

FINAL REPORT



Contents: Volume 1 of 4
Text, Figures, Summary Tables, and Appendices A - H

Study Title: A 90-Day Repeat-Dose Dermal Toxicity
Study Utilizing Distillates (Petroleum),
Light Catalytic Cracked in Sprague Dawley Rats

Laboratory Project ID: WIL-402024

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Test Guideline: OPPTS Guideline 870.3250
40 CFR 798.2250
OECD Guideline 411

Study Completion Date: 8 August 2012

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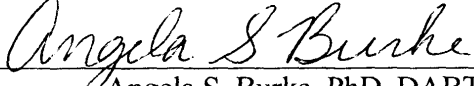
COMPLIANCE STATEMENT

The following is a detailed description of all differences between the practices used in this study, designated WIL-402024, 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:

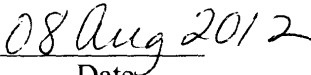
- The Sponsor conducted test substance characterization according to non-GLP standards and provided the characterization report to WIL Research (presented in Appendix B).
- The stability and purity of the test substance was not tested; however, it is the professional judgment of the Sponsor that the 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 and the study was conducted to be in general accordance with the U.S. EPA Health Effects Test Guidelines OPPTS 870.3250, the 40 CFR 798.2250, and the OECD Guidelines for Testing of Chemicals, Health Effects Test Guidelines, Section 411, 12 May 1981.



Angela S. Burke, PhD, DABT
Staff Toxicologist, General Toxicology
Study Director



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 distillate (petroleum), light catalytic cracked for 90 days and determine the effects on male and female rats and 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.

1.2. STUDY DESIGN

Distillates (petroleum), light catalytic cracked (also known as cat cracked distillate light; CAS no. 64741-59-9) in the vehicle (mineral oil, USP; CAS no. 8012-95-1), was administered via dermal application (non-occluded) to the back (down each side to ventral surface) and flanks (covering approximately 10% of the body surface area) to 3 groups (Groups 3-5) of CrI:CD(SD) rats for a minimum 90-day treatment period. The test substance was applied for approximately 6 hours per day, 5 days per week during which time the rats wore Elizabethan collars 24 hours per day to prevent grooming or other behavioral activity that could result in oral exposure, followed by a 2-day nondosing period during which the collars were removed. 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 100, 450, and 750 mg/kg/day for Groups 3, 4, and 5, respectively. A concurrent vehicle control group (Group 2) received the vehicle on a comparable regimen. 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. The dose volume was 1.5 mL/kg for Groups 2-5. Each group consisted of 10 animals/sex. The scheduled necropsy occurred on study days 89 and 90 (study week 12).

All rats were observed twice daily for mortality and moribundity. Clinical examinations were performed daily during the dosing period. Dermal observations were performed

during the pretest period and at the end of each 5-day dosing period. Detailed physical examinations were performed and individual body weights and food consumption were recorded approximately weekly throughout the study, beginning during the pretest period. Ophthalmic examinations were performed during study weeks -1 and 12. Clinical pathology parameters (hematology, coagulation, and serum chemistry) were analyzed on the day of the scheduled necropsy (study day 89 or 90). Complete necropsies were conducted on all animals; selected organs were weighed, and selected tissues were examined microscopically.

1.3. RESULTS

On study day 69, a 450 mg/kg/day group male was found dead. The cause of death was not evident and this early death was considered not related to test substance administration. With the exception of a 750 mg/kg/day group male that was euthanized *in extremis* due to trauma on study day 50, all other animals survived to the scheduled necropsy.

There were no test substance-related clinical observations, effects on food consumption or coagulation parameters, or ophthalmic findings.

Test substance-related dermal observations of desquamation were noted in all test substance-treated groups throughout the study.

Test substance-related, adverse lower body weights were noted in the 750 mg/kg/day group males and females throughout the study, when compared to the vehicle control group.

Test substance-related, adverse changes in hematology parameters were noted in the 100, 450, and/or 750 mg/kg/day group males and/or females and included lower red blood cell and eosinophil counts, lower hemoglobin and hematocrit values, and higher red cell and hemoglobin distribution widths. Nonadverse changes in hematology and coagulation parameters consisted of lower mean corpuscular volume and mean hemoglobin

concentration in the 450 and 750 mg/kg/day group females, and higher percentage reticulocyte counts in the 750 mg/kg/day group males.

Test substance-related serum chemistry changes noted in the 450 and/or 750 mg/kg/day group males and/or females were considered adaptive changes (higher urea nitrogen levels) or the product of metabolism changes secondary to lower final body weight (higher GGT and chloride levels) and were not considered adverse.

Test substance-related higher liver and adrenal gland weights were noted in the 450 mg/kg/day group males and/or 750 mg/kg/day group males and females.

Test substance-related epithelial hyperplasia and hyperkeratosis associated with chronic-active inflammation was observed in the ears and paws of a 750 mg/kg/day group female and in the stomach of another 750 mg/kg/day group female. These microscopic findings were considered adverse.

1.4. CONCLUSIONS

Based on the results of this study, dermal application of distillates (petroleum), light catalytic cracked 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 90-day treatment period at dosage levels of 100, 450, and 750 mg/kg/day resulted in body weight changes at 750 mg/kg/day. Local effects were limited to desquamation in all test substance-treated groups. In addition, systemic toxicity, including clinical pathology alterations, was noted in all test substance-treated groups. Due to these systemic effects extending to the 100 mg/kg/day group (the lowest dose administered), a no-observed-effect level (NOEL) could not be established.

2. INTRODUCTION

The objectives of this study were to evaluate the toxicity potential of repeated dermal exposure of distillate (petroleum), light catalytic cracked for 90 days and determine the effects on male and female rats and 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.

2.1. GENERAL STUDY INFORMATION

This report presents the data from “A 90-Day Repeat-Dose Dermal Toxicity Study Utilizing Distillates (Petroleum), Light Catalytic Cracked in Sprague Dawley Rats.” Due to software spacing constraints, the study title appears as “90-Day Rat Dermal Study of Distillates, Light Catalytic Cracked” 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-402024	Main study data
WIL-402024P	Pretest data
WIL-402024U	Treatments and nondosing day observations

2.2. KEY STUDY DATES

<u>Date(s)</u>	<u>Event(s)</u>
27 April 2011.....	Study initiation date (date protocol signed by Study Director)
3 May 2011.....	Experimental starting date (animal receipt)
12 May 2011.....	Assignment to study groups
16 May 2011.....	Experimental start date (initiation of dose administration; study day 0)
13 and 14 August 2011.....	Scheduled necropsy (study week 12)
14 October 2011	Experimental termination/completion date (last histopathological examination)

2.3. CONTRIBUTING SCIENTISTS

Ophthalmology Pretest period (Study week -1)	David A. Wilkie, DVM, MS, DACVO The Ohio State University Columbus, OH
Dosing period (Study week 12)	Brian C. Gilger, DVM, MS, DACVO, DABT Ophthalmic Consulting and Research, LLC Raleigh, NC

2.4. PARTICIPATING SCIENTISTS

Analyses of Dosing Formulations	Eric S. Bodle, PhD WIL Research Laboratories, LLC
Histopathology	Gary D. Coleman, DVM, PhD, DACVP, DACVPM WIL Research Laboratories, LLC

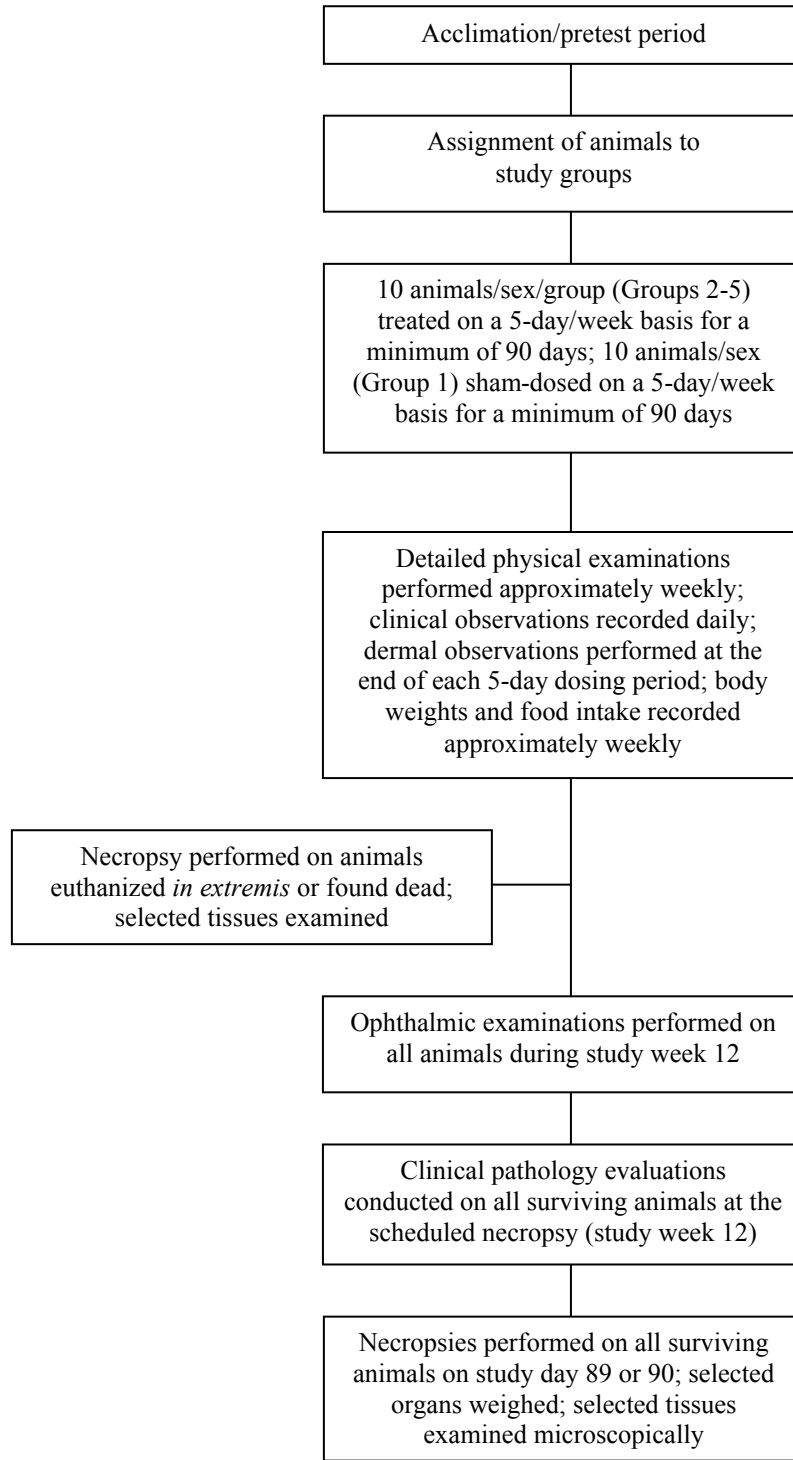
2.5. PRINCIPAL INVESTIGATOR AND TEST SITE

Principal Investigator for Histological Slide Preparation	Kathryn Marks WIL Research site at Hillsborough, NC

2.6. WIL RESEARCH KEY STUDY PERSONNEL

Eric S. Bodle, PhD	Assistant Director, Analytical Chemistry
Susan C. Haley, BS	Operations Manager, Pathology
Heather L. Johnson, BS, RQAP-GLP	Manager, Quality Assurance (WIL Research Ashland)
Sally A. Keets, AS	Senior Operations Manager, Vivarium
Carol A. Kopp, BS, LAT	Manager, Gross Pathology and Developmental Toxicology Laboratory
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Gwendalyn M. Maginnis, DVM	Clinical Veterinarian
George A. Parker, DVM, PhD, DACVP, DABT	Vice President, Pathology
Theresa M. Rafeld, CPhT	Group Manager, Formulations Laboratory
Michael A. Safron, AS, HT (ASCP) ^{CM}	Manager, Histology
Michael J. Schlosser, PhD, DABT	Vice President, Analytical, Metabolism, & <i>In Vitro</i> Toxicology Services
Bennett J. Varsho, MPH, DABT	Director, Operations
Evelyn C. Vedaa, MT	Manager, Clinical Pathology
Robert A. Wally, BS	Operations Manager, Reporting & Technical Support Services

3. STUDY DESIGN



4. EXPERIMENTAL PROCEDURES - MATERIALS AND METHODS

4.1. TEST SUBSTANCE AND VEHICLE

4.1.1. TEST SUBSTANCE

The test substance, distillates (petroleum), light catalytic cracked, was received from EPL Archives, Inc., Sterling, VA, on behalf of the Sponsor, as follows:

Identification	Physical Description	Date of Receipt
Distillates (petroleum), light catalytic cracked (CAS# 64741-59-9; Site# 26, Sample# 18) Exp. date: unknown [WIL log no. 8471A]	Brown, clear liquid	10 November 2010
Distillates (petroleum), light catalytic cracked (CAS# 64741-59-9; Site# 26, Sample# 18) Exp. date: unknown [WIL log no. 1100AD]	Brown, clear liquid	18 May 2011

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. Reserve samples of the test substance were 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 mineral oil, USP (lot no. ZH1000, exp. dates 13 May 2013 and 3 March 2012; lot no. 2AB0895, exp. date 16 May 2013; manufactured by Spectrum Chemical Manufacturing Corporation, New Brunswick, NJ).

4.1.3. PREPARATION

For the vehicle control group (Group 2), a sufficient amount of mineral oil was dispensed approximately weekly; aliquots were prepared for daily dispensation and stored at room temperature, protected from light. The pH was not measured due to the nature of the vehicle.

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

Group Number	Treatment	Dosage Level (mg/kg/day)	Test Substance Concentration (mg/mL)
1	Sham Control	NA	NA
2	Vehicle	0	0
3	Test Substance ^a	100	66.7
4	Test Substance ^a	450	300
5	Test Substance ^a	750	500

NA = Not applicable

^a = The test substance for this study was distillates (petroleum), light catalytic cracked.

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, sampling, and dose application procedures. The formulations were not adjusted for purity.

4.1.4. SAMPLING AND ANALYSES

Prior to the initiation of dose application, analyses to demonstrate homogeneity and resuspension homogeneity as well as 8-day and 15-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 (Bodle, 2011, WIL-402027).

Two sets of duplicate samples for concentration and homogeneity determinations were collected from the top, middle, and bottom strata of the 0, 66.7, 300, and 500 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 high performance liquid chromatography method using. Details about the methodology and results of these analyses are presented in Appendix C, and the results are summarized in Section 6.1.

In addition, a single sample was collected from the first preparation of the vehicle formulation and stored at room temperature, until shipped to the Sponsor for analysis. The analysis was not performed according to GLP standards and the results will not be provided to the study director or presented in this report.

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 selected because it is a widely used strain for which significant historical control data are available. The number of animals selected for this study (see Section 4.7.) was the minimum needed to yield statistically and scientifically meaningful data.

Crl:CD(SD) rats (60 males and 60 females) were received in good health from Charles River Laboratories, Inc., Raleigh, NC on 3 May 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 6 May 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

Upon arrival, 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 necropsy when food, but not water, was withheld. Municipal water supplying the facility was analyzed for contaminants according to SOPs. The results of the diet analyses are maintained in the study records and the results of the water analyses are maintained at WIL Research. 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 68.0°F to 70.9°F (20.0°C to 21.6°C) and mean daily relative humidity ranged from 40.8% to 61.8% 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 12 May 2011 (4 days prior to the initiation of dose administration), 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.

Each group consisted of 10 males and 10 females. The animals were approximately 8 weeks old at the initiation of dose administration. Individual body weights ranged from 199 g to 246 g for males and from 148 g to 190 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 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 90-day treatment period. No vehicle was applied to the sham control group. All animals wore Elizabethan collars during each 5-day dosing period. At the end of each dosing day, after an approximate 6-hour exposure period, all animals 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. Following each wash procedure, all animals were transferred to clean cages and the collars removed for a 2-day nondosing period.

The application sites were marked with a permanent marker for all animals 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:

$$K = 9 \text{ for rats (Freireich } et al., 1966)$$

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	3 100	4 450	5 750	1 NA	2 0	3 100	4 450	5 750
Study Week 0	10	10	10.1	9.9	10	10	10	10.3	10	10
Study Week 1	10	10.2	10.1	10	9.9	10	10	10.1	9.9	10.1
Study Week 2	10	10	10.1	9.8	10	9.8	10	10	9.7	10.6
Study Week 3	10	10	10	10.2	9.9	10	10	10.1	10.1	10
Study Week 4	10.1	10	9.8	10.1	10	9.9	10	9.9	10	9.9
Study Week 5	10	10	10.1	10.3	10.2	10.1	9.9	9.9	10	10
Study Week 6	10	10	9.9	10.2	10	9.9	10	10	10.1	10.1
Study Week 7	10	9.9	10	10.3	10	10	10	10	10	10
Study Week 8	9.9	10	9.9	10.3	10	10	10.1	9.9	10.1	10
Study Week 9	10	10.1	9.9	9.8	10	10	10	10	9.8	10.1
Study Week 10	9.9	10.1	9.9	9.7	10	9.9	10	10	10	10
Study Week 11	9.9	10.2	9.8	9.8	9.9	9.9	10	10	9.9	10
Study Week 12	9.9	10.2	10.1	10.2	10.1	9.8	9.9	9.9	10	10.1
Mean Coverage	10.0	10.1	10.0	10.0	10.0	9.9	10.0	10.0	10.0	10.1
Standard Deviation	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.2

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 ^b	
				Males	Females
1	Sham Control	NA	NA	10	10
2	Vehicle	0	1.5	10	10
3	Test Substance ^a	100	1.5	10	10
4	Test Substance ^a	450	1.5	10	10
5	Test Substance ^a	750	1.5	10	10

NA = Not applicable

^a = The test substance for this study was distillates (petroleum), light catalytic cracked.

Dosage levels were selected by the Sponsor based upon results from a previous 14-day range-finding dermal toxicity study (Morris, Draft, WIL-402020). The selected route of administration for this study was dermal because the study objective was to determine the potential toxicity of the test substance when administered by the dermal route.

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 moribund animal was euthanized by carbon dioxide inhalation and a necropsy was performed. 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 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 at least once during the pretest period, approximately weekly during the study, and prior to the scheduled necropsy. A separate computer protocol was used to record any treatments administered. These 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 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 (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. 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 animals 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. 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 during pretest (12 May 2011; study week -1) and near the end of the treatment period (12 August 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 J.

