1.81	7.84	1.83	0.62	0.96
99546	231.	1.73	8.55	1.73	0.56	0.99
99552	241.	1.93	9.22	1.79	0.46	1.08
99553	236.	1.88	7.73	1.74	0.64	0.92
99560	274.	2.01	8.76	1.90	0.50	1.05
99564	301.	2.03	8.99	2.04	0.52	1.15
99567	265.	1.85	9.14	1.89	0.61	1.04
99584	250.	1.97	8.25	1.72	0.47	1.04
99590	245.	1.96	8.72	1.73	0.70	1.01
MEAN	258.	1.92	8.62	1.84	0.57	1.04
S.D.	26.3	0.099	0.526	0.124	0.082	0.069
S.E.	8.3	0.031	0.166	0.039	0.026	0.022
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

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ANIMAL	FBW (G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART
99531	247.	2.02	9.58	1.97	0.54	0.99
99536	249.	1.93	11.13	1.99	0.71	1.05
99540	269.	1.88	9.61	1.86	0.72	0.98
99548	267.	1.88	10.72	1.87	0.50	1.15
99554	211.	1.77	9.32	1.78	0.51	0.73
99557	268.	1.96	10.15	1.92	0.55	1.09
99558	228.	1.90	9.44	1.74	0.61	0.92
99577	303.	2.09	12.17	2.06	0.55	1.23
99581	218.	1.67	8.44	1.63	0.41	0.93
99588	223.	1.68	8.04	1.58	0.38	0.90
MEAN	248.	1.88	9.86	1.84	0.55	1.00
S.D.	28.9	0.137	1.234	0.157	0.111	0.142
S.E.	9.1	0.043	0.390	0.050	0.035	0.045
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

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SPONSOR:AMERICAN PETROLEUM

TABLE A17
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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FEMALE GROUP: UNTREATED

ANIMAL	UTERUS	THYMUS	ADRENAL GLANDS	OVARIES/ OVIDUCTS	PITU ITARY	THYROIDES /PARATHY
99535	0.44	0.2383	0.0687	0.1236	0.0204	0.0115
99541	0.67	0.2557	0.0722	0.1427	0.0203	0.0146
99544	0.95	0.2327	0.0868	0.1680	0.0202	0.0159
99547	1.18	0.2445	0.0686	0.1384	0.0183	0.0125
99559	0.45	0.2174	0.0618	0.1321	0.0161	0.0118
99569	0.68	0.2868	0.0642	0.1554	0.0218	0.0157
99579	0.68	0.1854	0.0562	0.1142	0.0145	0.0114
99580	0.71	0.2403	0.0576	0.1058	0.0190	0.0181
99586	1.60	0.2991	0.0610	0.1314	0.0169	0.0144
99593	0.50	0.2971	0.0674	0.1355	0.0210	0.0084
MEAN	0.79	0.2497	0.0665	0.1347	0.0189	0.0134
S.D.	0.365	0.03623	0.00880	0.01829	0.00236	0.00283
S.E.	0.116	0.01146	0.00278	0.00579	0.00075	0.00089
N	10	10	10	10	10	10

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TABLE A17
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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FEMALE GROUP: 0 MG/KG/DAY

ANIMAL	UTERUS	THYMUS	ADRENAL GLANDS	OVARIES/ OVIDUCTS	PITU ITARY	THYROIDES /PARATHY
99534	0.61	0.1811	0.0608	0.1257	0.0150	0.0145
99561	0.66	0.2147	0.0789	0.1592	0.0188	0.0168
99562	0.44	0.3460	0.0717	0.1187	0.0223	0.0162
99563	0.41	0.1778	0.0567	0.1242	0.0186	0.0138
99572	0.92	0.2860	0.0730	0.1470	0.0200	0.0198
99574	0.45	0.2153	0.0731	0.1302	0.0231	0.0141
99575	0.42	0.2819	0.0564	0.1241	0.0231	0.0157
99576	0.53	0.2288	0.0640	0.1067	0.0183	0.0139
99578	0.66	0.1960	0.0687	0.1320	0.0195	0.0121
99585	0.76	0.2949	0.0660	0.0837	0.0268	0.0126
MEAN	0.59	0.2423	0.0669	0.1252	0.0206	0.0150
S.D.	0.168	0.05649	0.00750	0.02058	0.00332	0.00226
S.E.	0.053	0.01786	0.00237	0.00651	0.00105	0.00072
N	10	10	10	10	10	10

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TABLE A17
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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FEMALE GROUP: 5 MG/KG/DAY

ANIMAL	UTERUS	THYMUS	ADRENAL GLANDS	OVARIES/ OVIDUCTS	PITU ITARY	THYROIDES /PARATHY
99530	0.54	0.2522	0.0684	0.1194	0.0185	0.0104
99532	1.01	0.2396	0.0700	0.1159	0.0275	0.0125
99555	0.50	0.2019	0.0849	0.1167	0.0175	0.0154
99556	0.48	0.1470	0.0626	0.1273	0.0171	0.0117
99566	0.74	0.2571	0.0825	0.1426	0.0186	0.0150
99568	1.44	0.2129	0.0651	0.1284	0.0208	0.0116
99571	0.79	0.2744	0.0590	0.1186	0.0174	0.0125
99582	0.74	0.2110	0.0759	0.1274	0.0189	0.0206
99591	0.54	0.3415	0.0709	0.1306	0.0176	0.0125
99592	0.54	0.2437	0.0517	0.1113	0.0183	0.0120
MEAN	0.73	0.2381	0.0691	0.1238	0.0192	0.0134
S.D.	0.300	0.05119	0.01024	0.00920	0.00310	0.00294
S.E.	0.095	0.01619	0.00324	0.00291	0.00098	0.00093
N	10	10	10	10	10	10

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TABLE A17
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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FEMALE GROUP: 50 MG/KG/DAY

ANIMAL	UTERUS	THYMUS	ADRENAL GLANDS	OVARIES/ OVIDUCTS	PITU ITARY	THYROIDES /PARATHY
99533	0.39	0.1547	0.0672	0.1246	0.0152	0.0141
99538	0.51	0.1469	0.0775	0.0986	0.0189	0.0136
99546	1.13	0.1330	0.0542	0.0994	0.0161	0.0142
99552	0.66	0.1650	0.0840	0.0867	0.0284	0.0152
99553	0.56	0.2377	0.0574	0.1108	0.0183	0.0102
99560	0.65	0.2734	0.0716	0.1011	0.0199	0.0153
99564	0.46	0.1163	0.0692	0.1383	0.0195	0.0149
99567	0.69	0.1192	0.0800	0.1401	0.0168	0.0154
99584	0.80	0.1576	0.0717	0.1055	0.0101	0.0128
99590	1.43	0.1232	0.0916	0.1185	0.0218	0.0121
MEAN	0.73	0.1627	0.0724	0.1124	0.0185	0.0138
S.D.	0.322	0.05240	0.01146	0.01771	0.00474	0.00167
S.E.	0.102	0.01657	0.00362	0.00560	0.00150	0.00053
N	10	10	10	10	10	10

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A17
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 20

FEMALE GROUP: 150 MG/KG/DAY

ANIMAL	UTERUS	THYMUS	ADRENAL GLANDS	OVARIES/ OVIDUCTS	PITU ITARY	THYROIDES /PARATHY
99531	0.55	0.1052	0.0595	0.1161	0.0146	0.0156
99536	0.75	0.1342	0.0673	0.1640	0.0142	0.0154
99540	0.61	0.1115	0.0658	0.1424	0.0202	0.0105
99548	0.45	0.1426	0.0592	0.1330	0.0150	0.0094
99554	0.58	0.0753	0.0660	0.1039	0.0138	0.0110
99557	0.68	0.0944	0.0613	0.1206	0.0171	0.0161
99558	0.68	0.1024	0.0680	0.1216	0.0209	0.0140
99577	0.45	0.1413	0.0614	0.1700	0.0167	0.0184
99581	0.77	0.0893	0.0583	0.1012	0.0142	0.0110
99588	0.40	0.1351	0.0539	0.1056	0.0129	0.0162
MEAN	0.59	0.1131	0.0621	0.1278	0.0160	0.0138
S.D.	0.130	0.02385	0.00458	0.02434	0.00273	0.00305
S.E.	0.041	0.00754	0.00145	0.00770	0.00086	0.00097
N	10	10	10	10	10	10

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PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

PAGE 1

MALE GROUP: UNTREATED

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART	TESTES
99466	445.	0.483	2.348	0.685	0.146	0.362	0.746
99472	513.	0.433	2.481	0.610	0.168	0.357	0.733
99474	477.	0.474	2.476	0.635	0.159	0.319	0.945
99491	511.	0.432	2.789	0.636	0.168	0.364	0.744
99496	478.	0.435	2.337	0.751	0.178	0.310	0.799
99504	448.	0.507	2.453	0.719	0.174	0.335	0.741
99505	457.	0.455	2.501	0.630	0.162	0.291	0.689
99507	524.	0.393	2.305	0.668	0.198	0.363	0.679
99509	500.	0.424	2.298	0.608	0.174	0.342	0.704
99515	543.	0.424	2.514	0.669	0.186	0.328	0.770
MEAN	490.	0.446	2.450	0.661	0.171	0.337	0.755
S.D.	33.7	0.0336	0.1454	0.0469	0.0145	0.0252	0.0760
S.E.	10.7	0.0106	0.0460	0.0148	0.0046	0.0080	0.0240
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

PAGE 2

MALE GROUP: 0 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART	TESTES
99467	495.	0.416	2.778	0.640	0.168	0.368	0.772
99471	503.	0.416	2.465	0.561	0.167	0.324	0.706
99473	530.	0.425	2.706	0.579	0.181	0.279	0.708
99498	393.	0.511	2.473	0.720	0.163	0.389	0.891
99502	394.	0.497	2.404	0.713	0.107	0.332	0.858
99503	390.	0.551	2.462	0.708	0.190	0.364	0.874
99506	428.	0.493	2.521	0.713	0.171	0.357	0.671
99516	410.	0.510	2.320	0.720	0.149	0.334	0.785
99518	489.	0.431	2.728	0.787	0.164	0.335	0.732
99519	470.	0.453	2.583	0.728	0.172	0.355	0.726
MEAN	450.	0.470	2.544	0.687	0.163	0.344	0.772
S.D.	52.9	0.0482	0.1509	0.0710	0.0226	0.0302	0.0779
S.E.	16.7	0.0152	0.0477	0.0225	0.0072	0.0096	0.0246
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

PAGE 3

MALE GROUP: 5 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART	TESTES
99465	418.	0.474	2.653	0.636	0.158	0.354	0.876
99479	389.	0.537	2.522	0.640	0.180	0.378	0.879
99483	486.	0.426	2.700	0.632	0.167	0.381	0.601
99489	429.	0.485	2.587	0.629	0.200	0.326	0.888
99490	467.	0.465	2.745	0.694	0.167	0.353	0.683
99494	510.	0.408	2.508	0.563	0.176	0.327	0.676
99495	473.	0.444	2.524	0.681	0.146	0.370	0.702
99511	483.	0.470	2.238	0.743	0.176	0.317	0.768
99524	529.	0.397	2.588	0.626	0.202	0.301	0.754
99528	414.	0.481	2.611	0.751	0.147	0.348	0.792
MEAN	460.	0.459	2.568	0.660	0.172	0.345	0.762
S.D.	45.4	0.0414	0.1395	0.0579	0.0193	0.0270	0.0981
S.E.	14.4	0.0131	0.0441	0.0183	0.0061	0.0085	0.0310
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

PAGE 4

MALE GROUP: 50 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART	TESTES
99464	466.	0.442	3.500	0.665	0.223	0.343	0.927
99469	458.	0.439	3.166	0.725	0.218	0.328	0.749
99480	532.	0.378	2.827	0.609	0.203	0.353	0.682
99485	459.	0.495	3.224	0.776	0.200	0.331	0.876
99486	466.	0.448	3.386	0.659	0.232	0.300	0.796
99500	519.	0.385	2.940	0.692	0.239	0.355	0.753
99510	442.	0.491	2.885	0.751	0.156	0.355	0.833
99512	443.	0.465	3.235	0.718	0.214	0.341	0.847
99513	396.	0.520	3.313	0.742	0.247	0.371	0.823
99525	398.	0.520	3.098	0.817	0.198	0.327	0.864
MEAN	458.	0.458	3.157	0.715	0.213	0.340	0.815
S.D.	43.8	0.0501	0.2208	0.0611	0.0259	0.0200	0.0716
S.E.	13.8	0.0159	0.0698	0.0193	0.0082	0.0063	0.0227
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