5.8. ANATOMIC PATHOLOGY

5.8.1. MACROSCOPIC EXAMINATION

A complete necropsy was conducted on all animals. Animals at the scheduled necropsy were anesthetized by isoflurane inhalation and euthanized by exsanguination. The animal *in extremis* was euthanized by carbon dioxide inhalation. 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. 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	Mesenteric
Sternum	Ovaries with oviducts (2) ^d
Bone marrow smear (from sternum) ^a	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) ^b	Skeletal muscle (rectus femoris)
Eyes with optic nerve (2) ^c	Skin (with mammary gland) ^e
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) ^b
Colon	Thymus
Rectum	Thyroid (with parathyroids, if present [2]) ^d
Heart	Trachea
Kidneys (2)	Urinary bladder
Lacrimal gland (exorbital [2])	Uterus
Liver (sections of 2 lobes)	Vagina
Lungs (including bronchi, fixed by inflation with fixative)	Gross lesions (when possible)

^a = Bone marrow smears were not collected from the animal found dead; not placed in formalin. Slides were not examined.

^b = Fixed in Bouin's solution

^c = Fixed in Davidson's solution

^d = Oviducts and parathyroids were examined microscopically when in the plane of section and in all cases where a gross lesion was present.

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

5.8.2. ORGAN WEIGHTS

The following organs were weighed from all animals 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 shipped to WIL Research Hillsborough for processing. The tissues were trimmed according to Biotechnics' SOPs and the protocol. Trimmed tissues were processed into paraffin blocks, sectioned at 4 to 6 microns, mounted on glass microscope slides, and stained with hematoxylin and eosin.

Microscopic examination was performed on all tissues listed in Section 5.8.1. from all animals. 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. DATA ACQUISITION AND ANALYSIS

5.9.1. 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.	

5.9.2. 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.

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 to the control group by sex.

Body weight, body weight change, food consumption, clinical pathology (except gamma glutamyltransferase [GGT]), 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 (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 ($p < 0.05$).

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.

6. RESULTS

6.1. ANALYSES OF DOSING FORMULATIONS

Analyses of Dosing Formulations Report: Appendix C

The analyzed dosing formulations were found to contain 98.5% to 105% of the test substance which was within the WIL Research SOP range of target concentrations for suspensions (85% to 115%) and were homogeneous. The test substance was not detected in the vehicle formulation that was administered to the vehicle control group (Group 2).

Results of the analyses of dosing formulations are summarized below.

Text Table 1. Results of Homogeneity Assessment of the 13 May 2011 Formulations

	Group 2 (0 mg/mL)	Group 3 (66.7 mg/mL)	Group 4 (300 mg/mL)	Group 5 (500 mg/mL)
Mean Concentration (mg/mL)	ND	69.2	310	517
RSD (%)	NA	1.2	0.75	0.49
Mean % of Target	NA	104	103	103

ND = No test substance chromatographic peak detected

NA = Not applicable

Text Table 2. Results of Concentration Analyses

	Mean Concentration, mg/mL (% of Target)			
	Group 2 (0 mg/mL)	Group 3 (66.7 mg/mL)	Group 4 (300 mg/mL)	Group 5 (500 mg/mL)
Date of Preparation				
23 June 2011	ND	68.4 (103)	315 (105)	518 (104)
5 August 2011	ND	66.5 (99.7)	296 (98.5)	509 (102)

ND = No test substance chromatographic peak detected

6.2. SURVIVAL

Summary Data: Table S1, Table S17

Individual Data: Table A1, Table A14

On study day 50, a 750 mg/kg/day group male (no. 12658) was euthanized *in extremis* due to a fractured tibia and fibula and on study day 69, a 450 mg/kg/day group male

(no. 12699) was found dead. Complete necropsies and histologic examinations were conducted on both animals. The cause of death was not evident in the submitted tissues examined for the animal that was found dead and this early death was considered not related to test substance administration. The cause of the fractured tibia and fibula in the animal euthanized *in extremis* was presumed to be trauma unrelated to the test substance and this animal was noted with clinical observations of swollen and impaired use of left hindlimb, red material around nose and eye(s), and yellow material on the urogenital area on study days 49 and/or 50.

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. Swollen and/or reddened ears were occasionally noted towards the end of the study, starting as early as study day 64, in the 750 mg/kg/day group females. In the 450 mg/kg/day group, a single female was noted with swollen ears on study day 55 and another female was noted with reddened ears on study day 68. For the male groups, a single 750 mg/kg/day group male, one 450 mg/kg/day group male, and two 100 mg/kg/day group males were noted with reddened and/or swollen ears and/or facial area between study days 8 and 79. These observations were most likely not test substance-related due to the low frequency and the absence of a time-related response.

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

Test substance-related dermal observations of desquamation were noted in all test substance-treated groups throughout the study, with a dose-response.

Dermal observations of very slight to slight erythema were noted in the vehicle control and the 100 and 750 mg/kg/day group males, and in the vehicle control and the 450 mg/kg/day group females throughout the study; due to observations noted in the vehicle control group, these findings were not considered to be test substance-related.

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, adverse lower body weights were noted in the 750 mg/kg/day group males and females.

Lower mean and cumulative body weight gains, periodically statistically significant, were noted in the 750 mg/kg/day group males and/or females generally throughout the study when compared to the vehicle control group. These changes correlated with lower mean body weights noted as early as study week 1 reaching statistical significance by study week 6 in males and study week 12' in females. By the end of the study, the mean body weight for the 750 mg/kg/day group males and females was 17.8% and 9.5% lower than the vehicle control group, respectively, and the difference was considered adverse.

There were no other test substance-related body weight effects.

6.6. FOOD CONSUMPTION

Summary Data: Table S9

Individual Data: Table A9

Food consumption was unaffected by test substance administration. There were no statistically significant differences when the vehicle control and test substance-treated groups were compared during the dosing period.

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 eosinophil counts, as well as changes indicating regenerative anemia, were noted in the 100, 450, and/or 750 mg/kg/day groups.

Test substance-related statistically significant differences in hematology parameters compared to the vehicle control group were noted as follows: lower absolute eosinophil counts in the 100 mg/kg/day group males and lower absolute and percentage eosinophils in the 450 and 750 mg/kg/day group males and females; lower hemoglobin (HGB) and hematocrit (HCT) values and higher red cell distribution widths (RDW) and hemoglobin distribution widths (HDW) in the 450 mg/kg/day group males and the 750 mg/kg/day group males and females; lower red blood cell (RBC) counts in the 450 and 750 mg/kg/day group males; lower mean corpuscular volume (MCV) and mean hemoglobin concentration (MCH) in the 450 and 750 mg/kg/day group females; and higher percent reticulocyte counts in the 750 mg/kg/day group males. Additionally, lower HGB and HCT values were noted in the 450 mg/kg/day group females, but did not reach statistical significance. The combination of lower RBC counts and lower HGB, HCT, MCV, and MCH values along with higher RDW and HDW values and higher reticulocyte counts indicated the presence of a regenerative anemia.

Dose-dependent, lower eosinophil counts (absolute and percentages) for the 100, 450, and 750 mg/kg/day groups suggest a selective cytotoxicity for eosinophil precursors in the bone marrow that was not evident histologically. Eosinophil values (absolute and percentages) for vehicle controls and sham controls were not significantly different for males or females.

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

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

Parameter	Vehicle Control		100 mg/kg/day		450 mg/kg/day		750 mg/kg/day	
	Male	Female	Male	Female	Male	Female	Male	Female
Red blood cell count (millions/ μ L)	9.03	8.10	-	-	8.16** (-9.6%)	-	8.14** (-9.9%)	-
Hemoglobin (g/dL)	15.2	14.8	-	-	14.1* (-7.2%)	14.6 (-1.4%)	13.9** (-8.6%)	13.4** (-9.5%)
Hematocrit (%)	46.5	43.7	-	-	42.2** (-9.2%)	43.0 (-1.6%)	42.3** (-9.0%)	39.7** (-9.2%)
Mean corpuscular volume (fL)	51.5	54.0	-	-	-	51.8* (-4.1%)	-	51.9* (-3.9%)
Mean corpuscular hemoglobin (pg)	16.8	18.3	-	-	-	17.6* (-3.8%)	-	17.5* (-4.4%)
Reticulocytes (%)	1.8	2.0	-	-	-	-	2.4* (+33.3%)	-
Eosinophils (%)	1.0	1.0	-	-	0.4** (-60.0%)	0.5** (-50.0%)	0.3** (-70.0%)	0.4** (-60.0%)
Absolute eosinophil counts (thousand/ μ L)	0.13	0.10	0.08* (-38.5%)	-	0.05** (-61.5%)	0.04** (-60.0%)	0.04** (-69.2%)	0.04** (-60.0%)
Red cell distribution width (%)	11.7	11.2	-	-	13.1** (+12.0%)	-	14.3** (+22.2%)	12.6** (+12.5%)
Hemoglobin distribution width (%)	2.19	2.16	-	-	2.67** (+21.9%)	-	2.78** (+26.9%)	2.55** (+18.1%)

- = No test substance-related changes.

* = Significantly different from vehicle control group at $p < 0.05$ using Dunnett's test.

** = Significantly different from vehicle control group at $p < 0.01$ using Dunnett's test.

There were no other test substance-related effects on hematology or coagulation parameters. However, statistically significantly lower prothrombin time was noted in the 450 mg/kg/day group males, but was not considered test substance-related as it did not occur in the higher dose group. Additionally, lower mean activated partial thromboplastin time (APTT) was noted in the 750 mg/kg/day group males (suggestive of faster clotting) and was considered a spurious finding as it indicated increased clotting

efficiency for which there was no other evidence. Statistically significant lower mean absolute monocyte counts were noted in the 750 mg/kg/day group males; however, the difference was compounded by statistically significant higher absolute monocyte counts in the vehicle control group compared to the sham control group. Additionally, the mean absolute value reported in the 750 mg/kg/day group was within the range of means recorded in the WIL Research historical control database. Due to these factors, the lower monocyte count was not considered test substance-related, but the result of biological variability between groups.

6.7.2. SERUM CHEMISTRY

Summary Data: Table S11

Individual Data: Table A11

Pathology Report: Appendix I

Test substance-related statistically significant differences in serum chemistry parameters compared to the vehicle control group included higher urea nitrogen values in the 450 and 750 mg/kg/day group males and females and higher chloride and gamma glutamyltransferase (GGT) values in the 750 mg/kg/day group males.

While statistically significant when compared to the vehicle control group, all of the test substance-related changes noted above, except urea nitrogen, were within the range of means recorded in the WIL Research historical control database and were not considered adverse.

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		100 mg/kg/day		450 mg/kg/day		750 mg/kg/day	
	Male	Female	Male	Female	Male	Female	Male	Female
Urea nitrogen (mg/dL)	14.8	13.4	-	-	18.8** (+27.0%)	16.3* (+21.6%)	21.9** (+48.0%)	19.3** (+44.0%)
Gamma glutamyltransferase (U/L)	0.4	0.9	-	-	-	-	1.7 ⁺⁺ (+325%)	-
Chloride (mEq/L)	103	102	-	-	-	-	105** (+1.9%)	-

- = No test substance-related changes.

* = Significantly different from vehicle control group at p<0.05 using Dunnett's test.

** = Significantly different from vehicle control group at p<0.01 using Dunnett's test.

⁺⁺ = Significantly different from vehicle control group at p<0.01 using Dunn's test.

There were no other test substance-related effects on serum chemistry parameters. However, some statistically significant differences were observed when the control and test substance-treated groups were compared. Higher mean cholesterol values in the 450 and 750 mg/kg/day group males were partially attributed to lower (but not statistically significant) cholesterol values noted in the vehicle control group versus the untreated control group. The cholesterol values noted in the 450 and 750 mg/kg/day group males were within the range of means recorded in the WIL Research historical control database and were more similar to the untreated control group, and therefore were not considered test substance-related.

Higher mean creatinine values in the 450 and 750 mg/kg/day group females were attributed to lower, but not statistically significant values noted in the vehicle control group versus the untreated control group. Creatinine values in the 450 and 750 mg/kg/day group females were equal to the creatinine values in the untreated control group females and were within the range of means recorded in the WIL Research historical control database and were therefore not considered test substance-related.

Higher mean albumin/globulin (A/G) ratios in the 100, 450, and 750 mg/kg/day group males and females with corresponding lower mean globulin levels were noted in the 100, 450, and 750 mg/kg/day group males as well as in the 100 and 750 mg/kg/day group females and were associated with higher mean albumin levels in the 450 mg/kg/day

group females. Globulin levels in the vehicle control group males were statistically significantly higher than in the untreated control group and were higher, but not statistically significantly, in vehicle control group females than the untreated control group females. These higher values contributed to the statistically significant differences noted in the 100, 450, and/or 750 mg/kg/day groups which had mean globulin levels similar to or equal to the mean values recorded for the untreated control group. Mean albumin values in the vehicle control group females were statistically significantly lower than the untreated control group females resulting in a statistically significant difference between the two control groups which further contributed to the statistically significant difference in A/G ratios noted in the 100, 450, and 750 mg/kg/day group females. With 1 exception, mean albumin and globulin values and A/G ratios for the 100, 450, and 750 mg/kg/day group males and females were consistently closer to the untreated control group mean values and were within the range of mean values recorded in the WIL Research historical control database; the mean albumin value for the 450 mg/kg/day group males was minimally (0.1g/dL) less than the historical control mean value but was equal to the mean value for the vehicle control group.

6.8. OPHTHALMIC EXAMINATIONS

Summary Data: Table S12, Table S13

Individual Data: Table A12, Table A13

Ophthalmic Examination Report: Appendix J

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 S14, Table S15

Individual Data: Table A15, Table A16

Pathology Report: Appendix I

Scabbing of the tail, paws, and ears was noted in the 750 mg/kg/day group females.

One 750 mg/kg/day group male (no. 12680) had scabbing and nodules on the tail and one 750 mg/kg/day group female (no. 12755) was noted with scabbing of the tail, paws, and ears. Although these findings were only noted in the 750 mg/kg/day group, the possibility that they were the result of excess grooming while the restraining collars were removed per the protocol rather than a direct result of test substance exposure could not be excluded due to the location of these lesions.

6.9.2. ORGAN WEIGHTS

Summary Data: Table S16

Individual Data: Table A17, Table A18, Table A19

Pathology Report: Appendix I

Test substance-related higher liver and adrenal gland weights were noted in the 450 and/or 750 mg/kg/day groups.

Test substance-related lower final body weights were noted in the 750 mg/kg/day group and lower absolute weights were noted for the thymus (450 and 750 mg/kg/day), uterus (750 mg/kg/day, females), brain (750 mg/kg/day), epididymides, heart, and kidneys (750 mg/kg/day, males). Lower uterine weight relative to brain weight was noted in the 750 mg/kg/day group females and lower epididymides weights relative to brain weight were noted in the 750 mg/kg/day group males. Higher thyroid/parathyroid weight relative to final body weight was noted in the 750 mg/kg/day group males and females and higher brain and testes weights relative to final body weight was noted in the

750 mg/kg/day group males. Lower thymus weights relative to brain and final body weights were noted in the 450 and 750 mg/kg/day groups. Higher liver weights (absolute and relative to final body and brain weights) were noted in the 450 and/or 750 mg/kg/day group males and/or females. Adrenal gland weights were higher relative to final body weight (450 mg/kg/day, males and 750 mg/kg/day, males and females) and to brain weight in the 750 mg/kg/day group males.

Lower absolute weights for brain, epididymides, heart, kidney, uterus, and thymus were statistically significant when compared to the vehicle control group but were considered to be a result of a test substance-related effect on final body weight. Lower weights relative to the brain weight for the epididymides, uterus, and thymus were also considered to be the result of lower final body weight. Higher brain and testes weights relative to final body weight in the 750 mg/kg/day group males were also considered to be the result of lower final body weight probably due to slower weight change in these organs when compared to the rate of change in other organs and tissues.

Higher absolute and relative weights for the liver and adrenal glands were considered test substance-related effects although they could not be confirmed histologically.

There were no other test substance-related effects on organ weights.

6.9.3. MICROSCOPIC EXAMINATION

Summary Data: Table S18, Table S19

Individual Data: Table A15, Table A16

Pathology Report: Appendix I

Test substance-related microscopic findings were noted in the ears, paws, and/or nonglandular stomach of the 750 mg/kg/day group females.

Epithelial hyperplasia and hyperkeratosis associated with chronic-active inflammation was observed in the ears and paws of a single female (no. 12755) and epithelial hyperplasia and chronic-active inflammation was noted in the nonglandular stomach of

another female (no. 12750) from the 750 mg/kg/day group. The cause of the hyperplasia and hyperkeratosis could not be determined microscopically.

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

7. DISCUSSION AND CONCLUSIONS

7.1. DISCUSSION

The objectives of this study were to evaluate the toxicity potential of repeated dermal exposure of distillate (petroleum), light catalytic cracked for 90 days and 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.

On study day 50, a 750 mg/kg/day group male was euthanized *in extremis* due to a fractured tibia and fibula which was presumed to be trauma-related. A complete necropsy and histologic examination of the 450 mg/kg/day group male found dead on study day 69 did not reveal a cause of death. This early death was considered to be not test substance-related.

Test substance-related dermal observations of desquamation were noted in all test substance-treated groups throughout the study.

Test substance-related, adverse lower body weights were noted in the 750 mg/kg/day group males and females throughout the study, when compared to the vehicle control group; however, these lower body weights did not correlate with lower food consumption.

The finding of epithelial hyperplasia and/or hyperkeratosis associated with chronic-active inflammation only in the 750 mg/kg/day group suggests that the test substance may interfere with the development of normal stratified squamous epithelium at this exposure level. In the 2 animals presenting with some combinations of these lesions, the epithelial changes appeared to be the primary lesion and chronic-active inflammation a secondary response to the epithelial changes. Both haired and glabrous skin, as well as stratified squamous epithelium, was affected. The skin that was directly exposed to the test substance; however, was not affected suggesting that grooming or some other behavioral activity could have been a contributing factor. Lower red blood cell counts, hematocrit,

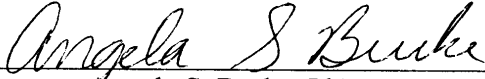
and hemoglobin values, in conjunction with higher red cell distribution width and hemoglobin distribution width values, were indicative of a regenerative anemia in the 750 mg/kg/day group, which coupled with lower eosinophil counts (absolute and percentages), suggest a negative effect on bone marrow precursor cells that was not evident histologically. In addition, lower eosinophil counts were noted in the 100 and 450 mg/kg/day group.