PAGE 5

MALE GROUP: 150 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART	TESTES
99468	401.	0.516	3.352	0.721	0.277	0.544	0.783
99482	462.	0.439	3.883	0.732	0.329	0.455	0.790
99487	489.	0.431	4.047	0.681	0.204	0.325	0.746
99499	477.	0.407	3.751	0.673	0.214	0.361	0.730
99501	461.	0.445	3.800	0.666	0.239	0.375	0.809
99517	415.	0.492	3.272	0.711	0.243	0.337	0.843
99521	433.	0.469	3.667	0.767	0.273	0.367	0.739
99522	436.	0.489	3.511	0.702	0.204	0.427	0.803
99523	452.	0.485	3.316	0.681	0.192	0.332	0.812
MEAN	447.	0.464	3.622	0.704	0.242	0.391	0.784
S.D.	28.6	0.0351	0.2739	0.0326	0.0445	0.0716	0.0383
S.E.	9.5	0.0117	0.0913	0.0109	0.0148	0.0239	0.0128
N	9	9	9	9	9	9	9

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

PAGE 6

MALE GROUP: UNTREATED

ANIMAL	EPIDID YMIDES	PROS TATE	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
99466	0.303	0.193	0.036	0.016	0.004	0.004
99472	0.283	0.203	0.050	0.014	0.003	0.003
99474	0.346	0.164	0.071	0.015	0.003	0.002
99491	0.231	0.205	0.051	0.014	0.003	0.005
99496	0.308	0.278	0.058	0.014	0.003	0.005
99504	0.315	0.257	0.049	0.012	0.004	0.003
99505	0.267	0.142	0.046	0.013	0.002	0.004
99507	0.267	0.263	0.040	0.014	0.003	0.005
99509	0.234	0.240	0.086	0.012	0.002	0.002
99515	0.263	0.276	0.071	0.012	0.003	0.003
MEAN	0.282	0.222	0.056	0.013	0.003	0.004
S.D.	0.0365	0.0478	0.0157	0.0014	0.0004	0.0012
S.E.	0.0115	0.0151	0.0050	0.0004	0.0001	0.0004
N	10	10	10	10	10	10

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

PAGE 7

MALE GROUP: 0 MG/KG/DAY

ANIMAL	EPIDID YMIDES	PROS TATE	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROID S /PARATHY
99467	0.269	0.152	0.051	0.011	0.003	0.004
99471	0.233	0.191	0.056	0.012	0.002	0.003
99473	0.264	0.164	0.047	0.010	0.003	0.004
99498	0.316	0.237	0.054	0.014	0.003	0.003
99502	0.294	0.274	0.042	0.014	0.004	0.003
99503	0.364	0.315	0.053	0.015	0.003	0.004
99506	0.304	0.259	0.064	0.014	0.004	0.002
99516	0.305	0.227	0.037	0.013	0.003	0.002
99518	0.301	0.254	0.071	0.011	0.003	0.003
99519	0.266	0.257	0.048	0.015	0.003	0.004
MEAN	0.291	0.233	0.052	0.013	0.003	0.003
S.D.	0.0360	0.0510	0.0100	0.0020	0.0006	0.0008
S.E.	0.0114	0.0161	0.0032	0.0006	0.0002	0.0002
N	10	10	10	10	10	10

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

PAGE 8

MALE GROUP: 5 MG/KG/DAY

ANIMAL	EPIDID YMIDES	PROS TATE	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
99465	0.340	0.318	0.069	0.014	0.002	0.003
99479	0.334	0.267	0.042	0.014	0.003	0.004
99483	0.233	0.202	0.058	0.012	0.003	0.004
99489	0.315	0.193	0.078	0.014	0.003	0.003
99490	0.302	0.218	0.057	0.018	0.003	0.003
99494	0.275	0.265	0.056	0.013	0.003	0.004
99495	0.275	0.237	0.044	0.012	0.003	0.005
99511	0.275	0.261	0.037	0.013	0.003	0.003
99524	0.278	0.202	0.066	0.014	0.003	0.003
99528	0.314	0.227	0.042	0.015	0.003	0.002
MEAN	0.294	0.239	0.055	0.014	0.003	0.003
S.D.	0.0329	0.0389	0.0135	0.0019	0.0003	0.0008
S.E.	0.0104	0.0123	0.0043	0.0006	0.0001	0.0003
N	10	10	10	10	10	10

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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MALE GROUP: 50 MG/KG/DAY

ANIMAL	EPIDID YMIDES	PROS TATE	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
99464	0.330	0.144	0.039	0.014	0.003	0.005
99469	0.295	0.210	0.047	0.016	0.004	0.004
99480	0.246	0.173	0.027	0.012	0.003	0.003
99485	0.342	0.248	0.038	0.015	0.003	0.005
99486	0.264	0.206	0.031	0.013	0.003	0.003
99500	0.272	0.225	0.039	0.014	0.003	0.004
99510	0.294	0.226	0.052	0.013	0.003	0.003
99512	0.323	0.244	0.052	0.016	0.003	0.006
99513	0.308	0.273	0.044	0.016	0.004	0.003
99525	0.302	0.206	0.054	0.015	0.003	0.004
MEAN	0.298	0.215	0.042	0.014	0.003	0.004
S.D.	0.0303	0.0373	0.0091	0.0016	0.0004	0.0011
S.E.	0.0096	0.0118	0.0029	0.0005	0.0001	0.0003
N	10	10	10	10	10	10

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

PAGE 10

MALE GROUP: 150 MG/KG/DAY

ANIMAL	EPIDID YMIDES	PROS TATE	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
99468	0.319	0.264	0.022	0.018	0.003	0.004
99482	0.266	0.249	0.023	0.014	0.003	0.004
99487	0.227	0.217	0.022	0.013	0.003	0.004
99499	0.283	0.195	0.022	0.013	0.003	0.002
99501	0.297	0.249	0.017	0.015	0.003	0.005
99517	0.299	0.277	0.019	0.015	0.004	0.004
99521	0.270	0.238	0.023	0.015	0.003	0.004
99522	0.312	0.314	0.019	0.013	0.003	0.005
99523	0.327	0.325	0.016	0.014	0.004	0.003
MEAN	0.289	0.259	0.020	0.014	0.003	0.004
S.D.	0.0313	0.0423	0.0029	0.0016	0.0002	0.0009
S.E.	0.0104	0.0141	0.0010	0.0005	0.0001	0.0003
N	9	9	9	9	9	9

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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FEMALE GROUP: UNTREATED

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART
99535	284.	0.711	3.130	0.641	0.208	0.391
99541	298.	0.674	2.812	0.832	0.164	0.443
99544	296.	0.672	2.493	0.611	0.182	0.426
99547	267.	0.738	2.670	0.727	0.165	0.378
99559	244.	0.787	2.836	0.734	0.176	0.381
99569	314.	0.624	2.583	0.627	0.194	0.334
99579	259.	0.699	2.591	0.737	0.236	0.398
99580	264.	0.761	2.883	0.754	0.197	0.458
99586	269.	0.691	2.491	0.673	0.182	0.390
99593	294.	0.639	2.803	0.670	0.214	0.388
MEAN	279.	0.700	2.729	0.701	0.192	0.399
S.D.	21.7	0.0514	0.2013	0.0682	0.0226	0.0355
S.E.	6.8	0.0163	0.0637	0.0216	0.0072	0.0112
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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FEMALE GROUP: 0 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART
99534	251.	0.733	3.020	0.817	0.195	0.430
99561	299.	0.629	2.532	0.599	0.157	0.324
99562	285.	0.660	2.740	0.688	0.186	0.379
99563	258.	0.729	2.888	0.876	0.209	0.380
99572	276.	0.674	2.812	0.801	0.196	0.380
99574	287.	0.711	2.645	0.742	0.181	0.352
99575	290.	0.710	2.562	0.790	0.210	0.362
99576	261.	0.774	2.310	0.667	0.184	0.437
99578	247.	0.721	2.802	0.721	0.239	0.393
99585	250.	0.816	3.224	0.796	0.200	0.444
MEAN	270.	0.716	2.753	0.749	0.196	0.388
S.D.	19.2	0.0542	0.2604	0.0825	0.0216	0.0388
S.E.	6.1	0.0171	0.0823	0.0261	0.0068	0.0123
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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FEMALE GROUP: 5 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART
99530	259.	0.726	2.753	0.726	0.208	0.409
99532	311.	0.650	2.608	0.691	0.196	0.376
99555	295.	0.627	2.617	0.610	0.214	0.336
99556	267.	0.700	2.618	0.805	0.184	0.375
99566	279.	0.699	2.821	0.631	0.190	0.437
99568	281.	0.676	2.762	0.698	0.235	0.370
99571	255.	0.761	2.576	0.671	0.157	0.384
99582	260.	0.738	2.888	0.758	0.242	0.431
99591	284.	0.676	2.539	0.697	0.204	0.373
99592	251.	0.781	3.020	0.661	0.223	0.394
MEAN	274.	0.703	2.720	0.695	0.205	0.389
S.D.	19.3	0.0486	0.1558	0.0578	0.0253	0.0305
S.E.	6.1	0.0154	0.0493	0.0183	0.0080	0.0096
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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FEMALE GROUP: 50 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART
99533	302.	0.669	2.983	0.675	0.212	0.368
99538	238.	0.761	3.294	0.769	0.261	0.403
99546	231.	0.749	3.701	0.749	0.242	0.429
99552	241.	0.801	3.826	0.743	0.191	0.448
99553	236.	0.797	3.275	0.737	0.271	0.390
99560	274.	0.734	3.197	0.693	0.182	0.383
99564	301.	0.674	2.987	0.678	0.173	0.382
99567	265.	0.698	3.449	0.713	0.230	0.392
99584	250.	0.788	3.300	0.688	0.188	0.416
99590	245.	0.800	3.559	0.706	0.286	0.412
MEAN	258.	0.747	3.357	0.715	0.224	0.402
S.D.	26.3	0.0516	0.2796	0.0326	0.0403	0.0243
S.E.	8.3	0.0163	0.0884	0.0103	0.0128	0.0077
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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FEMALE GROUP: 150 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	SPLEEN	HEART
99531	247.	0.818	3.879	0.798	0.219	0.401
99536	249.	0.775	4.470	0.799	0.285	0.422
99540	269.	0.699	3.572	0.691	0.268	0.364
99548	267.	0.704	4.015	0.700	0.187	0.431
99554	211.	0.839	4.417	0.844	0.242	0.346
99557	268.	0.731	3.787	0.716	0.205	0.407
99558	228.	0.833	4.140	0.763	0.268	0.404
99577	303.	0.690	4.017	0.680	0.182	0.406
99581	218.	0.766	3.872	0.748	0.188	0.427
99588	223.	0.753	3.605	0.709	0.170	0.404
MEAN	248.	0.761	3.977	0.745	0.221	0.401
S.D.	28.9	0.0556	0.3027	0.0548	0.0415	0.0267
S.E.	9.1	0.0176	0.0957	0.0173	0.0131	0.0084
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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FEMALE GROUP: UNTREATED

ANIMAL	UTERUS	THYMUS	ADRENAL GLANDS	OVARIES/ OVIDUCTS	PITU ITARY	THYROIDES /PARATHY
99535	0.155	0.084	0.024	0.044	0.007	0.004
99541	0.225	0.086	0.024	0.048	0.007	0.005
99544	0.321	0.079	0.029	0.057	0.007	0.005
99547	0.442	0.092	0.026	0.052	0.007	0.005
99559	0.184	0.089	0.025	0.054	0.007	0.005
99569	0.217	0.091	0.020	0.049	0.007	0.005
99579	0.263	0.072	0.022	0.044	0.006	0.004
99580	0.269	0.091	0.022	0.040	0.007	0.007
99586	0.595	0.111	0.023	0.049	0.006	0.005
99593	0.170	0.101	0.023	0.046	0.007	0.003
MEAN	0.284	0.090	0.024	0.048	0.007	0.005
S.D.	0.1379	0.0110	0.0025	0.0051	0.0005	0.0010
S.E.	0.0436	0.0035	0.0008	0.0016	0.0002	0.0003
N	10	10	10	10	10	10

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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FEMALE GROUP: 0 MG/KG/DAY

ANIMAL	UTERUS	THYMUS	ADRENAL GLANDS	OVARIES/ OVIDUCTS	PITU ITARY	THYROIDES /PARATHY
99534	0.243	0.072	0.024	0.050	0.006	0.006
99561	0.221	0.072	0.026	0.053	0.006	0.006
99562	0.154	0.121	0.025	0.042	0.008	0.006
99563	0.159	0.069	0.022	0.048	0.007	0.005
99572	0.333	0.104	0.026	0.053	0.007	0.007
99574	0.157	0.075	0.025	0.045	0.008	0.005
99575	0.145	0.097	0.019	0.043	0.008	0.005
99576	0.203	0.088	0.025	0.041	0.007	0.005
99578	0.267	0.079	0.028	0.053	0.008	0.005
99585	0.304	0.118	0.026	0.033	0.011	0.005
MEAN	0.219	0.090	0.025	0.046	0.008	0.006
S.D.	0.0672	0.0196	0.0025	0.0066	0.0013	0.0007
S.E.	0.0212	0.0062	0.0008	0.0021	0.0004	0.0002
N	10	10	10	10	10	10