7.2. CONCLUSIONS

Based on the results of this study, dermal application of distillates (petroleum), light catalytic cracked 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 90-day treatment period at dosage levels of 100, 450, and 750 mg/kg/day resulted in body weight changes at 750 mg/kg/day. Local effects were limited to desquamation in all test substance-treated groups. In addition, systemic toxicity, including clinical pathology alterations, was noted in all test substance-treated groups. Due to these systemic effects extending to the 100 mg/kg/day group (the lowest dose administered), a no-observed-effect level (NOEL) could not be established.

8. REPORT REVIEW AND APPROVAL

Report Approved By:

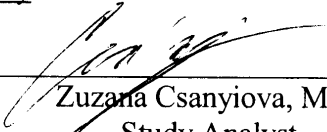


Angela S. Burke, PhD, DABT
Staff Toxicologist, General Toxicology
Study Director

08 Aug 2012

Date

Report Prepared By:

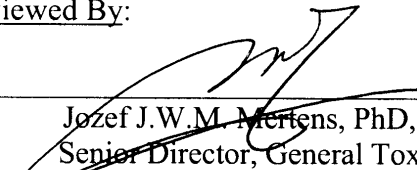


Zuzana Csanyiova, Mgr.
Study Analyst

08 Aug 2012

Date

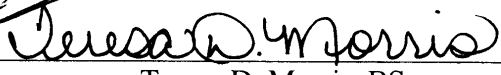
Report Reviewed By:



Jozef J.W.M. Mertens, PhD, DABT
Senior Director, General Toxicology

08 Aug 2012

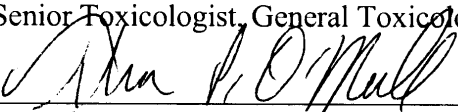
Date



Teresa D. Morris, BS
Senior Toxicologist, General Toxicology

08 Aug 2012

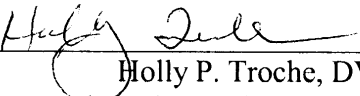
Date



Thomas P. O'Neill, BS, DABT
Assistant Director, General Toxicology

08 AUG 2012

Date



Holly P. Troche, DVM
Lead Analyst and Scientific Advisor,
Reporting & Technical Support Services

8 Aug 2012

Date

9. QUALITY ASSURANCE DEPARTMENT 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>
23-Jun-2011	Test Substance Analysis	23-Jun-2011	27-Jul-2011
12-Aug-2011	Ophthalmology Examination	12-Aug-2011	26-Sep-2011
13-Aug-2011	Clinical Pathology Blood Collection and Processing	13-Aug-2011	26-Sep-2011
13-Aug-2011	Necropsy	13-Aug-2011	26-Sep-2011
24-Aug-2011	Study Records (I-3, Final Body Weights Data)	24-Aug-2011	26-Sep-2011
24-Aug-2011	Study Records (C-1, Platelet and Hemoglobin Data)	24-Aug-2011	26-Sep-2011
24-Aug-2011	Study Records (N-1, Thymus and Liver Weight Data)	24-Aug-2011	26-Sep-2011
01-Sep-2011	Hematology and Organ Weight Tables	01-Sep-2011	25-Oct-2011
01-Sep-2011 02-Sep-2011 12-Sep-2011	Study Records (I-1)	12-Sep-2011	25-Oct-2011
01-Sep-2011 02-Sep-2011 12-Sep-2011	Study Records (I-2)	12-Sep-2011	25-Oct-2011
02-Sep-2011 12-Sep-2011	Study Records (I-3)	12-Sep-2011	25-Oct-2011
02-Sep-2011 12-Sep-2011	Study Records (C-1)	12-Sep-2011	25-Oct-2011
02-Sep-2011 12-Sep-2011	Study Records (RX-1)	12-Sep-2011	25-Oct-2011
12-Sep-2011	Study Records (N-1)	12-Sep-2011	25-Oct-2011
19-Oct-2011	Study Records (Pathology Data)	19-Oct-2011	28-Nov-2011
20-Oct-2011 21-Oct-2011	Study Records (A-1)	21-Oct-2011	28-Nov-2011
21-Oct-2011	Analytical Chemistry Report	21-Oct-2011	28-Nov-2011
23-Oct-2011 24-Oct-2011	Pathology Report	24-Oct-2011	28-Nov-2011
06-Nov-2011 07-Nov-2011	Draft Report (without Analyses of Dosing Formulations and Pathology Report)	07-Nov-2011	28-Nov-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-Nov-2011	Audited Draft Report	17-Nov-2011	20-Dec-2011
17-Nov-2011	Audited Analytical Chemistry Report	17-Nov-2011	20-Dec-2011
25-Jul-2012	Final Pathology Report	25-Jul-2012	25-Jul-2012
1-Aug-2012	Final Report	1-Aug-2012	1-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. The data located in Appendix B (Test Substance Characterization) were the responsibility of the Sponsor. Review of the protocol and protocol amendments as well as a yearly internal facility inspection are conducted by the WIL Research Quality Assurance Department.

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.



Dustin G. Risner, BA
Quality Assurance Representative



Date

WIL Research Hillsborough
310 Millstone Drive
Hillsborough, NC 27378

WIL-402024
American Petroleum Institute

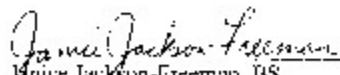
QUALITY ASSURANCE STATEMENT

PHASES INSPECTED

Date(s) of Inspection	Phase Inspected	Date(s) Findings Reported To Principal Investigator	Date (s) Findings Reported To Test Site Management	Date(s) Reported To Study Director and Testing Facility
06-Sep-2011	Trimming	06-Sep-2011	06-Sep-2011	20-Sep-2011
08-May-2012	Histology Documentation	08-May-2012	08-May-2012	09-May-2012

The portions of this study conducted at WIL Research Hillsborough were inspected in accordance with the applicable Good Laboratory Practice Regulations, SOPs and protocol and protocol amendments. A yearly internal facility inspection is conducted by the Quality Assurance Department.

The methods and procedures used in the portions of this study conducted at WIL Research Hillsborough were those specified in the protocol, its amendments, and SOPs.


Janice Jackson-Freeman, BS
Compliance Specialist, Quality Assurance

09 May 2012
Date

10. REFERENCES

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Sokal, R.R.; Rohlf, F.J. *Biometry: The Principles and Practice of Statistics in Biological Research*. Freeman: San Francisco, CA, **1981**; pp 222-229.

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. Data generated by the Sponsor will be archived by the Sponsor.

Reserve samples 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
cm	-	centimeter
CEO	-	correlates with externally observed
dL	-	deciliter
EPA	-	Environmental Protection Agency
<i>etc.</i>	-	<i>et cetera</i>
EDTA	-	ethylenediaminetetraacetic acid
exp.	-	expiration
g	-	gram
GLP	-	Good Laboratory Practices
hr	-	hour(s)
kg	-	kilogram
L	-	liter
M	-	molar
mEq	-	milliequivalent
mg	-	milligram
mL	-	milliliter
mm	-	millimeter
ms	-	milliseconds
mM	-	millimolar
NA	-	not applicable
no.	-	number
OECD	-	Organisation for Economic Cooperation and Development
OPPTS	-	Office of Prevention, Pesticides and Toxic Substances
RSD	-	Relative standard deviation
SOP	-	standard operating procedure
WIL Research	-	WIL Research Laboratories, LLC
WTDMS™	-	WIL Toxicology Data Management System
wt(s).	-	weight(s)

FIGURES 1 - 2

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

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

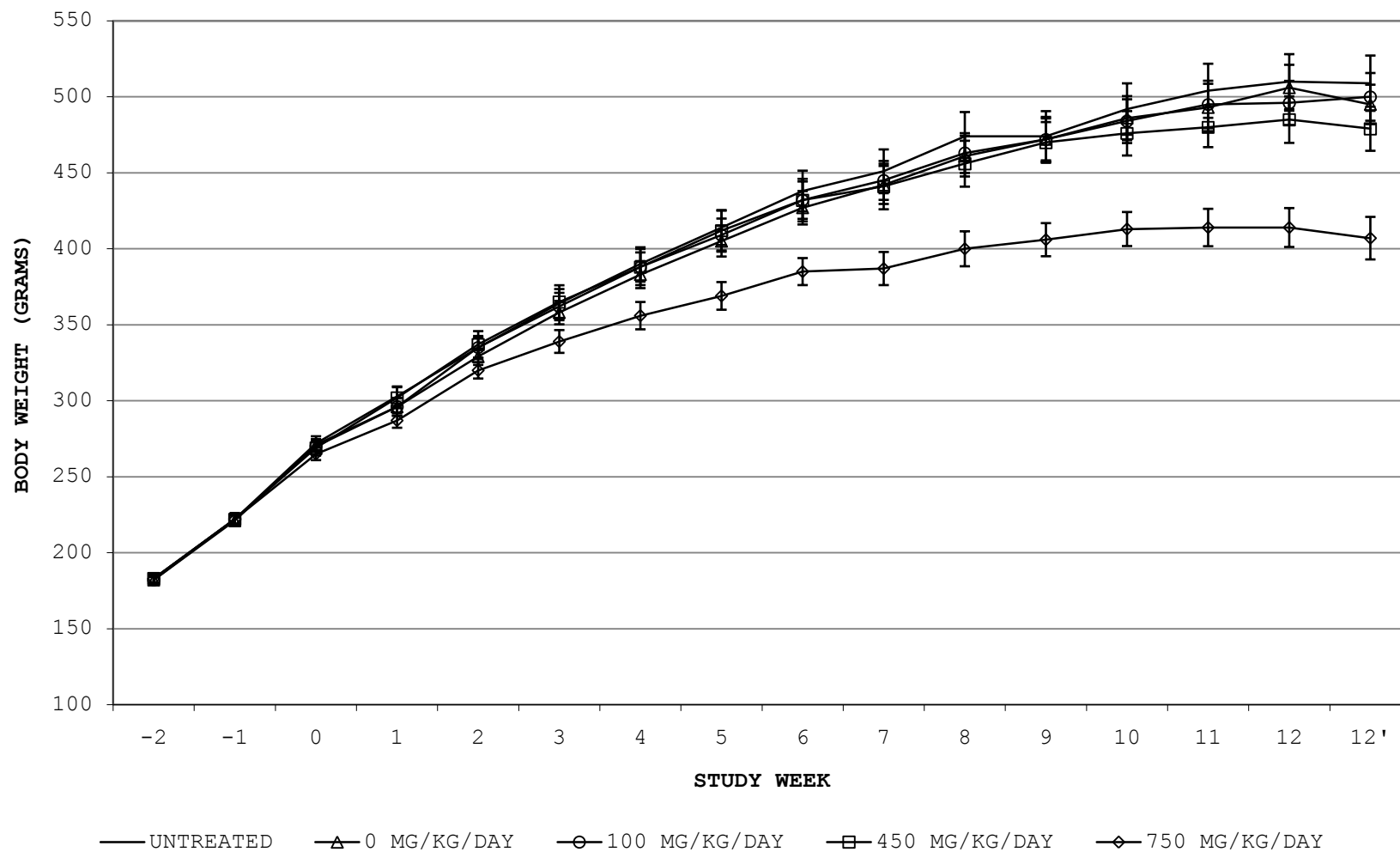
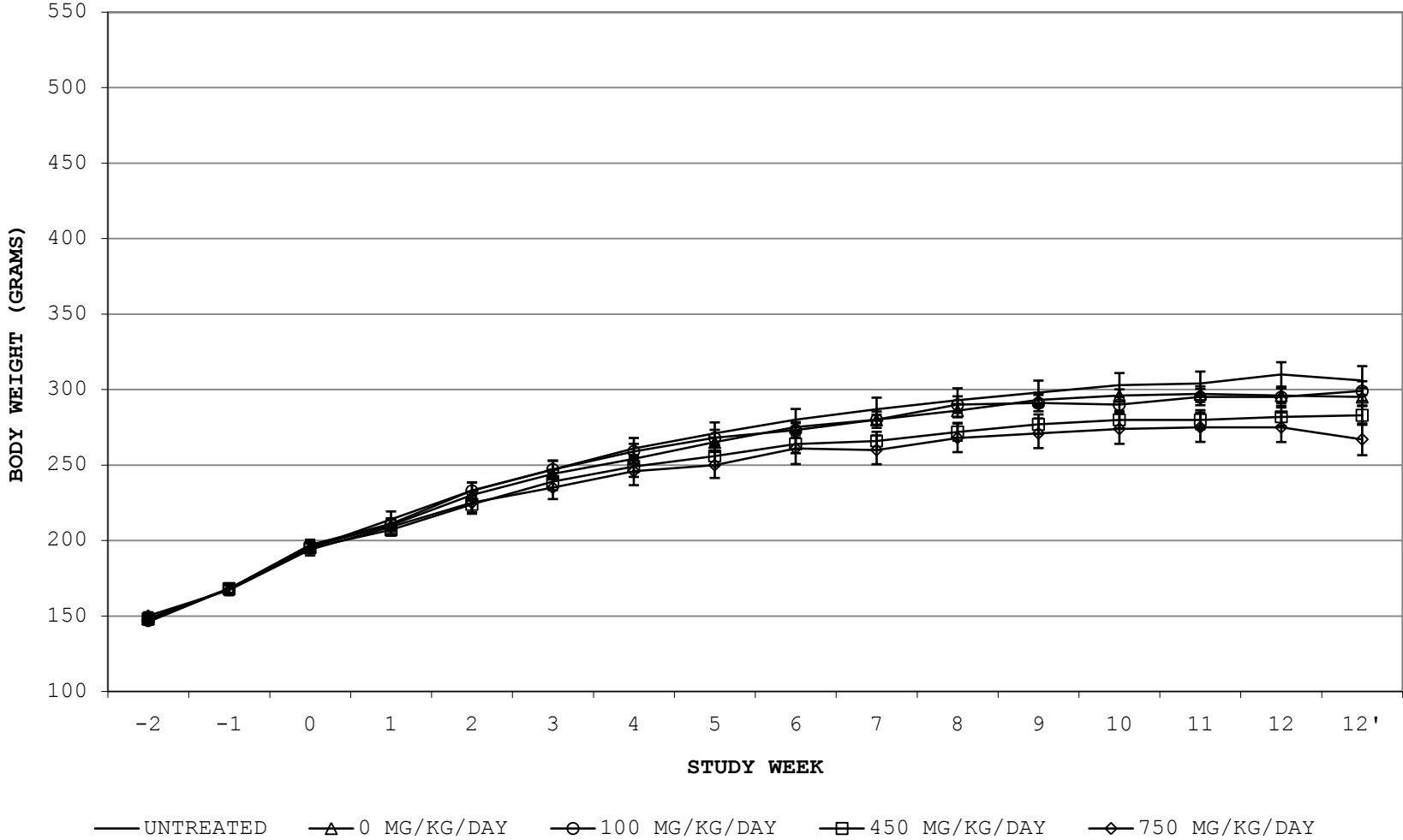


FIGURE 2 (FEMALES)
SUMMARY OF BODY WEIGHTS [G]
DATA PRESENTED AS MEAN $\pm$ SE



TABLES S1 - S19

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S1
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF SURVIVAL AND DISPOSITION

PAGE 1

MALES																								
GROUP : 1					2					3					4					5				
WEEK	LIVE	FD	EE	SE	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	10	0	0	0				
1	10	0	0	0	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	10	0	0	0				
3	10	0	0	0	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	10	0	0	0				
5	10	0	0	0	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	10	0	0	0				
7	10	0	0	0	10	0	0	0	10	0	0	0	10	0	0	0	9	0	1	0				
8	10	0	0	0	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	1	0	0	9	0	0	0				
10	10	0	0	0	10	0	0	0	10	0	0	0	9	0	0	0	9	0	0	0				
11	10	0	0	0	10	0	0	0	10	0	0	0	9	0	0	0	9	0	0	0				
12	0	0	0	10	0	0	0	10	0	0	0	10	0	0	0	9	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-	100 MG/KG/DAY				4-	450 MG/KG/DAY				5-	750 MG/KG/DAY			

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S1
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF SURVIVAL AND DISPOSITION

PAGE 2

FEMALES																			
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		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-	100 MG/KG/DAY				4-	450 MG/KG/DAY			
															5-	750 MG/KG/DAY			

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PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF CLINICAL FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 1

----- M A L E -----					
TABLE RANGE: GROUP:	1	DAY 000 TO DAY 090 2	3	4	5
NORMAL					
-NO SIGNIFICANT CLINICAL OBSERVATIONS	52/10	48/10	93/10	95/10	75/10
DISPOSITION					
-FOUND DEAD	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0
-SENT TO NECROPSY TO BE EUTHANIZED IN EXTREMIS- PHYSICAL CONDITION	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1
-PRIMARY NECROPSY (WEEK 12)	10/10	10/10	10/10	9/ 9	9/ 9
BEHAVIOR/CNS					
-IMPAIRED USE OF LEFT HINDLIMB	0/ 0	0/ 0	0/ 0	0/ 0	2/ 1
BODY/INTEGUMENT					
-HAIR LOSS FORELIMB(S)	14/ 4	27/ 4	1/ 1	2/ 1	9/ 3
-HAIR LOSS FACIAL AREA	0/ 0	0/ 0	0/ 0	2/ 1	0/ 0
-HAIR LOSS DORSAL NECK	37/ 9	27/10	15/ 5	8/ 5	38/ 9
-HAIR LOSS VENTRAL NECK	62/10	54/10	31/ 8	22/ 8	38/10
-HAIR LOSS VENTRAL TRUNK	1/ 1	0/ 0	0/ 0	0/ 0	0/ 0
-MOIST ALOPECIA DORSAL NECK	1/ 1	1/ 1	0/ 0	0/ 0	0/ 0
-MOIST ALOPECIA VENTRAL NECK	2/ 2	2/ 2	1/ 1	0/ 0	0/ 0
-MOIST ALOPECIA LEFT LATERAL NECK	1/ 1	0/ 0	0/ 0	0/ 0	0/ 0
-MOIST ALOPECIA RIGHT LATERAL NECK	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF CLINICAL FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 2