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TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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FEMALE GROUP: 5 MG/KG/DAY

ANIMAL	UTERUS	THYMUS	ADRENAL GLANDS	OVARIES/ OVIDUCTS	PITU ITARY	THYROIDES /PARATHY
99530	0.208	0.097	0.026	0.046	0.007	0.004
99532	0.325	0.077	0.023	0.037	0.009	0.004
99555	0.169	0.068	0.029	0.040	0.006	0.005
99556	0.180	0.055	0.023	0.048	0.006	0.004
99566	0.265	0.092	0.030	0.051	0.007	0.005
99568	0.512	0.076	0.023	0.046	0.007	0.004
99571	0.310	0.108	0.023	0.047	0.007	0.005
99582	0.285	0.081	0.029	0.049	0.007	0.008
99591	0.190	0.120	0.025	0.046	0.006	0.004
99592	0.215	0.097	0.021	0.044	0.007	0.005
MEAN	0.266	0.087	0.025	0.045	0.007	0.005
S.D.	0.1027	0.0194	0.0031	0.0041	0.0008	0.0012
S.E.	0.0325	0.0061	0.0010	0.0013	0.0003	0.0004
N	10	10	10	10	10	10

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SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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FEMALE GROUP: 50 MG/KG/DAY

ANIMAL	UTERUS	THYMUS	ADRENAL GLANDS	OVARIES/ OVIDUCTS	PITU ITARY	THYROIDES /PARATHY
99533	0.129	0.051	0.022	0.041	0.005	0.005
99538	0.214	0.062	0.033	0.041	0.008	0.006
99546	0.489	0.058	0.023	0.043	0.007	0.006
99552	0.274	0.068	0.035	0.036	0.012	0.006
99553	0.237	0.101	0.024	0.047	0.008	0.004
99560	0.237	0.100	0.026	0.037	0.007	0.006
99564	0.153	0.039	0.023	0.046	0.006	0.005
99567	0.260	0.045	0.030	0.053	0.006	0.006
99584	0.320	0.063	0.029	0.042	0.004	0.005
99590	0.584	0.050	0.037	0.048	0.009	0.005
MEAN	0.290	0.064	0.028	0.043	0.007	0.005
S.D.	0.1430	0.0212	0.0053	0.0052	0.0021	0.0007
S.E.	0.0452	0.0067	0.0017	0.0016	0.0007	0.0002
N	10	10	10	10	10	10

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A18
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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FEMALE GROUP: 150 MG/KG/DAY

ANIMAL	UTERUS	THYMUS	ADRENAL GLANDS	OVARIES/ OVIDUCTS	PITU ITARY	THYROIDES /PARATHY
99531	0.223	0.043	0.024	0.047	0.006	0.006
99536	0.301	0.054	0.027	0.066	0.006	0.006
99540	0.227	0.041	0.024	0.053	0.008	0.004
99548	0.169	0.053	0.022	0.050	0.006	0.004
99554	0.275	0.036	0.031	0.049	0.007	0.005
99557	0.254	0.035	0.023	0.045	0.006	0.006
99558	0.298	0.045	0.030	0.053	0.009	0.006
99577	0.149	0.047	0.020	0.056	0.006	0.006
99581	0.353	0.041	0.027	0.046	0.007	0.005
99588	0.179	0.061	0.024	0.047	0.006	0.007
MEAN	0.243	0.046	0.025	0.051	0.006	0.006
S.D.	0.0658	0.0082	0.0034	0.0062	0.0011	0.0010
S.E.	0.0208	0.0026	0.0011	0.0020	0.0004	0.0003
N	10	10	10	10	10	10

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TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 1

MALE GROUP: UNTREATED

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	SPLEEN	HEART	TESTES
99466	445.	2.15	486.046	141.860	30.233	74.884	154.419
99472	513.	2.22	573.423	140.991	38.739	82.432	169.369
99474	477.	2.26	522.566	134.071	33.628	67.257	199.558
99491	511.	2.21	644.796	147.059	38.914	84.163	171.946
99496	478.	2.08	537.019	172.596	40.865	71.154	183.654
99504	448.	2.27	484.141	141.850	34.361	66.079	146.256
99505	457.	2.08	549.519	138.462	35.577	63.942	151.442
99507	524.	2.06	586.408	169.903	50.485	92.233	172.816
99509	500.	2.12	541.981	143.396	41.038	80.660	166.038
99515	543.	2.30	593.478	157.826	43.913	77.391	181.739
MEAN	490.	2.18	551.938	148.801	38.775	76.020	169.724
S.D.	33.7	0.088	49.5832	13.3607	5.7948	9.0686	16.2477
S.E.	10.7	0.028	15.6796	4.2250	1.8325	2.8677	5.1380
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

MALE GROUP: 0 MG/KG/DAY

ANIMAL	FBW (G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	SPLEEN	HEART	TESTES
99467	495.	2.06	667.476	153.884	40.291	88.350	185.437
99471	503.	2.09	593.301	134.928	40.191	77.990	169.856
99473	530.	2.25	637.333	136.444	42.667	65.778	166.667
99498	393.	2.01	483.582	140.796	31.841	76.119	174.129
99502	394.	1.96	483.163	143.367	21.429	66.837	172.449
99503	390.	2.15	446.512	128.372	34.419	66.047	158.605
99506	428.	2.11	511.374	144.550	34.597	72.512	136.019
99516	410.	2.09	455.024	141.148	29.187	65.550	154.067
99518	489.	2.11	632.228	182.464	37.915	77.725	169.668
99519	470.	2.13	569.953	160.563	38.028	78.404	160.094
MEAN	450.	2.10	547.995	146.652	35.056	73.531	164.699
S.D.	52.9	0.078	82.0045	15.5775	6.3230	7.5512	13.4501
S.E.	16.7	0.025	25.9321	4.9261	1.9995	2.3879	4.2533
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

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MALE GROUP: 5 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	SPLEEN	HEART	TESTES
99465	418.	1.98	560.101	134.343	33.333	74.747	184.848
99479	389.	2.09	469.378	119.139	33.493	70.335	163.636
99483	486.	2.07	633.816	148.309	39.130	89.372	141.063
99489	429.	2.08	533.654	129.808	41.346	67.308	183.173
99490	467.	2.17	590.783	149.309	35.945	76.037	147.005
99494	510.	2.08	614.904	137.981	43.269	80.288	165.865
99495	473.	2.10	568.571	153.333	32.857	83.333	158.095
99511	483.	2.27	476.211	158.150	37.445	67.401	163.436
99524	529.	2.10	651.905	157.619	50.952	75.714	190.000
99528	414.	1.99	543.216	156.281	30.653	72.362	164.824
MEAN	460.	2.09	564.254	144.427	37.842	75.690	166.195
S.D.	45.4	0.083	61.4262	13.4062	6.0992	7.0435	15.9323
S.E.	14.4	0.026	19.4247	4.2394	1.9287	2.2274	5.0382
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 4

MALE GROUP: 50 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	SPLEEN	HEART	TESTES
99464	466.	2.06	791.748	150.485	50.485	77.670	209.709
99469	458.	2.01	721.393	165.174	49.751	74.627	170.647
99480	532.	2.01	748.259	161.194	53.731	93.532	180.597
99485	459.	2.27	651.982	156.828	40.529	66.960	177.093
99486	466.	2.09	755.024	146.890	51.675	66.986	177.512
99500	519.	2.00	763.000	179.500	62.000	92.000	195.500
99510	442.	2.17	587.558	152.995	31.797	72.350	169.585
99512	443.	2.06	695.631	154.369	46.117	73.301	182.039
99513	396.	2.06	636.893	142.718	47.573	71.359	158.252
99525	398.	2.07	595.652	157.005	38.164	62.802	166.184
MEAN	458.	2.08	694.714	156.716	47.182	75.159	178.712
S.D.	43.8	0.083	72.8472	10.3358	8.5877	10.2214	14.8519
S.E.	13.8	0.026	23.0363	3.2685	2.7157	3.2323	4.6966
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 5

MALE GROUP: 150 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	SPLEEN	HEART	TESTES
99468	401.	2.07	649.275	139.614	53.623	105.314	151.691
99482	462.	2.03	883.744	166.502	74.877	103.448	179.803
99487	489.	2.11	937.915	157.820	47.393	75.355	172.986
99499	477.	1.94	922.165	165.464	52.577	88.660	179.381
99501	461.	2.05	854.634	149.756	53.659	84.390	181.951
99517	415.	2.04	665.686	144.608	49.510	68.627	171.569
99521	433.	2.03	782.266	163.547	58.128	78.325	157.635
99522	436.	2.13	718.779	143.662	41.784	87.324	164.319
99523	452.	2.19	684.475	140.639	39.726	68.493	167.580
MEAN	447.	2.07	788.771	152.401	52.364	84.437	169.657
S.D.	28.6	0.071	113.9206	11.0059	10.2948	13.4509	10.3893
S.E.	9.5	0.024	37.9735	3.6686	3.4316	4.4836	3.4631
N	9	9	9	9	9	9	9

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 6

MALE GROUP: UNTREATED

ANIMAL	EPIDID YMIDES	PROS TATE	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
99466	62.791	40.000	7.428	3.312	0.726	0.726
99472	65.315	46.847	11.495	3.293	0.622	0.667
99474	73.009	34.513	14.881	3.075	0.562	0.465
99491	53.394	47.511	11.715	3.258	0.692	1.140
99496	70.673	63.942	13.231	3.111	0.740	1.111
99504	62.115	50.661	9.753	2.326	0.718	0.551
99505	58.654	31.250	10.096	2.755	0.543	0.813
99507	67.961	66.990	10.112	3.529	0.830	1.286
99509	55.189	56.604	20.259	2.830	0.575	0.566
99515	62.174	65.217	16.852	2.861	0.700	0.752
MEAN	63.127	50.354	12.582	3.035	0.671	0.808
S.D.	6.3470	12.7583	3.8248	0.3492	0.0921	0.2794
S.E.	2.0071	4.0345	1.2095	0.1104	0.0291	0.0884
N	10	10	10	10	10	10

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TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

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MALE GROUP: 0 MG/KG/DAY

ANIMAL	EPIDID YMIDES	PROS TATE	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
99467	64.563	36.408	12.209	2.578	0.617	0.937
99471	55.981	45.933	13.574	2.775	0.593	0.737
99473	62.222	38.667	11.058	2.307	0.680	0.844
99498	61.692	46.269	10.607	2.642	0.522	0.557
99502	59.184	55.102	8.418	2.908	0.867	0.602
99503	66.047	57.209	9.586	2.781	0.502	0.670
99506	61.611	52.607	12.891	2.758	0.787	0.398
99516	59.809	44.498	7.225	2.617	0.569	0.416
99518	69.668	58.768	16.479	2.441	0.626	0.725
99519	58.685	56.808	10.577	3.296	0.582	0.883
MEAN	61.946	49.227	11.262	2.710	0.635	0.677
S.D.	3.9716	7.9998	2.6717	0.2708	0.1148	0.1856
S.E.	1.2559	2.5298	0.8449	0.0856	0.0363	0.0587
N	10	10	10	10	10	10

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TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

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MALE GROUP: 5 MG/KG/DAY

ANIMAL	EPIDID YMIDES	PROS TATE	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
99465	71.717	67.172	14.606	2.985	0.525	0.732
99479	62.201	49.761	7.890	2.569	0.565	0.737
99483	54.589	47.343	13.527	2.725	0.734	0.836
99489	64.904	39.904	16.019	2.817	0.524	0.591
99490	64.977	47.005	12.309	3.889	0.724	0.673
99494	67.308	64.904	13.745	3.130	0.745	0.870
99495	61.905	53.333	9.871	2.610	0.629	1.048
99511	58.590	55.507	7.855	2.661	0.722	0.612
99524	70.000	50.952	16.705	3.562	0.819	0.643
99528	65.327	47.236	8.719	3.070	0.608	0.503
MEAN	64.152	52.312	12.125	3.002	0.660	0.725
S.D.	5.1126	8.3769	3.3295	0.4335	0.1030	0.1589
S.E.	1.6167	2.6490	1.0529	0.1371	0.0326	0.0503
N	10	10	10	10	10	10

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TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