----- M A L E -----					
TABLE RANGE: GROUP:	1	DAY 000 TO DAY 090 2	3	4	5
EYES/EARS/NOSE					
-DRIED RED MATERIAL AROUND NOSE	2/ 1	1/ 1	3/ 3	3/ 3	6/ 5
-DRIED RED MATERIAL AROUND RIGHT EYE	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1
-DRIED RED MATERIAL AROUND LEFT EYE	0/ 0	0/ 0	0/ 0	1/ 1	1/ 1
EXCRETA					
-SOFT FECES	0/ 0	2/ 2	0/ 0	1/ 1	1/ 1
-WET YELLOW MATERIAL UROGENITAL AREA	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1
-DRIED YELLOW MATERIAL UROGENITAL AREA	0/ 0	0/ 0	0/ 0	1/ 1	1/ 1
BODY/INTEG II					
-SCABBING FACIAL AREA	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0
-SCABBING DORSAL NECK	6/ 4	18/ 8	9/ 3	4/ 3	4/ 2
-SCABBING DORSAL HEAD	0/ 0	1/ 1	0/ 0	4/ 1	0/ 0
-SCABBING FORELIMB(S)	1/ 1	4/ 2	0/ 0	0/ 0	0/ 0
-SCABBING VENTRAL NECK	14/ 7	27/ 9	5/ 4	2/ 2	1/ 1
-SCABBING DORSAL TRUNK	0/ 0	1/ 1	0/ 0	0/ 0	1/ 1
-SCABBING UROGENITAL AREA	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1
-SCABBING BASE OF TAIL	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1
-SCABBING LEFT LATERAL NECK	0/ 0	1/ 1	1/ 1	0/ 0	0/ 0
ORAL/DENTAL					
-WET CLEAR MATERIAL AROUND MOUTH	2/ 2	1/ 1	0/ 0	0/ 0	0/ 0
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	

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

TABLE RANGE:		DAY 000 TO DAY 090			
GROUP:		1	2	3	45

SPECIAL		0/ 0	0/ 0	0/ 0	1/ 1
-SWOLLEN LEFT HINDLIMB					

1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF CLINICAL FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 4

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

TABLE RANGE: GROUP:	1	DAY 000 TO DAY 090 2	3	4	5
NORMAL					
-NO SIGNIFICANT CLINICAL OBSERVATIONS	94/10	90/10	114/10	114/10	91/10
DISPOSITION					
-PRIMARY NECROPSY (WEEK 12)	10/10	10/10	10/10	10/10	10/10
BODY/INTEGUMENT					
-HAIR LOSS FORELIMB(S)	5/ 2	22/ 3	12/ 3	2/ 2	19/ 5
-HAIR LOSS FACIAL AREA	2/ 2	1/ 1	1/ 1	4/ 2	1/ 1
-HAIR LOSS HINDLIMB(S)	0/ 0	5/ 1	0/ 0	0/ 0	0/ 0
-HAIR LOSS DORSAL NECK	19/ 5	12/ 5	5/ 3	7/ 4	22/ 8
-HAIR LOSS VENTRAL NECK	31/ 8	23/ 7	7/ 6	8/ 6	26/ 8
-HAIR LOSS DORSAL TRUNK	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0
-HAIR LOSS VENTRAL TRUNK	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1
-MOIST ALOPECIA BASE OF TAIL	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1
EYES/EARS/NOSE					
-DRIED RED MATERIAL AROUND NOSE	1/ 1	4/ 4	5/ 4	6/ 4	3/ 3
-DRIED RED MATERIAL AROUND RIGHT EYE	0/ 0	0/ 0	0/ 0	0/ 0	2/ 2
EXCRETA					
-DRIED YELLOW MATERIAL UROGENITAL AREA	0/ 0	0/ 0	0/ 0	0/ 0	4/ 3
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF CLINICAL FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 5

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

TABLE RANGE: GROUP:	1	DAY 000 TO DAY 090 2	3	4	5
BODY/INTEG II					
-SCABBING FACIAL AREA	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0
-SCABBING DORSAL NECK	3/ 3	9/ 7	0/ 0	0/ 0	3/ 2
-SCABBING FORELIMB(S)	0/ 0	1/ 1	0/ 0	0/ 0	3/ 2
-SCABBING HINDLIMB(S)	0/ 0	0/ 0	0/ 0	0/ 0	3/ 1
-SCABBING VENTRAL NECK	4/ 2	8/ 6	1/ 1	0/ 0	0/ 0
-SCABBING DORSAL TRUNK	0/ 0	1/ 1	0/ 0	1/ 1	0/ 0
-SCABBING DORSAL RUMP	0/ 0	0/ 0	0/ 0	0/ 0	2/ 2
-SCABBING BASE OF TAIL	0/ 0	0/ 0	0/ 0	0/ 0	4/ 1
-SCABBING LEFT EAR	0/ 0	0/ 0	0/ 0	1/ 1	4/ 2
-SCABBING RIGHT EAR	0/ 0	0/ 0	0/ 0	1/ 1	2/ 1
ORAL/DENTAL					
-UPPER INCISOR(S) BROKEN	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	

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PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF POST-DOSE FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 1

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

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

NORMAL						
PRIOR TO DOSING						
-NO SIGNIFICANT CLINICAL OBSERVATIONS		650/10	650/10	646/10	633/10	618/10
1-2 HOUR POST-DOSING						
-NO SIGNIFICANT CLINICAL OBSERVATIONS		650/10	649/10	649/10	634/10	620/10
BEHAVIOR/CNS						
PRIOR TO DOSING						
-IMPAIRED USE OF LEFT HINDLIMB		0/0	0/0	0/0	0/0	2/1
1-2 HOUR POST-DOSING						
-IMPAIRED USE OF LEFT HINDLIMB		0/0	0/0	0/0	0/0	2/1
UNSCHED OBS (>135 MINS)						
-PARTIAL CLOSURE RIGHT EYE		0/0	0/0	0/0	1/1	0/0
EYES/EARS/NOSE						
PRIOR TO DOSING						
-DRIED RED MATERIAL AROUND NOSE		0/0	0/0	1/1	1/1	1/1
SPECIAL						
PRIOR TO DOSING						
-SWOLLEN FACIAL AREA		0/0	0/0	3/2	0/0	1/1
-REDDENED LEFT EAR		0/0	0/0	0/0	1/1	1/1
-REDDENED RIGHT EAR		0/0	0/0	0/0	1/1	1/1
-REDDENED FACIAL AREA		0/0	0/0	0/0	1/1	0/0
-REDDENED LEFT FORELIMB		0/0	0/0	0/0	1/1	0/0
-REDDENED RIGHT FORELIMB		0/0	0/0	0/0	1/1	0/0
-REDDENED LEFT HINDLIMB		0/0	0/0	0/0	1/1	0/0

1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY		

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF POST-DOSE FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 2

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

TABLE RANGE: GROUP:	DAY 0 TO DAY 89 1	2	3	4	5
-REDDENED RIGHT HINDLIMB	0/0	0/0	0/0	1/1	0/0
1-2 HOUR POST-DOSING					
-SWOLLEN FACIAL AREA	0/0	1/1	1/1	0/0	0/0
-REDDENED LEFT EAR	0/0	0/0	0/0	1/1	0/0
-REDDENED RIGHT EAR	0/0	0/0	0/0	1/1	0/0
-REDDENED FACIAL AREA	0/0	0/0	0/0	1/1	0/0
-REDDENED LEFT FORELIMB	0/0	0/0	0/0	1/1	0/0
-REDDENED RIGHT FORELIMB	0/0	0/0	0/0	1/1	0/0
-REDDENED LEFT HINDLIMB	0/0	0/0	0/0	1/1	0/0
-REDDENED RIGHT HINDLIMB	0/0	0/0	0/0	1/1	0/0
UNSCHED OBS (>135 MINS)					
-SWOLLEN FACIAL AREA	0/0	0/0	0/0	1/1	0/0
-REDDENED LEFT EAR	0/0	0/0	0/0	1/1	0/0
-REDDENED RIGHT EAR	0/0	0/0	0/0	1/1	0/0
-REDDENED FACIAL AREA	0/0	0/0	0/0	1/1	0/0
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF POST-DOSE FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 3

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

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

NORMAL						
PRIOR TO DOSING						
-NO SIGNIFICANT CLINICAL OBSERVATIONS		650/10	649/10	648/10	649/10	641/10
1-2 HOUR POST-DOSING						
-NO SIGNIFICANT CLINICAL OBSERVATIONS		650/10	650/10	650/10	650/10	638/10
EYES/EARS/NOSE						
PRIOR TO DOSING						
-DRIED RED MATERIAL AROUND NOSE		0/0	1/1	2/2	1/1	0/0
EXCRETA						
PRIOR TO DOSING						
-DRIED YELLOW MATERIAL UROGENITAL AREA		0/0	0/0	0/0	0/0	1/1
1-2 HOUR POST-DOSING						
-WET YELLOW MATERIAL UROGENITAL AREA		0/0	0/0	0/0	0/0	1/1
-DRIED YELLOW MATERIAL UROGENITAL AREA		0/0	0/0	0/0	0/0	1/1
SPECIAL						
PRIOR TO DOSING						
-REDDENED LEFT EAR		0/0	0/0	0/0	0/0	8/2
-REDDENED RIGHT EAR		0/0	0/0	0/0	0/0	8/2
-SWOLLEN LEFT EAR		0/0	0/0	0/0	0/0	3/1
-SWOLLEN RIGHT EAR		0/0	0/0	0/0	0/0	3/1

1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY		

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF POST-DOSE FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 4

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

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

1-2 HOUR POST-DOSING						
-REDDENED LEFT EAR		0/0	0/0	0/0	0/0	10/2
-REDDENED RIGHT EAR		0/0	0/0	0/0	0/0	10/2
-SWOLLEN LEFT EAR		0/0	0/0	0/0	0/0	4/1
-SWOLLEN RIGHT EAR		0/0	0/0	0/0	0/0	4/1

1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY		
						PPDTSUv1.4 10/17/2011

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE S4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF CLINICAL FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 1

----- M A L E -----					
TABLE RANGE: GROUP:	1	DAY 005 TO 2	3	4	5
NORMAL					
-NO SIGNIFICANT CLINICAL OBSERVATIONS	246/10	253/10	245/10	227/10	224/10
BEHAVIOR/CNS					
-VOCALIZATION DURING HANDLING	1/ 1	0/ 0	0/ 0	0/ 0	0/ 0
EYES/EARS/NOSE					
-DRIED RED MATERIAL AROUND LEFT EYE	1/ 1	0/ 0	0/ 0	1/ 1	0/ 0
-DRIED RED MATERIAL AROUND RIGHT EYE	2/ 2	0/ 0	1/ 1	0/ 0	0/ 0
-DRIED RED MATERIAL AROUND NOSE	6/ 3	1/ 1	9/ 5	14/ 9	7/ 5
SPECIAL					
-REDDENED LEFT FORELIMB	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0
-REDDENED RIGHT FORELIMB	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0
BODY/INTEG III					
-WET YELLOW MATERIAL UROGENITAL AREA	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1
-DRIED YELLOW MATERIAL UROGENITAL AREA	0/ 0	0/ 0	0/ 0	8/ 6	12/ 6
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE S4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF CLINICAL FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 2

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

TABLE RANGE: GROUP:	1	DAY 005 TO 2	DAY 090 3	4	5
NORMAL					
-NO SIGNIFICANT CLINICAL OBSERVATIONS	250/10	251/10	249/10	244/10	231/10
EYES/EARS/NOSE					
-DRIED RED MATERIAL AROUND LEFT EYE	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1
-DRIED RED MATERIAL AROUND RIGHT EYE	0/ 0	1/ 1	0/ 0	0/ 0	2/ 2
-DRIED RED MATERIAL AROUND NOSE	5/ 4	3/ 3	6/ 5	9/ 6	11/ 7
SPECIAL					
-SWOLLEN LEFT EAR	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0
-SWOLLEN RIGHT EAR	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0
-REDDENED LEFT EAR	0/ 0	0/ 0	0/ 0	1/ 1	1/ 1
-REDDENED RIGHT EAR	0/ 0	0/ 0	0/ 0	1/ 1	1/ 1
BODY/INTEG III					
-DRIED YELLOW MATERIAL UROGENITAL AREA	0/ 0	0/ 0	0/ 0	0/ 0	12/ 5
-DRIED YELLOW MATERIAL VENTRAL TRUNK	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1
-DRIED YELLOW MATERIAL ANOGENITAL AREA	0/ 0	0/ 0	0/ 0	0/ 0	2/ 1
-DRIED YELLOW MATERIAL HINDLIMB(S)	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	

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TABLE S5
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF DERMAL OBSERVATIONS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 1

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

TABLE RANGE: GROUP:	1	DAY 004 TO 2	3	4	5
DERMAL OBS					
-SCORED, NOT REMARKABLE	130/10	125/10	119/10	118/10	100/10
-NO ERYTHEMA	0/ 0	2/ 1	7/ 6	9/ 5	23/10
-ERYTHEMA - VERY SLIGHT	0/ 0	3/ 2	2/ 2	0/ 0	2/ 2
-ERYTHEMA - SLIGHT	0/ 0	0/ 0	2/ 2	0/ 0	0/ 0
-NO EDEMA	0/ 0	5/ 3	10/ 7	9/ 5	25/10
-EDEMA - VERY SLIGHT	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0
-DESQUAMATION	0/ 0	2/ 1	1/ 1	6/ 4	21/10
-RESIDUAL TEST SUBSTANCE WITHIN DOSE SITE	0/ 0	0/ 0	6/ 5	2/ 2	0/ 0
-SCABBING WITHIN DOSE SITE	0/ 0	0/ 0	0/ 0	1/ 1	2/ 2
-PINPOINT SCABBING	0/ 0	0/ 0	0/ 0	0/ 0	2/ 2
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S5
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF DERMAL OBSERVATIONS: TOTAL OCCURRENCE/NO. OF ANIMALS

PAGE 2

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

TABLE RANGE: GROUP:	1	DAY 004 TO 2	3	4	5
DERMAL OBS					
-SCORED, NOT REMARKABLE	128/10	118/10	120/10	109/10	79/10
-NO ERYTHEMA	2/ 2	5/ 3	10/ 7	20/10	51/10
-ERYTHEMA - VERY SLIGHT	0/ 0	6/ 3	0/ 0	1/ 1	0/ 0
-ERYTHEMA - SLIGHT	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0
-NO EDEMA	2/ 2	12/ 4	10/ 7	21/10	51/10
-DESQUAMATION	2/ 2	5/ 3	7/ 6	14/ 8	44/10
-RESIDUAL TEST SUBSTANCE WITHIN DOSE SITE	0/ 0	0/ 0	3/ 3	6/ 6	0/ 0
-SCABBING WITHIN DOSE SITE	0/ 0	2/ 1	0/ 0	0/ 0	4/ 2
-PINPOINT SCABBING	0/ 0	0/ 0	0/ 0	0/ 0	6/ 2

1- UNTREATED 2- 0 MG/KG/DAY 3- 100 MG/KG/DAY 4- 450 MG/KG/DAY 5- 750 MG/KG/DAY

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TABLE S6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF BODY WEIGHTS [G]

GROUP:		MALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	-2					
	MEAN	183.	182.	182.	183.	183.
% DIFFERENCE			-0.5	-0.5	0.0	0.0
	S.D.	8.7	6.9	6.3	8.1	8.5
	S.E.	2.8	2.2	2.0	2.6	2.7
	N	10	10	10	10	10
	-1					
	MEAN	222.	221.	222.	222.	222.
% DIFFERENCE			-0.5	0.0	0.0	0.0
	S.D.	11.7	10.6	10.2	12.9	11.8
	S.E.	3.7	3.4	3.2	4.1	3.7
	N	10	10	10	10	10
	0					
	MEAN	272.	271.	270.	269.	265.
% DIFFERENCE			-0.4	-0.7	-1.1	-2.6
	S.D.	14.4	11.7	11.5	16.0	13.0
	S.E.	4.6	3.7	3.6	5.1	4.1
	N	10	10	10	10	10
	1					
	MEAN	303.	296.	296.	302.	287.
% DIFFERENCE			-2.3	-2.3	-0.3	-5.3
	S.D.	20.2	18.5	18.5	21.7	15.2
	S.E.	6.4	5.9	5.8	6.9	4.8
	N	10	10	10	10	10

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

TABLE S6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF BODY WEIGHTS [G]

GROUP:		MALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	2					
	MEAN	335.	329.	335.	337.	320.
% DIFFERENCE			-1.8	0.0	0.6	-4.5
	S.D.	24.0	17.2	20.9	27.7	17.1
	S.E.	7.6	5.4	6.6	8.8	5.4
	N	10	10	10	10	10
	3					
	MEAN	364.	358.	362.	365.	339.
% DIFFERENCE			-1.6	-0.5	0.3	-6.9
	S.D.	30.1	24.5	28.6	34.8	23.6
	S.E.	9.5	7.7	9.0	11.0	7.5
	N	10	10	10	10	10
	4					
	MEAN	390.	383.	388.	388.	356.
% DIFFERENCE			-1.8	-0.5	-0.5	-8.7
	S.D.	34.8	28.2	30.5	37.8	28.4
	S.E.	11.0	8.9	9.6	11.9	9.0
	N	10	10	10	10	10
	5					
	MEAN	414.	405.	409.	412.	369.
% DIFFERENCE			-2.2	-1.2	-0.5	-10.9
	S.D.	36.4	32.0	34.4	41.5	28.8
	S.E.	11.5	10.1	10.9	13.1	9.1
	N	10	10	10	10	10

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

TABLE S6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF BODY WEIGHTS [G]

		MALES				
GROUP:		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	6					
	MEAN	438.	427.	432.	432.	385. a
% DIFFERENCE			-2.5	-1.4	-1.4	-12.1
	S.D.	42.3	34.9	38.9	44.3	28.2
	S.E.	13.4	11.0	12.3	14.0	8.9
	N	10	10	10	10	10
	7					
	MEAN	451.	442.	445.	441.	387. a
% DIFFERENCE			-2.0	-1.3	-2.2	-14.2
	S.D.	45.6	39.6	40.5	47.5	34.4
	S.E.	14.4	12.5	12.8	15.0	10.9
	N	10	10	10	10	10
	8					
	MEAN	474.	461.	463.	456.	400. b
% DIFFERENCE			-2.7	-2.3	-3.8	-15.6
	S.D.	50.6	42.2	41.4	47.8	34.5
	S.E.	16.0	13.4	13.1	15.1	11.5
	N	10	10	10	10	9
	9					
	MEAN	474.	472.	472.	470.	406. b
% DIFFERENCE			-0.4	-0.4	-0.8	-14.3
	S.D.	52.6	46.7	43.5	42.5	32.8
	S.E.	16.6	14.8	13.8	13.4	10.9
	N	10	10	10	10	9

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

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

TABLE S6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF BODY WEIGHTS [G]