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MALE GROUP: 50 MG/KG/DAY

ANIMAL	EPIDID YMIDES	PROS TATE	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
99464	74.757	32.524	8.888	3.243	0.728	1.189
99469	67.164	47.761	10.692	3.577	0.866	0.940
99480	65.174	45.771	7.095	3.119	0.791	0.920
99485	69.163	50.220	7.683	3.084	0.700	0.938
99486	58.852	45.933	6.986	2.809	0.689	0.636
99500	70.500	58.500	10.195	3.520	0.715	0.980
99510	59.908	46.083	10.585	2.576	0.576	0.622
99512	69.417	52.427	11.121	3.354	0.626	1.199
99513	59.223	52.427	8.447	3.136	0.689	0.636
99525	57.971	39.614	10.430	2.899	0.517	0.715
MEAN	65.213	47.126	9.212	3.132	0.690	0.878
S.D.	5.8979	7.2230	1.5860	0.3129	0.1002	0.2182
S.E.	1.8651	2.2841	0.5015	0.0989	0.0317	0.0690
N	10	10	10	10	10	10

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TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 10

MALE GROUP: 150 MG/KG/DAY

ANIMAL	EPIDID YMIDES	PROS TATE	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
99468	61.836	51.208	4.329	3.391	0.618	0.816
99482	60.591	56.650	5.232	3.123	0.754	0.936
99487	52.607	50.237	5.185	2.962	0.801	1.038
99499	69.588	47.938	5.495	3.268	0.809	0.567
99501	66.829	56.098	3.746	3.468	0.722	1.024
99517	60.784	56.373	3.961	3.049	0.750	0.887
99521	57.635	50.739	5.005	3.212	0.719	0.956
99522	63.850	64.319	3.906	2.592	0.676	1.103
99523	67.580	67.123	3.247	2.804	0.740	0.662
MEAN	62.367	55.632	4.456	3.097	0.732	0.888
S.D.	5.3035	6.5301	0.7940	0.2805	0.0590	0.1780
S.E.	1.7678	2.1767	0.2647	0.0935	0.0197	0.0593
N	9	9	9	9	9	9

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TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

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FEMALE GROUP: UNTREATED

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	SPLEEN	HEART
99535	284.	2.02	440.099	90.099	29.208	54.950
99541	298.	2.01	416.915	123.383	24.378	65.672
99544	296.	1.99	370.854	90.955	27.136	63.317
99547	267.	1.97	361.929	98.477	22.335	51.269
99559	244.	1.92	360.417	93.229	22.396	48.438
99569	314.	1.96	413.775	100.510	31.122	53.571
99579	259.	1.81	370.718	105.525	33.702	56.906
99580	264.	2.01	378.607	99.005	25.871	60.199
99586	269.	1.86	360.215	97.312	26.344	56.452
99593	294.	1.88	438.298	104.787	33.511	60.638
MEAN	279.	1.94	391.183	100.328	27.600	57.141
S.D.	21.7	0.072	32.5521	9.6357	4.1783	5.3830
S.E.	6.8	0.023	10.2939	3.0471	1.3213	1.7023
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

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FEMALE GROUP: 0 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	SPLEEN	HEART
99534	251.	1.84	411.957	111.413	26.630	58.696
99561	299.	1.88	402.660	95.213	25.000	51.596
99562	285.	1.88	415.426	104.255	28.191	57.447
99563	258.	1.88	396.277	120.213	28.723	52.128
99572	276.	1.86	417.204	118.817	29.032	56.452
99574	287.	2.04	372.059	104.412	25.490	49.510
99575	290.	2.06	360.680	111.165	29.612	50.971
99576	261.	2.02	298.515	86.139	23.762	56.436
99578	247.	1.78	388.764	100.000	33.146	54.494
99585	250.	2.04	395.098	97.549	24.510	54.412
MEAN	270.	1.93	385.864	104.918	27.410	54.214
S.D.	19.2	0.101	35.7084	10.7205	2.8778	3.0633
S.E.	6.1	0.032	11.2920	3.3901	0.9100	0.9687
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

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SPONSOR:AMERICAN PETROLEUM

TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

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FEMALE GROUP: 5 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	SPLEEN	HEART
99530	259.	1.88	379.255	100.000	28.723	56.383
99532	311.	2.02	401.485	106.436	30.198	57.921
99555	295.	1.85	417.297	97.297	34.054	53.514
99556	267.	1.87	373.797	114.973	26.203	53.476
99566	279.	1.95	403.590	90.256	27.179	62.564
99568	281.	1.90	408.421	103.158	34.737	54.737
99571	255.	1.94	338.660	88.144	20.619	50.515
99582	260.	1.92	391.146	102.604	32.813	58.333
99591	284.	1.92	375.521	103.125	30.208	55.208
99592	251.	1.96	386.735	84.694	28.571	50.510
MEAN	274.	1.92	387.591	99.069	29.331	55.316
S.D.	19.3	0.050	22.5547	9.1926	4.1692	3.6921
S.E.	6.1	0.016	7.1324	2.9070	1.3184	1.1675
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402022
SPONSOR:AMERICAN PETROLEUM

TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

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FEMALE GROUP: 50 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	SPLEEN	HEART
99533	302.	2.02	446.040	100.990	31.683	54.950
99538	238.	1.81	433.149	101.105	34.254	53.039
99546	231.	1.73	494.220	100.000	32.370	57.225
99552	241.	1.93	477.720	92.746	23.834	55.959
99553	236.	1.88	411.170	92.553	34.043	48.936
99560	274.	2.01	435.821	94.527	24.876	52.239
99564	301.	2.03	442.857	100.493	25.616	56.650
99567	265.	1.85	494.054	102.162	32.973	56.216
99584	250.	1.97	418.782	87.310	23.858	52.792
99590	245.	1.96	444.898	88.265	35.714	51.531
MEAN	258.	1.92	449.871	96.015	29.922	53.954
S.D.	26.3	0.099	29.2963	5.6283	4.7789	2.6725
S.E.	8.3	0.031	9.2643	1.7798	1.5112	0.8451
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

FEMALE GROUP: 150 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	SPLEEN	HEART
99531	247.	2.02	474.257	97.525	26.733	49.010
99536	249.	1.93	576.684	103.109	36.788	54.404
99540	269.	1.88	511.170	98.936	38.298	52.128
99548	267.	1.88	570.213	99.468	26.596	61.170
99554	211.	1.77	526.554	100.565	28.814	41.243
99557	268.	1.96	517.857	97.959	28.061	55.612
99558	228.	1.90	496.842	91.579	32.105	48.421
99577	303.	2.09	582.297	98.565	26.316	58.852
99581	218.	1.67	505.389	97.605	24.551	55.689
99588	223.	1.68	478.571	94.048	22.619	53.571
MEAN	248.	1.88	523.983	97.936	29.088	53.010
S.D.	28.9	0.137	39.6380	3.2184	5.1231	5.7079
S.E.	9.1	0.043	12.5346	1.0178	1.6201	1.8050
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