		MALES				
GROUP:		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	10					
	MEAN	492.	486.	484.	476.	413. b
% DIFFERENCE			-1.2	-1.6	-3.3	-16.1
	S.D.	53.4	45.9	45.6	43.7	33.7
	S.E.	16.9	14.5	14.4	14.6	11.2
	N	10	10	10	9	9
	11					
	MEAN	504.	493.	495.	480.	414. b
% DIFFERENCE			-2.2	-1.8	-4.8	-17.9
	S.D.	56.2	49.2	49.2	39.4	37.0
	S.E.	17.8	15.6	15.6	13.1	12.3
	N	10	10	10	9	9
	12					
	MEAN	510.	506.	496.	485.	414. b
% DIFFERENCE			-0.8	-2.7	-4.9	-18.8
	S.D.	57.4	47.9	45.7	45.8	38.3
	S.E.	18.1	15.1	14.5	15.3	12.8
	N	10	10	10	9	9
	12'					
	MEAN	509.	495.	500.	479.	407. b
% DIFFERENCE			-2.8	-1.8	-5.9	-20.0
	S.D.	57.6	41.1	49.6	43.5	42.0
	S.E.	18.2	13.0	15.7	14.5	14.0
	N	10	10	10	9	9

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

TABLE S6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF BODY WEIGHTS [G]

GROUP:		FEMALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	-2					
	MEAN	146.	148.	147.	148.	150.
% DIFFERENCE			1.4	0.7	1.4	2.7
	S.D.	5.9	7.8	8.6	5.7	7.7
	S.E.	1.9	2.5	2.7	1.8	2.4
	N	10	10	10	10	10
	-1					
	MEAN	168.	168.	168.	168.	167.
% DIFFERENCE			0.0	0.0	0.0	-0.6
	S.D.	11.4	8.1	11.4	8.9	10.5
	S.E.	3.6	2.6	3.6	2.8	3.3
	N	10	10	10	10	10
	0					
	MEAN	195.	196.	197.	195.	194.
% DIFFERENCE			0.5	1.0	0.0	-0.5
	S.D.	10.0	11.0	11.2	10.0	12.8
	S.E.	3.2	3.5	3.5	3.2	4.0
	N	10	10	10	10	10
	1					
	MEAN	214.	210.	211.	207.	209.
% DIFFERENCE			-1.9	-1.4	-3.3	-2.3
	S.D.	16.6	12.2	11.7	12.3	15.0
	S.E.	5.2	3.9	3.7	3.9	4.7
	N	10	10	10	10	10

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

TABLE S6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF BODY WEIGHTS [G]

		FEMALES				
GROUP:		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	2					
	MEAN	233.	230.	233.	224.	225.
%	DIFFERENCE		-1.3	0.0	-3.9	-3.4
	S.D.	17.5	7.6	17.1	17.1	23.2
	S.E.	5.5	2.4	5.4	5.4	7.3
	N	10	10	10	10	10
	3					
	MEAN	247.	244.	247.	239.	235.
%	DIFFERENCE		-1.2	0.0	-3.2	-4.9
	S.D.	18.8	9.1	18.0	18.1	24.0
	S.E.	6.0	2.9	5.7	5.7	7.6
	N	10	10	10	10	10
	4					
	MEAN	261.	254.	259.	249.	246.
%	DIFFERENCE		-2.7	-0.8	-4.6	-5.7
	S.D.	21.7	8.6	15.7	21.7	29.6
	S.E.	6.9	2.7	5.0	6.9	9.4
	N	10	10	10	10	10
	5					
	MEAN	271.	265.	268.	256.	250.
%	DIFFERENCE		-2.2	-1.1	-5.5	-7.7
	S.D.	22.8	10.1	16.9	21.1	27.1
	S.E.	7.2	3.2	5.3	6.7	8.6
	N	10	10	10	10	10

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

TABLE S6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF BODY WEIGHTS [G]

		FEMALES				
GROUP:		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	6					
	MEAN	280.	275.	273.	264.	261.
%	DIFFERENCE		-1.8	-2.5	-5.7	-6.8
	S.D.	22.5	10.7	14.8	19.6	33.0
	S.E.	7.1	3.4	4.7	6.2	10.4
	N	10	10	10	10	10
	7					
	MEAN	287.	280.	280.	266.	260.
%	DIFFERENCE		-2.4	-2.4	-7.3	-9.4
	S.D.	24.0	10.4	17.1	18.9	30.0
	S.E.	7.6	3.3	5.4	6.0	9.5
	N	10	10	10	10	10
	8					
	MEAN	293.	286.	290.	272.	268.
%	DIFFERENCE		-2.4	-1.0	-7.2	-8.5
	S.D.	24.7	13.8	17.5	18.6	29.9
	S.E.	7.8	4.4	5.5	5.9	9.5
	N	10	10	10	10	10
	9					
	MEAN	298.	293.	291.	277.	271.
%	DIFFERENCE		-1.7	-2.3	-7.0	-9.1
	S.D.	25.0	15.2	17.1	20.7	31.0
	S.E.	7.9	4.8	5.4	6.5	9.8
	N	10	10	10	10	10

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

TABLE S6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF BODY WEIGHTS [G]

GROUP:		FEMALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	10					
	MEAN	303.	296.	290.	280.	274.
% DIFFERENCE			-2.3	-4.3	-7.6	-9.6
	S.D.	24.9	12.8	16.1	18.3	31.6
	S.E.	7.9	4.1	5.1	5.8	10.0
	N	10	10	10	10	10
	11					
	MEAN	304.	297.	295.	280.	275.
% DIFFERENCE			-2.3	-3.0	-7.9	-9.5
	S.D.	24.9	16.2	17.0	19.8	30.6
	S.E.	7.9	5.1	5.4	6.3	9.7
	N	10	10	10	10	10
	12					
	MEAN	310.	296.	295.	282.	275.
% DIFFERENCE			-4.5	-4.8	-9.0	-11.3
	S.D.	25.5	15.8	18.4	19.4	31.1
	S.E.	8.1	5.0	5.8	6.1	9.8
	N	10	10	10	10	10
	12'					
	MEAN	306.	295.	299.	283.	267. a
% DIFFERENCE			-3.6	-2.3	-7.5	-12.7
	S.D.	30.2	18.8	20.5	20.4	33.2
	S.E.	9.5	6.0	6.5	6.4	10.5
	N	10	10	10	10	10

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

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

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10/13/2011
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PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF BODY WEIGHT CHANGES [G]

PAGE 1

GROUP:		MALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	-2 TO -1					
	MEAN	39.	40.	40.	39.	40.
	S.D.	5.8	8.0	6.0	8.1	7.2
	S.E.	1.8	2.5	1.9	2.6	2.3
	N	10	10	10	10	10
	-1 TO 0					
	MEAN	49.	50.	48.	48.	43.
	S.D.	5.3	5.7	5.5	6.6	4.5
	S.E.	1.7	1.8	1.7	2.1	1.4
	N	10	10	10	10	10
	0 TO 1					
	MEAN	31.	25.	26.	32.	21.
	S.D.	9.5	9.9	11.1	9.1	7.5
	S.E.	3.0	3.1	3.5	2.9	2.4
	N	10	10	10	10	10
	1 TO 2					
	MEAN	33.	33.	39.	36.	33.
	S.D.	10.0	7.5	6.5	9.7	9.8
	S.E.	3.2	2.4	2.1	3.1	3.1
	N	10	10	10	10	10
	2 TO 3					
	MEAN	29.	29.	27.	27.	19. a
	S.D.	8.2	8.6	8.5	7.8	7.5
	S.E.	2.6	2.7	2.7	2.5	2.4
	N	10	10	10	10	10

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2.
a = Significantly different from control group 2 at 0.05 using Dunnett's test

TABLE S7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF BODY WEIGHT CHANGES [G]

		MALES				
GROUP:		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	3 TO 4					
	MEAN	26.	25.	25.	23.	17. a
	S.D.	5.3	7.2	7.4	5.0	6.3
	S.E.	1.7	2.3	2.3	1.6	2.0
	N	10	10	10	10	10
	4 TO 5					
	MEAN	24.	23.	22.	24.	13. b
	S.D.	3.7	7.4	4.8	6.8	5.6
	S.E.	1.2	2.3	1.5	2.1	1.8
	N	10	10	10	10	10
	5 TO 6					
	MEAN	24.	22.	23.	20.	16.
	S.D.	8.0	9.7	7.4	5.0	5.6
	S.E.	2.5	3.1	2.3	1.6	1.8
	N	10	10	10	10	10
	6 TO 7					
	MEAN	13.	15.	13.	9.	2. b
	S.D.	7.8	7.7	4.7	6.4	8.8
	S.E.	2.5	2.4	1.5	2.0	2.8
	N	10	10	10	10	10
	7 TO 8					
	MEAN	23.	20.	18.	15.	17.
	S.D.	8.8	6.4	5.7	14.1	5.5
	S.E.	2.8	2.0	1.8	4.5	1.8
	N	10	10	10	10	9

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

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF BODY WEIGHT CHANGES [G]

PAGE 3

		MALES				
GROUP:		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	8 TO 9					
	MEAN	0.	10.	9.	14.	6.
	S.D.	14.4	6.8	4.9	10.0	5.9
	S.E.	4.6	2.2	1.6	3.2	2.0
	N	10	10	10	10	9
	9 TO 10					
	MEAN	18.	14.	12.	10.	6. b
	S.D.	11.2	6.0	5.6	4.0	4.3
	S.E.	3.5	1.9	1.8	1.3	1.4
	N	10	10	10	9	9
	10 TO 11					
	MEAN	12.	7.	10.	3.	1.
	S.D.	8.4	9.1	7.2	10.1	6.2
	S.E.	2.7	2.9	2.3	3.4	2.1
	N	10	10	10	9	9
	11 TO 12					
	MEAN	7.	13.	2.	5.	0.
	S.D.	6.9	16.7	7.2	13.2	8.0
	S.E.	2.2	5.3	2.3	4.4	2.7
	N	10	10	10	9	9
	12 TO 12'					
	MEAN	-1.	-11.	3.	-6.	-6.
	S.D.	8.1	21.1	6.5	7.5	14.9
	S.E.	2.5	6.7	2.1	2.5	5.0
	N	10	10	10	9	9

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

TABLE S7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF BODY WEIGHT CHANGES [G]

GROUP:		FEMALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	-2 TO -1					
	MEAN	21.	20.	21.	19.	17.
	S.D.	7.3	6.8	7.9	7.0	5.2
	S.E.	2.3	2.1	2.5	2.2	1.6
	N	10	10	10	10	10
	-1 TO 0					
	MEAN	28.	28.	30.	27.	27.
	S.D.	4.0	7.7	4.7	6.3	4.5
	S.E.	1.3	2.4	1.5	2.0	1.4
	N	10	10	10	10	10
	0 TO 1					
	MEAN	19.	14.	14.	12.	16.
	S.D.	10.0	9.7	8.0	6.4	5.8
	S.E.	3.2	3.1	2.5	2.0	1.8
	N	10	10	10	10	10
	1 TO 2					
	MEAN	19.	20.	22.	18.	16.
	S.D.	7.6	7.3	8.6	8.4	11.7
	S.E.	2.4	2.3	2.7	2.7	3.7
	N	10	10	10	10	10
	2 TO 3					
	MEAN	14.	14.	14.	15.	9.
	S.D.	9.3	5.8	9.1	5.0	6.1
	S.E.	2.9	1.8	2.9	1.6	1.9
	N	10	10	10	10	10

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

TABLE S7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF BODY WEIGHT CHANGES [G]

GROUP:		UNTREATED	FEMALES			
			0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	3 TO 4	MEAN	14.	11.	12.	11.
		S.D.	5.8	2.9	6.4	6.6
		S.E.	1.8	0.9	2.0	2.1
		N	10	10	10	10
	4 TO 5	MEAN	10.	11.	9.	4. a
		S.D.	6.1	7.0	3.0	4.9
		S.E.	1.9	2.2	1.0	1.6
		N	10	10	10	10
	5 TO 6	MEAN	9.	9.	8.	11.
		S.D.	8.5	5.1	4.7	7.8
		S.E.	2.7	1.6	1.5	2.5
		N	10	10	10	10
	6 TO 7	MEAN	8.	5.	2.	-1. a
		S.D.	8.3	5.0	2.5	3.7
		S.E.	2.6	1.6	0.8	1.2
		N	10	10	10	10
	7 TO 8	MEAN	6.	6.	6.	8.
		S.D.	9.0	6.1	4.9	3.6
		S.E.	2.9	1.9	1.5	1.1
		N	10	10	10	10

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2.
a = Significantly different from control group 2 at 0.05 using Dunnett's test

TABLE S7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF BODY WEIGHT CHANGES [G]

GROUP:		FEMALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	8 TO 9					
	MEAN	5.	6.	1.	5.	3.
	S.D.	11.1	4.3	5.6	6.4	4.6
	S.E.	3.5	1.4	1.8	2.0	1.5
	N	10	10	10	10	10
	9 TO 10					
	MEAN	5.	3.	-2.	3.	2.
	S.D.	7.4	5.7	4.7	5.8	4.4
	S.E.	2.3	1.8	1.5	1.8	1.4
	N	10	10	10	10	10
	10 TO 11					
	MEAN	2.	1.	6.	0.	2.
	S.D.	7.8	5.5	7.1	5.2	6.0
	S.E.	2.5	1.7	2.3	1.6	1.9
	N	10	10	10	10	10
	11 TO 12					
	MEAN	6.	-1. c	0.	3.	0.
	S.D.	6.6	5.6	7.9	5.5	7.6
	S.E.	2.1	1.8	2.5	1.7	2.4
	N	10	10	10	10	10
	12 TO 12'					
	MEAN	-4.	-2.	4.	1.	-8.
	S.D.	6.9	8.4	6.9	8.1	10.6
	S.E.	2.2	2.7	2.2	2.6	3.4
	N	10	10	10	10	10

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

PBFSTv5.40
10/13/2011
R:11/15/2011

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 1

GROUP:		MALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	0 TO					
	1					
	MEAN	31.	25.	26.	32.	21.
	S.D.	9.5	9.9	11.1	9.1	7.5
	S.E.	3.0	3.1	3.5	2.9	2.4
	N	10	10	10	10	10
	0 TO 2					
	MEAN	64.	58.	66.	68.	55.
	S.D.	16.3	10.0	13.0	14.5	9.7
	S.E.	5.2	3.2	4.1	4.6	3.1
	N	10	10	10	10	10
	0 TO 3					
	MEAN	92.	87.	92.	95.	73.
	S.D.	22.7	17.1	21.0	21.9	16.2
	S.E.	7.2	5.4	6.6	6.9	5.1
	N	10	10	10	10	10
	0 TO 4					
	MEAN	119.	111.	118.	119.	91.
	S.D.	27.0	21.2	21.9	24.8	20.8
	S.E.	8.5	6.7	6.9	7.8	6.6
	N	10	10	10	10	10
	0 TO 5					
	MEAN	143.	134.	139.	143.	104. a
	S.D.	28.9	24.4	26.1	28.8	22.9
	S.E.	9.2	7.7	8.3	9.1	7.2
	N	10	10	10	10	10

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2.
a = Significantly different from control group 2 at 0.05 using Dunnett's test

TABLE S8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF CUMULATIVE BODY WEIGHT CHANGES [G]

		MALES				
GROUP:		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	0 TO					
	6					
	MEAN	166.	156.	162.	163.	120. a
	S.D.	34.6	28.1	30.8	31.9	21.6
	S.E.	10.9	8.9	9.7	10.1	6.8
	N	10	10	10	10	10
	0 TO 7					
	MEAN	179.	171.	175.	172.	121. b
	S.D.	39.3	32.6	32.6	35.0	28.9
	S.E.	12.4	10.3	10.3	11.1	9.1
	N	10	10	10	10	10
	0 TO 8					
	MEAN	202.	190.	193.	187.	134. b
	S.D.	43.2	34.8	33.0	35.4	27.2
	S.E.	13.7	11.0	10.4	11.2	9.1
	N	10	10	10	10	9
	0 TO 9					
	MEAN	202.	200.	202.	201.	141. b
	S.D.	47.6	38.7	34.9	31.2	25.4
	S.E.	15.0	12.2	11.0	9.9	8.5
	N	10	10	10	10	9
	0 TO 10					
	MEAN	220.	214.	214.	208.	147. b
	S.D.	46.9	38.2	36.9	32.6	26.9
	S.E.	14.8	12.1	11.7	10.9	9.0
	N	10	10	10	9	9

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

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 3

GROUP:		MALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	0 TO 11					
	MEAN	232.	221.	225.	211.	148. b
	S.D.	49.4	40.6	39.8	30.5	29.0
	S.E.	15.6	12.9	12.6	10.2	9.7
	N	10	10	10	9	9
	0 TO 12					
	MEAN	239.	235.	226.	217.	148. b
	S.D.	50.5	40.1	36.5	35.7	32.1
	S.E.	16.0	12.7	11.6	11.9	10.7
	N	10	10	10	9	9
	0 TO 12'					
	MEAN	238.	224.	230.	211.	141. b
	S.D.	51.2	33.2	40.5	33.7	35.2
	S.E.	16.2	10.5	12.8	11.2	11.7
	N	10	10	10	9	9

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

TABLE S8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF CUMULATIVE BODY WEIGHT CHANGES [G]

GROUP:		FEMALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	0 TO					
	1					
	MEAN	19.	14.	14.	12.	16.
	S.D.	10.0	9.7	8.0	6.4	5.8
	S.E.	3.2	3.1	2.5	2.0	1.8
	N	10	10	10	10	10
	0 TO 2					
	MEAN	38.	34.	36.	29.	32.
	S.D.	11.4	8.2	7.8	10.9	16.2
	S.E.	3.6	2.6	2.5	3.5	5.1
	N	10	10	10	10	10
	0 TO 3					
	MEAN	52.	48.	49.	44.	41.
	S.D.	12.6	11.5	11.8	11.5	17.4
	S.E.	4.0	3.6	3.7	3.6	5.5
	N	10	10	10	10	10
	0 TO 4					
	MEAN	66.	59.	61.	54.	52.
	S.D.	14.4	12.3	10.0	15.3	23.3
	S.E.	4.6	3.9	3.1	4.8	7.4
	N	10	10	10	10	10
	0 TO 5					
	MEAN	76.	70.	71.	62.	56.
	S.D.	16.9	12.0	10.9	15.6	21.9
	S.E.	5.4	3.8	3.5	4.9	6.9
	N	10	10	10	10	10

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

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF CUMULATIVE BODY WEIGHT CHANGES [G]