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SPONSOR:AMERICAN PETROLEUM

TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

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FEMALE GROUP: UNTREATED

ANIMAL	UTERUS	THYMUS	ADRENAL GLANDS	OVARIES/ OVIDUCTS	PITU ITARY	THYROIDES /PARATHY
99535	21.782	11.797	3.401	6.119	1.010	0.569
99541	33.333	12.721	3.592	7.100	1.010	0.726
99544	47.739	11.693	4.362	8.442	1.015	0.799
99547	59.898	12.411	3.482	7.025	0.929	0.635
99559	23.438	11.323	3.219	6.880	0.839	0.615
99569	34.694	14.633	3.276	7.929	1.112	0.801
99579	37.569	10.243	3.105	6.309	0.801	0.630
99580	35.323	11.955	2.866	5.264	0.945	0.900
99586	86.022	16.081	3.280	7.065	0.909	0.774
99593	26.596	15.803	3.585	7.207	1.117	0.447
MEAN	40.639	12.866	3.417	6.934	0.969	0.690
S.D.	19.5959	1.9697	0.3994	0.8968	0.1048	0.1344
S.E.	6.1968	0.6229	0.1263	0.2836	0.0332	0.0425
N	10	10	10	10	10	10

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TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

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FEMALE GROUP: 0 MG/KG/DAY

ANIMAL	UTERUS	THYMUS	ADRENAL GLANDS	OVARIES/ OVIDUCTS	PITU ITARY	THYROIDES /PARATHY
99534	33.152	9.842	3.304	6.832	0.815	0.788
99561	35.106	11.420	4.197	8.468	1.000	0.894
99562	23.404	18.404	3.814	6.314	1.186	0.862
99563	21.809	9.457	3.016	6.606	0.989	0.734
99572	49.462	15.376	3.925	7.903	1.075	1.065
99574	22.059	10.554	3.583	6.382	1.132	0.691
99575	20.388	13.684	2.738	6.024	1.121	0.762
99576	26.238	11.327	3.168	5.282	0.906	0.688
99578	37.079	11.011	3.860	7.416	1.096	0.680
99585	37.255	14.456	3.235	4.103	1.314	0.618
MEAN	30.595	12.553	3.484	6.533	1.063	0.778
S.D.	9.3938	2.8519	0.4633	1.2603	0.1426	0.1317
S.E.	2.9706	0.9018	0.1465	0.3985	0.0451	0.0416
N	10	10	10	10	10	10

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TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

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FEMALE GROUP: 5 MG/KG/DAY

ANIMAL	UTERUS	THYMUS	ADRENAL GLANDS	OVARIES/ OVIDUCTS	PITU ITARY	THYROIDES /PARATHY
99530	28.723	13.415	3.638	6.351	0.984	0.553
99532	50.000	11.861	3.465	5.738	1.361	0.619
99555	27.027	10.914	4.589	6.308	0.946	0.832
99556	25.668	7.861	3.348	6.807	0.914	0.626
99566	37.949	13.185	4.231	7.313	0.954	0.769
99568	75.789	11.205	3.426	6.758	1.095	0.611
99571	40.722	14.144	3.041	6.113	0.897	0.644
99582	38.542	10.990	3.953	6.635	0.984	1.073
99591	28.125	17.786	3.693	6.802	0.917	0.651
99592	27.551	12.434	2.638	5.679	0.934	0.612
MEAN	38.010	12.379	3.602	6.450	0.999	0.699
S.D.	15.4379	2.5867	0.5638	0.5133	0.1392	0.1550
S.E.	4.8819	0.8180	0.1783	0.1623	0.0440	0.0490
N	10	10	10	10	10	10

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TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

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FEMALE GROUP: 50 MG/KG/DAY

ANIMAL	UTERUS	THYMUS	ADRENAL GLANDS	OVARIES/ OVIDUCTS	PITU ITARY	THYROIDES /PARATHY
99533	19.307	7.658	3.327	6.168	0.752	0.698
99538	28.177	8.116	4.282	5.448	1.044	0.751
99546	65.318	7.688	3.133	5.746	0.931	0.821
99552	34.197	8.549	4.352	4.492	1.472	0.788
99553	29.787	12.644	3.053	5.894	0.973	0.543
99560	32.338	13.602	3.562	5.030	0.990	0.761
99564	22.660	5.729	3.409	6.813	0.961	0.734
99567	37.297	6.443	4.324	7.573	0.908	0.832
99584	40.609	8.000	3.640	5.355	0.513	0.650
99590	72.959	6.286	4.673	6.046	1.112	0.617
MEAN	38.265	8.472	3.776	5.856	0.966	0.720
S.D.	17.5443	2.6198	0.5803	0.8801	0.2448	0.0928
S.E.	5.5480	0.8285	0.1835	0.2783	0.0774	0.0293
N	10	10	10	10	10	10

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TABLE A19
A 90-DAY MN DERMAL STUDY WITH PARAFFINIC DISTILLATE IN RATS
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

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FEMALE GROUP: 150 MG/KG/DAY

ANIMAL	UTERUS	THYMUS	ADRENAL GLANDS	OVARIES/ OVIDUCTS	PITU ITARY	THYROIDES /PARATHY
99531	27.228	5.208	2.946	5.748	0.723	0.772
99536	38.860	6.953	3.487	8.497	0.736	0.798
99540	32.447	5.931	3.500	7.574	1.074	0.559
99548	23.936	7.585	3.149	7.074	0.798	0.500
99554	32.768	4.254	3.729	5.870	0.780	0.621
99557	34.694	4.816	3.128	6.153	0.872	0.821
99558	35.789	5.389	3.579	6.400	1.100	0.737
99577	21.531	6.761	2.938	8.134	0.799	0.880
99581	46.108	5.347	3.491	6.060	0.850	0.659
99588	23.810	8.042	3.208	6.286	0.768	0.964
MEAN	31.717	6.029	3.315	6.780	0.850	0.731
S.D.	7.6897	1.2490	0.2766	0.9829	0.1332	0.1457
S.E.	2.4317	0.3950	0.0875	0.3108	0.0421	0.0461
N	10	10	10	10	10	10

POFBWv4.29
09/04/2011