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GROUP:		FEMALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	0 TO					
	6					
	MEAN	85.	79.	76.	69.	67.
	S.D.	15.8	12.4	8.3	15.0	26.9
	S.E.	5.0	3.9	2.6	4.7	8.5
	N	10	10	10	10	10
	0 TO 7					
	MEAN	92.	84.	83.	71.	66.
	S.D.	17.2	11.7	11.1	14.2	24.1
	S.E.	5.5	3.7	3.5	4.5	7.6
	N	10	10	10	10	10
	0 TO 8					
	MEAN	98.	90.	93.	77.	75.
	S.D.	19.0	15.6	11.9	13.5	25.1
	S.E.	6.0	4.9	3.8	4.3	7.9
	N	10	10	10	10	10
	0 TO 9					
	MEAN	103.	97.	94.	82.	78.
	S.D.	19.9	17.9	12.8	16.7	25.8
	S.E.	6.3	5.6	4.1	5.3	8.2
	N	10	10	10	10	10
	0 TO 10					
	MEAN	107.	100.	92.	85.	80.
	S.D.	17.8	16.0	10.8	14.7	26.8
	S.E.	5.6	5.1	3.4	4.6	8.5
	N	10	10	10	10	10

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

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 6

GROUP:		FEMALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	0 TO 11					
	MEAN	109.	101.	98.	85.	82.
	S.D.	20.1	19.3	11.4	14.2	26.4
	S.E.	6.4	6.1	3.6	4.5	8.4
	N	10	10	10	10	10
	0 TO 12					
	MEAN	115.	100.	98.	87.	81.
	S.D.	20.1	18.8	12.0	15.5	27.9
	S.E.	6.4	5.9	3.8	4.9	8.8
	N	10	10	10	10	10
	0 TO 12'					
	MEAN	111.	99.	102.	88.	73. a
	S.D.	25.0	22.1	16.0	16.2	28.1
	S.E.	7.9	7.0	5.1	5.1	8.9
	N	10	10	10	10	10

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2.
a = Significantly different from control group 2 at 0.05 using Dunnett's test

PBFSTv5.40
10/13/2011
R:11/15/2011

TABLE S9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF FOOD CONSUMPTION [G/ANIMAL/DAY]

GROUP:		MALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	-2 TO -1					
	MEAN	27.	27.	26.	25. a	26.
	S.D.	2.3	1.9	1.9	2.1	1.7
	S.E.	0.7	0.6	0.6	0.7	0.5
	N	10	10	10	10	10
	0 TO 1					
	MEAN	31.	31.	31.	30.	29.
	S.D.	2.6	2.1	2.5	2.8	1.7
	S.E.	0.8	0.7	0.8	0.9	0.5
	N	10	10	10	10	10
	1 TO 2					
	MEAN	33.	33.	34.	32.	32.
	S.D.	2.7	1.9	2.4	3.1	1.7
	S.E.	0.9	0.6	0.8	1.0	0.5
	N	10	10	10	10	10
	2 TO 3					
	MEAN	33.	34.	34.	34.	33.
	S.D.	3.1	2.3	2.6	4.1	2.2
	S.E.	1.0	0.7	0.8	1.3	0.7
	N	10	10	10	10	10
	3 TO 4					
	MEAN	32.	34.	34.	33.	32.
	S.D.	2.8	2.8	3.7	3.0	2.2
	S.E.	0.9	0.9	1.2	0.9	0.7
	N	10	10	10	10	10

STATISTICAL ANALYSIS PERFORMED USING AN ANOVA AND DUNNETT'S TEST (GROUPS 3, 4, 5) OR STUDENT'S T-TEST (GROUP 1)
For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2.
a = Significantly different from control group 2 at 0.05 using Dunnett's test

TABLE S9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF FOOD CONSUMPTION [G/ANIMAL/DAY]

		MALES				
GROUP:		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	4 TO 5					
	MEAN	33.	34.	33.	32.	36.
	S.D.	4.3	3.3	3.2	3.3	15.2
	S.E.	1.4	1.0	1.0	1.0	4.8
	N	10	10	10	10	10
	5 TO 6					
	MEAN	35.	35.	34.	33.	32.
	S.D.	4.1	2.9	3.3	3.8	2.1
	S.E.	1.3	0.9	1.0	1.2	0.7
	N	10	10	10	10	10
	6 TO 7					
	MEAN	37.	38.	38.	37.	35.
	S.D.	4.3	2.7	3.5	4.7	3.0
	S.E.	1.4	0.9	1.1	1.5	1.0
	N	10	10	10	10	10
	7 TO 8					
	MEAN	34.	34.	35.	33.	33.
	S.D.	4.6	4.1	3.2	5.7	3.5
	S.E.	1.5	1.3	1.0	1.8	1.2
	N	10	10	10	10	9
	8 TO 9					
	MEAN	37.	38.	38.	38.	36.
	S.D.	5.6	4.6	4.0	3.5	2.3
	S.E.	1.8	1.5	1.3	1.1	0.8
	N	10	10	10	10	9

STATISTICAL ANALYSIS PERFORMED USING AN ANOVA AND DUNNETT'S TEST (GROUPS 3, 4, 5) OR STUDENT'S T-TEST (GROUP 1)
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

TABLE S9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF FOOD CONSUMPTION [G/ANIMAL/DAY]

		MALES				
GROUP:		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	9 TO 10					
	MEAN	35.	38.	38.	36.	36.
	S.D.	3.7	4.3	2.9	3.4	2.1
	S.E.	1.2	1.4	0.9	1.1	0.7
	N	10	10	10	9	9
	10 TO 11					
	MEAN	39.	40.	39.	39.	37.
	S.D.	4.4	4.0	3.3	3.6	1.6
	S.E.	1.4	1.3	1.0	1.2	0.5
	N	10	10	10	9	9
	11 TO 12					
	MEAN	37.	38.	38.	39.	37.
	S.D.	4.5	8.7	3.6	4.1	2.7
	S.E.	1.4	2.7	1.1	1.4	0.9
	N	10	10	10	9	9
	12 TO 12'					
	MEAN	36.	37.	43.	42.	39.
	S.D.	4.9	12.5	4.3	5.4	4.8
	S.E.	1.5	3.9	1.4	1.8	1.6
	N	10	10	10	9	9

STATISTICAL ANALYSIS PERFORMED USING AN ANOVA AND DUNNETT'S TEST (GROUPS 3, 4, 5) OR STUDENT'S T-TEST (GROUP 1)
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
' = SECOND WEEKLY INTERVAL

TABLE S9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF FOOD CONSUMPTION [G/ANIMAL/DAY]

GROUP:		UNTREATED	FEMALES			
			0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	-2 TO -1					
	MEAN	21.	21.	21.	21.	22.
	S.D.	2.0	2.0	2.1	2.3	3.2
	S.E.	0.6	0.6	0.7	0.7	1.0
	N	10	10	10	10	10
	0 TO 1					
	MEAN	26.	26.	25.	24.	24.
	S.D.	1.8	1.4	2.1	1.7	2.1
	S.E.	0.6	0.5	0.7	0.5	0.7
	N	10	10	10	10	10
	1 TO 2					
	MEAN	26.	27.	26.	25.	25.
	S.D.	2.0	1.7	3.3	2.1	3.0
	S.E.	0.6	0.5	1.1	0.7	0.9
	N	10	10	10	10	10
	2 TO 3					
	MEAN	26.	29. c	27.	27.	30.
	S.D.	2.1	2.5	2.2	2.1	4.7
	S.E.	0.7	0.8	0.7	0.7	1.5
	N	10	10	10	10	10
	3 TO 4					
	MEAN	25.	27. d	26.	25.	26.
	S.D.	2.3	1.5	3.3	2.3	3.4
	S.E.	0.7	0.5	1.1	0.7	1.1
	N	10	10	10	10	10

STATISTICAL ANALYSIS PERFORMED USING AN ANOVA AND DUNNETT'S TEST (GROUPS 3, 4, 5) OR STUDENT'S T-TEST (GROUP 1)
For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2.
c = Significantly different from control group 1 at 0.05 using Student's t-Test
d = Significantly different from control group 1 at 0.01 using Student's t-Test

TABLE S9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF FOOD CONSUMPTION [G/ANIMAL/DAY]

GROUP:		UNTREATED	FEMALES			
			0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	4 TO 5	MEAN	24.	27. c	25.	25.
		S.D.	2.2	1.8	2.5	3.0
		S.E.	0.7	0.6	0.8	1.0
		N	10	10	10	10
	5 TO 6	MEAN	25.	27.	26.	25.
		S.D.	2.7	2.5	4.5	2.9
		S.E.	0.8	0.8	1.4	0.9
		N	10	10	10	10
	6 TO 7	MEAN	29.	30.	28.	28.
		S.D.	2.8	2.6	2.9	3.3
		S.E.	0.9	0.8	0.9	1.0
		N	10	10	10	10
	7 TO 8	MEAN	24.	25.	23.	25.
		S.D.	3.0	2.7	2.9	3.1
		S.E.	0.9	0.9	0.9	1.0
		N	10	10	10	10
	8 TO 9	MEAN	26.	30. c	28.	29.
		S.D.	3.1	2.4	2.4	3.2
		S.E.	1.0	0.7	0.8	1.0
		N	10	10	10	10

STATISTICAL ANALYSIS PERFORMED USING AN ANOVA AND DUNNETT'S TEST (GROUPS 3, 4, 5) OR STUDENT'S T-TEST (GROUP 1)
For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2.
c = Significantly different from control group 1 at 0.05 using Student's t-Test

TABLE S9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF FOOD CONSUMPTION [G/ANIMAL/DAY]

GROUP:		UNTREATED	FEMALES			
			0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WEEK	9 TO 10					
	MEAN	27.	30. c	27.	28.	29.
	S.D.	2.0	2.8	2.6	2.3	4.1
	S.E.	0.6	0.9	0.8	0.7	1.3
	N	10	10	10	10	10
	10 TO 11					
	MEAN	29.	30.	30.	30.	30.
	S.D.	2.2	3.4	2.4	1.6	3.1
	S.E.	0.7	1.1	0.8	0.5	1.0
	N	10	10	10	10	10
	11 TO 12					
	MEAN	27.	29.	29.	28.	29.
	S.D.	2.6	3.7	5.2	3.2	3.8
	S.E.	0.8	1.2	1.6	1.0	1.2
	N	10	10	10	10	10
	12 TO 12'					
	MEAN	27.	29.	33.	33.	25.
	S.D.	3.7	3.3	5.3	8.9	4.3
	S.E.	1.2	1.0	1.7	2.8	1.4
	N	10	10	10	10	10

STATISTICAL ANALYSIS PERFORMED USING AN ANOVA AND DUNNETT'S TEST (GROUPS 3, 4, 5) OR STUDENT'S T-TEST (GROUP 1)
For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2.
c = Significantly different from control group 1 at 0.05 using Student's t-Test
' = SECOND WEEKLY INTERVAL

PBFSTv5.41
04/16/2012
R:04/16/2012

TABLE S10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF HEMATOLOGY VALUES

		MALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
WBC (thous/uL)						
WEEK 12	MEAN	10.30	13.25 ^c	11.05	10.92	9.88
	% DIFFERENCE		28.6	7.3	6.0	-4.1
	S.D.	1.418	3.080	1.839	3.429	3.205
	S.E.	0.448	0.974	0.613	1.143	1.068
	N	10	10	9	9	9
RBC (mil/uL)						
WEEK 12	MEAN	8.80	9.03	8.88	8.16 ^b	8.14 ^b
	% DIFFERENCE		2.6	0.9	-7.3	-7.5
	S.D.	0.372	0.473	0.416	0.347	0.567
	S.E.	0.118	0.149	0.139	0.116	0.189
	N	10	10	9	9	9
HGB (g/dL)						
WEEK 12	MEAN	15.1	15.2	15.1	14.1 ^a	13.9 ^b
	% DIFFERENCE		0.7	0.0	-6.6	-7.9
	S.D.	0.56	0.80	0.66	0.73	0.99
	S.E.	0.18	0.25	0.22	0.24	0.33
	N	10	10	9	9	9
HCT (%)						
WEEK 12	MEAN	45.6	46.5	46.1	42.2 ^b	42.3 ^b
	% DIFFERENCE		2.0	1.1	-7.5	-7.2
	S.D.	1.65	2.82	2.80	2.37	2.92
	S.E.	0.52	0.89	0.93	0.79	0.97
	N	10	10	9	9	9

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

		MALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
MCV (fL)						
WEEK 12	MEAN	51.8	51.5	51.9	51.8	52.0
	% DIFFERENCE		-0.6	0.2	0.0	0.4
	S.D.	1.59	2.09	1.57	1.55	1.50
	S.E.	0.50	0.66	0.52	0.52	0.50
	N	10	10	9	9	9
MCH (pg)						
WEEK 12	MEAN	17.2	16.8	17.1	17.3	17.1
	% DIFFERENCE		-2.3	-0.6	0.6	-0.6
	S.D.	0.60	0.74	0.42	0.49	0.58
	S.E.	0.19	0.24	0.14	0.16	0.19
	N	10	10	9	9	9
MCHC (g/dL)						
WEEK 12	MEAN	33.1	32.7	32.9	33.4	32.9
	% DIFFERENCE		-1.2	-0.6	0.9	-0.6
	S.D.	0.60	0.49	0.66	0.63	0.55
	S.E.	0.19	0.16	0.22	0.21	0.18
	N	10	10	9	9	9
PLATELET (thous/uL)						
WEEK 12	MEAN	979.	1056.	965.	932.	923.
	% DIFFERENCE		7.9	-1.4	-4.8	-5.7
	S.D.	73.4	119.6	117.5	188.0	159.2
	S.E.	23.2	37.8	39.2	62.7	53.1
	N	10	10	9	9	9

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

TABLE S10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF HEMATOLOGY VALUES

		MALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
PT (seconds)						
WEEK 12	MEAN	17.7	18.3	18.0	17.6a	17.7
	% DIFFERENCE		3.4	1.7	-0.6	0.0
	S.D.	0.84	0.76	0.60	0.46	0.55
	S.E.	0.27	0.24	0.20	0.15	0.18
	N	10	10	9	9	9
APTT (seconds)						
WEEK 12	MEAN	21.2	21.1	22.3	20.0	18.8a
	% DIFFERENCE		-0.5	5.2	-5.7	-11.3
	S.D.	1.99	2.72	2.06	1.73	1.01
	S.E.	0.63	0.86	0.69	0.58	0.34
	N	10	10	9	9	9
RETIC (%)						
WEEK 12	MEAN	2.0	1.8	1.7	2.2	2.4a
	% DIFFERENCE		-10.0	-15.0	10.0	20.0
	S.D.	0.46	0.30	0.31	0.53	0.75
	S.E.	0.14	0.10	0.10	0.18	0.25
	N	10	10	9	9	9
RETIC ABSOLUTE (thous/uL)						
WEEK 12	MEAN	177.8	162.0	146.5	175.0	195.9
	% DIFFERENCE		-8.9	-17.6	-1.6	10.2
	S.D.	37.99	27.19	24.42	37.62	52.10
	S.E.	12.01	8.60	8.14	12.54	17.37
	N	10	10	9	9	9

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

TABLE S10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF HEMATOLOGY VALUES

		MALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
NEU (%)						
WEEK 12	MEAN	17.4	21.8	17.8	18.3	19.2
	% DIFFERENCE		25.3	2.3	5.2	10.3
	S.D.	5.89	3.96	4.59	6.34	7.65
	S.E.	1.86	1.25	1.53	2.11	2.55
	N	10	10	9	9	9
LYMPH (%)						
WEEK 12	MEAN	78.0	73.0	77.6	76.8	77.4
	% DIFFERENCE		-6.4	-0.5	-1.5	-0.8
	S.D.	6.47	5.05	5.52	7.06	8.30
	S.E.	2.05	1.60	1.84	2.35	2.77
	N	10	10	9	9	9
MONO (%)						
WEEK 12	MEAN	2.4	2.7	2.7	2.8	1.9
	% DIFFERENCE		12.5	12.5	16.7	-20.8
	S.D.	0.74	0.92	0.84	1.10	0.48
	S.E.	0.24	0.29	0.28	0.37	0.16
	N	10	10	9	9	9
EOS (%)						
WEEK 12	MEAN	1.1	1.0	0.7	0.4b	0.3b
	% DIFFERENCE		-9.1	-36.4	-63.6	-72.7
	S.D.	0.42	0.45	0.23	0.22	0.17
	S.E.	0.13	0.14	0.08	0.07	0.06
	N	10	10	9	9	9

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

TABLE S10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF HEMATOLOGY VALUES

		MALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
BASO (%)						
WEEK 12	MEAN	0.4	0.4	0.5	0.4	0.4
	% DIFFERENCE		0.0	25.0	0.0	0.0
	S.D.	0.14	0.18	0.19	0.08	0.09
	S.E.	0.05	0.06	0.06	0.03	0.03
	N	10	10	9	9	9
LUC (%)						
WEEK 12	MEAN	0.8	1.0	0.7	1.2	0.8
	% DIFFERENCE		25.0	-12.5	50.0	0.0
	S.D.	0.49	0.69	0.34	1.00	0.46
	S.E.	0.16	0.22	0.11	0.33	0.15
	N	10	10	9	9	9
NEU ABSOLUTE (thous/uL)						
WEEK 12	MEAN	1.80	2.85 ^c	2.00	1.97	1.96
	% DIFFERENCE		58.3	11.1	9.4	8.9
	S.D.	0.636	0.685	0.683	0.808	1.356
	S.E.	0.201	0.217	0.228	0.269	0.452
	N	10	10	9	9	9
LYMPH ABSOLUTE (thous/uL)						
WEEK 12	MEAN	8.03	9.74	8.53	8.45	7.56
	% DIFFERENCE		21.3	6.2	5.2	-5.9
	S.D.	1.286	2.540	1.301	3.042	2.007
	S.E.	0.407	0.803	0.434	1.014	0.669
	N	10	10	9	9	9

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

TABLE S10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF HEMATOLOGY VALUES

		MALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY

MONO ABSOLUTE (thous/uL)						
WEEK 12	MEAN	0.24	0.36c	0.30	0.30	0.18b
	% DIFFERENCE		50.0	25.0	25.0	-25.0
	S.D.	0.081	0.109	0.123	0.102	0.080
	S.E.	0.026	0.034	0.041	0.034	0.027
	N	10	10	9	9	9
EOS ABSOLUTE (thous/uL)						
WEEK 12	MEAN	0.12	0.13	0.08a	0.05b	0.04b
	% DIFFERENCE		8.3	-33.3	-58.3	-66.7
	S.D.	0.050	0.059	0.029	0.029	0.036
	S.E.	0.016	0.019	0.010	0.010	0.012
	N	10	10	9	9	9
BASO ABSOLUTE (thous/uL)						
WEEK 12	MEAN	0.04	0.06	0.06	0.05	0.04
	% DIFFERENCE		50.0	50.0	25.0	0.0
	S.D.	0.015	0.025	0.026	0.019	0.014
	S.E.	0.005	0.008	0.009	0.006	0.005
	N	10	10	9	9	9
LUC ABSOLUTE (thous/uL)						
WEEK 12	MEAN	0.08	0.13	0.08	0.12	0.09
	% DIFFERENCE		62.5	0.0	50.0	12.5
	S.D.	0.048	0.100	0.046	0.083	0.099
	S.E.	0.015	0.032	0.015	0.028	0.033
	N	10	10	9	9	9

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

TABLE S10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF HEMATOLOGY VALUES

		MALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
RDW (%)						
WEEK 12	MEAN	11.8	11.7	11.7	13.1b	14.3b
	% DIFFERENCE		-0.8	-0.8	11.0	21.2
	S.D.	0.37	0.45	0.66	1.02	1.30
	S.E.	0.12	0.14	0.22	0.34	0.43
	N	10	10	9	9	9
HDW (g/dL)						
WEEK 12	MEAN	2.26	2.19	2.23	2.67b	2.78b
	% DIFFERENCE		-3.1	-1.3	18.1	23.0
	S.D.	0.137	0.081	0.161	0.289	0.235
	S.E.	0.043	0.026	0.054	0.096	0.078
	N	10	10	9	9	9

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

		FEMALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY

WBC (thous/uL)						
WEEK 12	MEAN	8.24	9.72	8.03	8.74	8.97
	% DIFFERENCE		18.0	-2.5	6.1	8.9
	S.D.	2.186	1.956	1.301	1.866	2.321
	S.E.	0.691	0.652	0.412	0.590	0.734
	N	10	9	10	10	10
RBC (mil/uL)						
WEEK 12	MEAN	8.27	8.10	8.22	8.31	7.67
	% DIFFERENCE		-2.1	-0.6	0.5	-7.3
	S.D.	0.473	0.447	0.314	0.487	0.608
	S.E.	0.150	0.149	0.099	0.154	0.192
	N	10	9	10	10	10
HGB (g/dL)						
WEEK 12	MEAN	14.9	14.8	14.8	14.6	13.4b
	% DIFFERENCE		-0.7	-0.7	-2.0	-10.1
	S.D.	0.59	0.70	0.61	0.74	0.68
	S.E.	0.19	0.23	0.19	0.23	0.22
	N	10	9	10	10	10
HCT (%)						
WEEK 12	MEAN	44.2	43.7	43.9	43.0	39.7b
	% DIFFERENCE		-1.1	-0.7	-2.7	-10.2
	S.D.	2.11	2.25	2.07	2.32	2.31
	S.E.	0.67	0.75	0.65	0.73	0.73
	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

TABLE S10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF HEMATOLOGY VALUES

		FEMALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY

MCV (fL)						
WEEK 12	MEAN	53.5	54.0	53.4	51.8a	51.9a
	% DIFFERENCE		0.9	-0.2	-3.2	-3.0
	S.D.	1.56	0.78	1.69	1.12	2.05
	S.E.	0.49	0.26	0.53	0.35	0.65
	N	10	9	10	10	10
MCH (pg)						
WEEK 12	MEAN	18.1	18.3	18.0	17.6a	17.5a
	% DIFFERENCE		1.1	-0.6	-2.8	-3.3
	S.D.	0.52	0.32	0.56	0.42	0.81
	S.E.	0.16	0.11	0.18	0.13	0.26
	N	10	9	10	10	10
MCHC (g/dL)						
WEEK 12	MEAN	33.8	33.8	33.6	33.9	33.8
	% DIFFERENCE		0.0	-0.6	0.3	0.0
	S.D.	0.66	0.64	0.47	0.63	0.51
	S.E.	0.21	0.21	0.15	0.20	0.16
	N	10	9	10	10	10
PLATELET (thous/uL)						
WEEK 12	MEAN	1062.	1049.	1085.	1022.	1029.
	% DIFFERENCE		-1.2	2.2	-3.8	-3.1
	S.D.	135.8	133.0	113.6	164.3	179.0
	S.E.	43.0	44.3	35.9	51.9	56.6
	N	10	9	10	10	10

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

TABLE S10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF HEMATOLOGY VALUES

		FEMALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
PT (seconds)						
WEEK 12	MEAN	17.1	16.7	17.0	17.0	17.3
	% DIFFERENCE		-2.3	-0.6	-0.6	1.2
	S.D.	0.82	0.78	0.52	0.40	0.45
	S.E.	0.27	0.26	0.16	0.13	0.14
	N	9	9	10	10	10
APTT (seconds)						
WEEK 12	MEAN	17.4	18.6	17.8	18.0	17.4
	% DIFFERENCE		6.9	2.3	3.4	0.0
	S.D.	1.33	1.52	1.20	1.18	1.42
	S.E.	0.44	0.51	0.38	0.37	0.45
	N	9	9	10	10	10
RETIC (%)						
WEEK 12	MEAN	1.9	2.0	1.8	1.5	2.3
	% DIFFERENCE		5.3	-5.3	-21.1	21.1
	S.D.	0.48	0.39	0.37	0.39	0.85
	S.E.	0.15	0.13	0.12	0.12	0.27
	N	10	9	10	10	10
RETIC ABSOLUTE (thous/uL)						
WEEK 12	MEAN	157.2	163.6	149.3	123.4	171.2
	% DIFFERENCE		4.1	-5.0	-21.5	8.9
	S.D.	37.89	30.52	27.85	29.15	58.55
	S.E.	11.98	10.17	8.81	9.22	18.52
	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.
None significantly different from control group

TABLE S10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF HEMATOLOGY VALUES

		FEMALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
NEU (%)						
WEEK 12	MEAN	12.0	15.0	14.5	17.5	18.7
	% DIFFERENCE		25.0	20.8	45.8	55.8
	S.D.	2.92	3.42	5.42	7.57	7.45
	S.E.	0.92	1.14	1.71	2.39	2.36
	N	10	9	10	10	10
LYMPH (%)						
WEEK 12	MEAN	83.8	79.9c	80.5	77.4	76.9
	% DIFFERENCE		-4.7	-3.9	-7.6	-8.2
	S.D.	2.98	3.48	4.96	8.38	8.00
	S.E.	0.94	1.16	1.57	2.65	2.53
	N	10	9	10	10	10
MONO (%)						
WEEK 12	MEAN	1.9	2.7c	2.6	3.0	2.4
	% DIFFERENCE		42.1	36.8	57.9	26.3
	S.D.	0.53	0.76	0.61	1.04	0.86
	S.E.	0.17	0.25	0.19	0.33	0.27
	N	10	9	10	10	10
EOS (%)						
WEEK 12	MEAN	1.1	1.0	0.9	0.5b	0.4b
	% DIFFERENCE		-9.1	-18.2	-54.5	-63.6
	S.D.	0.41	0.32	0.34	0.17	0.22
	S.E.	0.13	0.11	0.11	0.05	0.07
	N	10	9	10	10	10

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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

TABLE S10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF HEMATOLOGY VALUES

		FEMALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
BASO (%)						
WEEK 12	MEAN	0.5	0.5	0.4	0.5	0.4
	% DIFFERENCE		0.0	-20.0	0.0	-20.0
	S.D.	0.14	0.17	0.13	0.17	0.21
	S.E.	0.04	0.06	0.04	0.05	0.07
	N	10	9	10	10	10
LUC (%)						
WEEK 12	MEAN	0.6	1.0	1.0	1.1	1.2
	% DIFFERENCE		66.7	66.7	83.3	100.0
	S.D.	0.20	0.68	0.32	0.33	0.55
	S.E.	0.06	0.23	0.10	0.10	0.17
	N	10	9	10	10	10
NEU ABSOLUTE (thous/uL)						
WEEK 12	MEAN	0.96	1.45 ^c	1.16	1.52	1.78
	% DIFFERENCE		51.0	20.8	58.3	85.4
	S.D.	0.215	0.444	0.437	0.807	1.083
	S.E.	0.068	0.148	0.138	0.255	0.342
	N	10	9	10	10	10
LYMPH ABSOLUTE (thous/uL)						
WEEK 12	MEAN	6.95	7.78	6.47	6.78	6.79
	% DIFFERENCE		11.9	-6.9	-2.4	-2.3
	S.D.	2.043	1.617	1.170	1.689	1.351
	S.E.	0.646	0.539	0.370	0.534	0.427
	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.
c = Significantly different from control group 1 at 0.05 using Student's t-Test

		FEMALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY

MONO ABSOLUTE (thous/uL)						
WEEK 12	MEAN	0.16	0.26c	0.21	0.26	0.22
	% DIFFERENCE		62.5	31.3	62.5	37.5
	S.D.	0.053	0.083	0.049	0.125	0.124
	S.E.	0.017	0.028	0.015	0.040	0.039
	N	10	9	10	10	10
EOS ABSOLUTE (thous/uL)						
WEEK 12	MEAN	0.09	0.10	0.07	0.04b	0.04b
	% DIFFERENCE		11.1	-22.2	-55.6	-55.6
	S.D.	0.034	0.030	0.029	0.020	0.028
	S.E.	0.011	0.010	0.009	0.006	0.009
	N	10	9	10	10	10
BASO ABSOLUTE (thous/uL)						
WEEK 12	MEAN	0.04	0.04	0.04	0.04	0.04
	% DIFFERENCE		0.0	0.0	0.0	0.0
	S.D.	0.019	0.014	0.011	0.016	0.020
	S.E.	0.006	0.005	0.003	0.005	0.006
	N	10	9	10	10	10
LUC ABSOLUTE (thous/uL)						
WEEK 12	MEAN	0.05	0.09c	0.08	0.10	0.11
	% DIFFERENCE		80.0	60.0	100.0	120.0
	S.D.	0.018	0.061	0.026	0.039	0.059
	S.E.	0.006	0.020	0.008	0.012	0.019
	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

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

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF HEMATOLOGY VALUES

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		FEMALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
RDW (%)						
WEEK 12	MEAN	11.1	11.2	11.1	11.6	12.6b
	% DIFFERENCE		0.9	0.0	4.5	13.5
	S.D.	0.28	0.50	0.34	0.40	0.75
	S.E.	0.09	0.17	0.11	0.13	0.24
	N	10	9	10	10	10
HDW (g/dL)						
WEEK 12	MEAN	2.05	2.16	2.10	2.24	2.55b
	% DIFFERENCE		5.4	2.4	9.3	24.4
	S.D.	0.112	0.182	0.107	0.134	0.189
	S.E.	0.035	0.061	0.034	0.042	0.060
	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

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TABLE S11
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF SERUM CHEMISTRY VALUES

		MALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
ALBUMIN (g/dL)						
WEEK 12	MEAN	3.9	3.8	3.9	3.8	3.9
	% DIFFERENCE		-2.6	0.0	-2.6	0.0
	S.D.	0.13	0.21	0.19	0.32	0.24
	S.E.	0.04	0.07	0.06	0.11	0.08
	N	10	10	10	9	9
TOTAL PROTEIN (g/dL)						
WEEK 12	MEAN	6.5	6.6	6.3	6.2	6.1
	% DIFFERENCE		1.5	-3.1	-4.6	-6.2
	S.D.	0.33	0.38	0.39	0.43	0.33
	S.E.	0.10	0.12	0.12	0.14	0.11
	N	10	10	10	9	9
GLOBULIN (g/dL)						
WEEK 12	MEAN	2.5	2.8c	2.4b	2.4b	2.2b
	% DIFFERENCE		12.0	-4.0	-4.0	-12.0
	S.D.	0.29	0.27	0.29	0.24	0.23
	S.E.	0.09	0.08	0.09	0.08	0.08
	N	10	10	10	9	9
A/G RATIO						
WEEK 12	MEAN	1.58	1.34c	1.64b	1.55a	1.76b
	% DIFFERENCE		-15.2	3.8	-1.9	11.4
	S.D.	0.221	0.127	0.202	0.171	0.214
	S.E.	0.070	0.040	0.064	0.057	0.071
	N	10	10	10	9	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.
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
c = Significantly different from control group 1 at 0.05 using Student's t-Test

TABLE S11
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF SERUM CHEMISTRY VALUES

		MALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY

TOTAL BILI (mg/dL)						
WEEK 12	MEAN	0.07	0.08	0.06	0.05	0.07
	% DIFFERENCE		14.3	-14.3	-28.6	0.0
	S.D.	0.013	0.020	0.030	0.013	0.029
	S.E.	0.004	0.006	0.009	0.004	0.010
	N	10	10	10	9	9
UREA NITROGEN (mg/dL)						
WEEK 12	MEAN	13.6	14.8	16.1	18.8b	21.9b
	% DIFFERENCE		8.8	18.4	38.2	61.0
	S.D.	2.02	2.39	2.13	1.86	4.06
	S.E.	0.64	0.76	0.67	0.62	1.35
	N	10	10	10	9	9
CREATININE (mg/dL)						
WEEK 12	MEAN	0.2	0.2	0.2	0.3	0.3
	% DIFFERENCE		0.0	0.0	50.0	50.0
	S.D.	0.04	0.06	0.07	0.07	0.05
	S.E.	0.01	0.02	0.02	0.02	0.02
	N	10	10	10	9	9
ALP (U/L)						
WEEK 12	MEAN	92.	80.	88.	78.	97.
	% DIFFERENCE		-13.0	-4.3	-15.2	5.4
	S.D.	26.6	17.2	23.1	22.3	27.3
	S.E.	8.4	5.5	7.3	7.4	9.1
	N	10	10	10	9	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.
b = Significantly different from control group 2 at 0.01 using Dunnett's test

TABLE S11
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF SERUM CHEMISTRY VALUES

		MALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
ALT (U/L)						
WEEK 12	MEAN	46.	48.	49.	43.	50.
	% DIFFERENCE		4.3	6.5	-6.5	8.7
	S.D.	11.7	9.1	5.8	6.8	15.6
	S.E.	3.7	2.9	1.8	2.3	5.2
	N	10	10	10	9	9
AST (U/L)						
WEEK 12	MEAN	103.	122.	126.	125.	138.
	% DIFFERENCE		18.4	22.3	21.4	34.0
	S.D.	11.8	29.5	21.2	38.2	32.5
	S.E.	3.7	9.3	6.7	12.7	10.8
	N	10	10	10	9	9
GGT (U/L)						
WEEK 12	MEAN	0.4	0.4	0.5	0.4	1.7d
	% DIFFERENCE		0.0	25.0	0.0	325.0
	S.D.	0.31	0.39	0.46	0.36	0.78
	S.E.	0.10	0.12	0.15	0.12	0.26
	N	10	10	10	9	9
GLUCOSE (mg/dL)						
WEEK 12	MEAN	147.	130.	133.	131.	134.
	% DIFFERENCE		-11.6	-9.5	-10.9	-8.8
	S.D.	26.1	14.0	9.5	21.9	9.0
	S.E.	8.3	4.4	3.0	7.3	3.0
	N	10	10	10	9	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.
d = Significantly different from control group 2 at 0.01 using Dunn's test

TABLE S11
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF SERUM CHEMISTRY VALUES

		MALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
CHOLESTEROL (mg/dL)						
WEEK 12	MEAN	58.	48.	52.	70. b	75. b
	% DIFFERENCE		-17.2	-10.3	20.7	29.3
	S.D.	17.8	10.2	9.6	15.6	17.6
	S.E.	5.6	3.2	3.0	5.2	5.9
	N	10	10	10	9	9
CALCIUM (mg/dL)						
WEEK 12	MEAN	11.4	11.3	11.3	11.2	11.2
	% DIFFERENCE		-0.9	-0.9	-1.8	-1.8
	S.D.	0.47	0.73	0.42	0.58	0.32
	S.E.	0.15	0.23	0.13	0.19	0.11
	N	10	10	10	9	9
CHLORIDE (mEq/L)						
WEEK 12	MEAN	104.	103.	103.	104.	105. b
	% DIFFERENCE		-1.0	-1.0	0.0	1.0
	S.D.	2.1	1.6	1.5	1.7	1.1
	S.E.	0.7	0.5	0.5	0.6	0.4
	N	10	10	10	9	9
PHOSPHORUS (mg/dL)						
WEEK 12	MEAN	8.4	8.7	8.7	8.1	8.7
	% DIFFERENCE		3.6	3.6	-3.6	3.6
	S.D.	0.72	0.81	0.90	1.05	1.48
	S.E.	0.23	0.26	0.29	0.35	0.49
	N	10	10	10	9	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.
b = Significantly different from control group 2 at 0.01 using Dunnett's test

TABLE S11
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF SERUM CHEMISTRY VALUES

		MALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
POTASSIUM (mEq/L)						
WEEK 12	MEAN	5.00	5.57 ^c	5.93	5.14	5.91
	% DIFFERENCE		11.4	18.6	2.8	18.2
	S.D.	0.537	0.619	1.329	0.431	1.221
	S.E.	0.170	0.196	0.420	0.144	0.407
	N	10	10	10	9	9
SODIUM (mEq/L)						
WEEK 12	MEAN	147.	147.	146.	147.	147.
	% DIFFERENCE		0.0	-0.7	0.0	0.0
	S.D.	1.2	1.6	1.3	1.7	2.5
	S.E.	0.4	0.5	0.4	0.6	0.8
	N	10	10	10	9	9
TRIGLYCERIDE (mg/dL)						
WEEK 12	MEAN	20.	20.	17.	16.	33.
	% DIFFERENCE		0.0	-15.0	-20.0	65.0
	S.D.	8.2	19.1	6.8	7.5	58.5
	S.E.	2.6	6.1	2.1	2.5	19.5
	N	10	10	10	9	9
SDH (U/L)						
WEEK 12	MEAN	12.	10.	11.	11.	10.
	% DIFFERENCE		-16.7	-8.3	-8.3	-16.7
	S.D.	4.5	6.0	4.0	3.7	3.3
	S.E.	1.4	1.9	1.3	1.2	1.1
	N	10	10	9	9	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.
c = Significantly different from control group 1 at 0.05 using Student's t-Test

TABLE S11
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF SERUM CHEMISTRY VALUES

		FEMALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
ALBUMIN (g/dL)						
WEEK 12	MEAN	5.0	4.5c	4.8	5.0b	4.9
	% DIFFERENCE		-10.0	-4.0	0.0	-2.0
	S.D.	0.35	0.27	0.38	0.32	0.26
	S.E.	0.11	0.09	0.12	0.10	0.08
	N	10	10	10	10	10
TOTAL PROTEIN (g/dL)						
WEEK 12	MEAN	7.3	7.0	7.0	7.3	7.0
	% DIFFERENCE		-4.1	-4.1	0.0	-4.1
	S.D.	0.38	0.52	0.48	0.41	0.33
	S.E.	0.12	0.16	0.15	0.13	0.10
	N	10	10	10	10	10
GLOBULIN (g/dL)						
WEEK 12	MEAN	2.3	2.5	2.2a	2.3	2.2a
	% DIFFERENCE		8.7	-4.3	0.0	-4.3
	S.D.	0.24	0.29	0.19	0.26	0.18
	S.E.	0.07	0.09	0.06	0.08	0.06
	N	10	10	10	10	10
A/G RATIO						
WEEK 12	MEAN	2.25	1.84c	2.16a	2.24b	2.26b
	% DIFFERENCE		-18.2	-4.0	-0.4	0.4
	S.D.	0.322	0.178	0.229	0.280	0.240
	S.E.	0.102	0.056	0.072	0.089	0.076
	N	10	10	10	10	10

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

TABLE S11
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF SERUM CHEMISTRY VALUES

		FEMALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY

TOTAL BILI (mg/dL)						
WEEK 12	MEAN	0.11	0.10	0.11	0.10	0.10
	% DIFFERENCE		-9.1	0.0	-9.1	-9.1
	S.D.	0.025	0.042	0.021	0.017	0.013
	S.E.	0.008	0.013	0.007	0.005	0.004
	N	10	10	10	10	10
UREA NITROGEN (mg/dL)						
WEEK 12	MEAN	14.1	13.4	14.1	16.3a	19.3b
	% DIFFERENCE		-5.0	0.0	15.6	36.9
	S.D.	2.77	2.25	2.46	2.05	2.68
	S.E.	0.88	0.71	0.78	0.65	0.85
	N	10	10	10	10	10
CREATININE (mg/dL)						
WEEK 12	MEAN	0.3	0.2	0.3	0.3a	0.3b
	% DIFFERENCE		-33.3	0.0	0.0	0.0
	S.D.	0.08	0.05	0.05	0.07	0.06
	S.E.	0.03	0.02	0.02	0.02	0.02
	N	10	10	10	10	10
ALP (U/L)						
WEEK 12	MEAN	47.	48.	46.	49.	71.
	% DIFFERENCE		2.1	-2.1	4.3	51.1
	S.D.	13.1	14.5	11.0	14.6	40.5
	S.E.	4.2	4.6	3.5	4.6	12.8
	N	10	10	10	10	10

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.

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

TABLE S11
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF SERUM CHEMISTRY VALUES

		FEMALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
ALT (U/L)						
WEEK 12	MEAN	82.	56.	42.	43.	47.
	% DIFFERENCE		-31.7	-48.8	-47.6	-42.7
	S.D.	66.5	40.9	10.8	11.6	15.0
	S.E.	21.0	12.9	3.4	3.7	4.7
	N	10	10	10	10	10
AST (U/L)						
WEEK 12	MEAN	150.	129.	92.	100.	113.
	% DIFFERENCE		-14.0	-38.7	-33.3	-24.7
	S.D.	95.7	74.3	12.3	13.5	24.2
	S.E.	30.3	23.5	3.9	4.3	7.6
	N	10	10	10	10	10
GGT (U/L)						
WEEK 12	MEAN	1.4	0.9	0.9	0.9	1.4
	% DIFFERENCE		-35.7	-35.7	-35.7	0.0
	S.D.	1.58	0.63	0.75	0.54	1.13
	S.E.	0.50	0.20	0.24	0.17	0.36
	N	10	10	10	10	10
GLUCOSE (mg/dL)						
WEEK 12	MEAN	132.	121.	122.	122.	127.
	% DIFFERENCE		-8.3	-7.6	-7.6	-3.8
	S.D.	18.5	16.4	18.1	11.4	9.8
	S.E.	5.9	5.2	5.7	3.6	3.1
	N	10	10	10	10	10

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

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S11
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF SERUM CHEMISTRY VALUES

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		FEMALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
CHOLESTEROL (mg/dL)						
WEEK 12	MEAN	76.	85.	78.	86.	97.
	% DIFFERENCE		11.8	2.6	13.2	27.6
	S.D.	16.1	37.6	16.2	15.9	15.9
	S.E.	5.1	11.9	5.1	5.0	5.0
	N	10	10	10	10	10
CALCIUM (mg/dL)						
WEEK 12	MEAN	12.2	11.9	12.2	12.1	11.7
	% DIFFERENCE		-2.5	0.0	-0.8	-4.1
	S.D.	0.60	0.50	0.48	0.32	0.59
	S.E.	0.19	0.16	0.15	0.10	0.19
	N	10	10	10	10	10
CHLORIDE (mEq/L)						
WEEK 12	MEAN	103.	102.	102.	102.	103.
	% DIFFERENCE		-1.0	-1.0	-1.0	0.0
	S.D.	1.6	2.0	1.3	2.1	1.7
	S.E.	0.5	0.6	0.4	0.7	0.5
	N	10	10	10	10	10
PHOSPHORUS (mg/dL)						
WEEK 12	MEAN	8.2	8.2	8.3	8.8	8.2
	% DIFFERENCE		0.0	1.2	7.3	0.0
	S.D.	0.97	1.09	0.77	0.98	1.26
	S.E.	0.31	0.35	0.24	0.31	0.40
	N	10	10	10	10	10

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

TABLE S11
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF SERUM CHEMISTRY VALUES

		FEMALES				
ANALYSIS	GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
POTASSIUM (mEq/L)						
WEEK 12	MEAN	5.70	5.21	5.58	5.24	5.49
	% DIFFERENCE		-8.6	-2.1	-8.1	-3.7
	S.D.	1.117	1.362	0.814	0.612	1.049
	S.E.	0.353	0.431	0.257	0.194	0.332
	N	10	10	10	10	10
SODIUM (mEq/L)						
WEEK 12	MEAN	146.	146.	146.	146.	146.
	% DIFFERENCE		0.0	0.0	0.0	0.0
	S.D.	1.5	1.5	1.6	1.5	2.1
	S.E.	0.5	0.5	0.5	0.5	0.7
	N	10	10	10	10	10
TRIGLYCERIDE (mg/dL)						
WEEK 12	MEAN	23.	20.	19.	20.	17.
	% DIFFERENCE		-13.0	-17.4	-13.0	-26.1
	S.D.	6.0	9.7	2.7	3.7	2.8
	S.E.	1.9	3.1	0.9	1.2	0.9
	N	10	10	10	10	10
SDH (U/L)						
WEEK 12	MEAN	18.	16.	12.	14.	14.
	% DIFFERENCE		-11.1	-33.3	-22.2	-22.2
	S.D.	13.5	11.9	3.6	3.0	4.0
	S.E.	4.3	4.0	1.1	0.9	1.3
	N	10	9	10	10	10

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

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10/13/2011
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PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S12 (WEEK -1 PRETEST EXAMINATION)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF OPHTHALMIC EXAMINATION FINDINGS

PAGE 1

GROUP:	M A L E					F E M A L E				
	1	2	3	4	5	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED EXAM 1(WEEK -1)	10	10	10	10	10	10	10	10	10	10
-NO OCULAR LESIONS - BILATERAL	10	9	10	10	10	10	10	10	10	9
-CORNEAL CRYSTALS - BILATERAL	0	1	0	0	0	0	0	0	0	1
1- UNTREATED	2- 0 MG/KG/DAY					3- 100 MG/KG/DAY				
	4- 450 MG/KG/DAY					5- 750 MG/KG/DAY				

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10/13/2011

GROUP:	M A L E					F E M A L E				
	1	2	3	4	5	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED EXAM 2(WEEK 12)	10	10	10	9	9	10	10	10	10	10
-NO OCULAR LESIONS - BILATERAL	9	7	5	5	7	8	8	9	8	6
-CORNEAL CRYSTALS - BILATERAL	1	3	5	4	2	2	2	1	2	4

1- UNTREATED 2- 0 MG/KG/DAY 3- 100 MG/KG/DAY 4- 450 MG/KG/DAY 5- 750 MG/KG/DAY

POPSiv4.03
10/13/2011

FOUND DEAD OR EUTHANIZED MORIBUND OR IN EXTREMIS							

GROUP:		1	2	M A L E	3	4	5

NUMBER OF ANIMALS IN DOSE GROUP		10	10		10	10	10
NUMBER OF ANIMALS EXAMINED		0	0		0	1	1
BONE							
-FRACTURED		0	0		0	0	1
STOMACH							
-DISTENDED		0	0		0	1	0
-CONTENTS, DARK RED		0	0		0	1	0

1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY			

FOUND DEAD OR EUTHANIZED MORIBUND OR IN EXTREMIS						

GROUP:		1	----- F E M A L E -----	3	4	5
			2			
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10
NUMBER OF ANIMALS EXAMINED		0	0	0	0	0

1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY		

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S15 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MACROSCOPIC FINDINGS

PAGE 1

SCHEDULED NECROPSY

GROUP:	M A L E				
	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12	10	10	10	9	9
KIDNEYS -DILATED PELVIS	2	0	0	0	0
LIVER -AREA(S), WHITE	0	0	0	0	1
PROSTATE -DISCOLORATION, GREEN	0	0	0	0	1
SPLEEN -AREA(S), WHITE	0	0	0	0	2
TAIL -SCABBING -NODULE(S)	0 0	0 0	0 0	0 0	1 1
THYMUS -AREA(S), DARK RED -SMALL -DISCOLORATION, DARK RED	1 0 1	1 0 0	0 0 0	0 0 0	0 1 0
URINARY BLADDER -DISTENDED	0	0	1	0	0
NO SIGNIFICANT CHANGES OBSERVED - ALL EXAMINED TISSUES	6	9	9	9	6
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S15 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MACROSCOPIC FINDINGS

PAGE 2

SCHEDULED NECROPSY

GROUP:	F E M A L E				
	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12	10	10	10	10	10
EARS					
-SCABBING	0	0	0	0	1
KIDNEYS					
-AREA(S), DEPRESSED	0	1	1	1	1
-DILATED PELVIS	1	0	0	0	0
LIVER					
-AREA(S), WHITE	0	0	1	0	0
OVARIES					
-CYST(S)	0	0	1	0	0
PAWS					
-SCABBING	0	0	0	0	1
SPLEEN					
-ACCESSORY	0	0	1	0	0
TAIL					
-SCABBING	0	0	0	0	1
THYMUS					
-AREA(S), DARK RED	2	0	0	0	0
-SMALL	0	0	0	1	3
1- UNTREATED					
2- 0 MG/KG/DAY					
3- 100 MG/KG/DAY					
4- 450 MG/KG/DAY					
5- 750 MG/KG/DAY					

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S15 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MACROSCOPIC FINDINGS

PAGE 3

SCHEDULED NECROPSY

	F E M A L E				
GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12	10	10	10	10	10
THYMUS -- CONTINUED					
-DISCOLORATION, DARK RED	0	0	0	0	1
THYROID GLANDS					
-SMALL	0	0	1	0	0
UTERUS					
-CONTENTS, CLEAR FLUID	5	5	1	3	0
NO SIGNIFICANT CHANGES OBSERVED - ALL EXAMINED TISSUES	3	4	5	7	6

1- UNTREATED 2- 0 MG/KG/DAY 3- 100 MG/KG/DAY 4- 450 MG/KG/DAY 5- 750 MG/KG/DAY

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10/14/2011

GROUP:	MALES				
	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
FINAL BODY WT (G)					
MEAN	484.	468.	471.	452.	380. b
% DIFFERENCE		-3.3	-2.7	-6.6	-21.5
S.D.	55.1	39.5	51.8	41.8	39.8
S.E.	17.4	12.5	16.4	13.9	13.3
N	10	10	10	9	9
ADRENAL GLANDS (G)					
MEAN	0.0646	0.0636	0.0646	0.0701	0.0715
% DIFFERENCE		-1.5	0.0	8.5	10.7
S.D.	0.01238	0.00882	0.00819	0.00788	0.00751
S.E.	0.00391	0.00279	0.00259	0.00263	0.00250
N	10	10	10	9	9
ADRENAL GLANDS (G/100 G FINAL BODY WEIGHT)					
MEAN	0.013	0.014	0.014	0.016a	0.019b
% DIFFERENCE		7.7	7.7	23.1	46.2
S.D.	0.0021	0.0015	0.0014	0.0009	0.0024
S.E.	0.0007	0.0005	0.0004	0.0003	0.0008
N	10	10	10	9	9
ADRENAL GLANDS (G/100 G BRAIN)					
MEAN	3.006	2.972	3.028	3.319	3.570b
% DIFFERENCE		-1.1	0.7	10.4	18.8
S.D.	0.5266	0.3919	0.4171	0.4175	0.3768
S.E.	0.1665	0.1239	0.1319	0.1392	0.1256
N	10	10	10	9	9

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

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

		MALES				
GROUP:		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
BRAIN (G)						
MEAN		2.14	2.14	2.14	2.12	2.00b
% DIFFERENCE			0.0	0.0	-0.9	-6.5
S.D.		0.089	0.075	0.095	0.076	0.054
S.E.		0.028	0.024	0.030	0.025	0.018
N		10	10	10	9	9
BRAIN (G/100 G FINAL BODY WEIGHT)						
MEAN		0.448	0.460	0.459	0.472	0.532b
% DIFFERENCE			2.7	2.5	5.4	18.8
S.D.		0.0475	0.0352	0.0496	0.0400	0.0523
S.E.		0.0150	0.0111	0.0157	0.0133	0.0174
N		10	10	10	9	9
EPIDIDYIMIDES (G)						
MEAN		1.42	1.42	1.46	1.32	1.24b
% DIFFERENCE			0.0	2.8	-7.0	-12.7
S.D.		0.085	0.055	0.103	0.126	0.085
S.E.		0.027	0.017	0.033	0.042	0.028
N		10	10	10	9	9
EPIDIDYIMIDES (G/100 G FINAL BODY WEIGHT)						
MEAN		0.296	0.305	0.314	0.293	0.328
% DIFFERENCE			3.0	6.1	-1.0	10.8
S.D.		0.0348	0.0241	0.0388	0.0294	0.0204
S.E.		0.0110	0.0076	0.0123	0.0098	0.0068
N		10	10	10	9	9

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

GROUP:	MALES				
	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
EPIDIDYIMIDES (G/100 G BRAIN)					
MEAN	66.143	66.310	68.451	62.184	61.936a
% DIFFERENCE		0.3	3.5	-6.0	-6.4
S.D.	4.0184	2.4138	3.5635	5.2856	3.2303
S.E.	1.2707	0.7633	1.1269	1.7619	1.0768
N	10	10	10	9	9
HEART (G)					
MEAN	1.69	1.67	1.69	1.68	1.43a
% DIFFERENCE		-1.2	0.0	-0.6	-15.4
S.D.	0.258	0.164	0.207	0.215	0.137
S.E.	0.082	0.052	0.066	0.072	0.046
N	10	10	10	9	9
HEART (G/100 G FINAL BODY WEIGHT)					
MEAN	0.349	0.358	0.361	0.373	0.378
% DIFFERENCE		2.6	3.4	6.9	8.3
S.D.	0.0372	0.0253	0.0475	0.0346	0.0245
S.E.	0.0118	0.0080	0.0150	0.0115	0.0082
N	10	10	10	9	9
HEART (G/100 G BRAIN)					
MEAN	78.816	78.385	78.963	79.472	71.453
% DIFFERENCE		-0.5	0.2	0.8	-9.3
S.D.	12.0096	8.3648	9.7652	8.6717	6.5576
S.E.	3.7978	2.6452	3.0880	2.8906	2.1859
N	10	10	10	9	9

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

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

		MALES				
GROUP:		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
KIDNEYS (G)						
MEAN		3.20	3.44	3.39	3.49	2.93a
% DIFFERENCE			7.5	5.9	9.1	-8.4
S.D.		0.241	0.329	0.327	0.485	0.272
S.E.		0.076	0.104	0.103	0.162	0.091
N		10	10	10	9	9
KIDNEYS (G/100 G FINAL BODY WEIGHT)						
MEAN		0.665	0.736c	0.724	0.770	0.774
% DIFFERENCE			10.7	8.9	15.8	16.4
S.D.		0.0592	0.0361	0.0743	0.0495	0.0578
S.E.		0.0187	0.0114	0.0235	0.0165	0.0193
N		10	10	10	9	9
KIDNEYS (G/100 G BRAIN)						
MEAN		149.162	160.772c	158.572	164.996	146.362
% DIFFERENCE			7.8	6.3	10.6	-1.9
S.D.		10.3413	13.6545	14.8894	24.2340	13.2841
S.E.		3.2702	4.3179	4.7084	8.0780	4.4280
N		10	10	10	9	9
LIVER (G)						
MEAN		12.64	12.38	13.06	14.80b	14.08a
% DIFFERENCE			-2.1	3.3	17.1	11.4
S.D.		2.126	1.103	1.551	1.751	1.117
S.E.		0.672	0.349	0.490	0.584	0.372
N		10	10	10	9	9

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

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

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

GROUP:	MALES				
	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
LIVER (G/100 G FINAL BODY WEIGHT)					
MEAN	2.603	2.652	2.782	3.275b	3.713b
% DIFFERENCE		1.9	6.9	25.8	42.6
S.D.	0.2303	0.1693	0.2370	0.2208	0.1399
S.E.	0.0728	0.0535	0.0749	0.0736	0.0466
N	10	10	10	9	9
LIVER (G/100 G BRAIN)					
MEAN	590.252	578.872	610.273	698.893b	702.229b
% DIFFERENCE		-1.9	3.4	18.4	19.0
S.D.	102.2607	44.1745	62.6171	73.6188	52.3242
S.E.	32.3377	13.9692	19.8013	24.5396	17.4414
N	10	10	10	9	9
PITUITARY (G)					
MEAN	0.0143	0.0167	0.0156	0.0141	0.0147
% DIFFERENCE		16.8	9.1	-1.4	2.8
S.D.	0.00217	0.00314	0.00149	0.00237	0.00200
S.E.	0.00068	0.00099	0.00047	0.00079	0.00067
N	10	10	10	9	9
PITUITARY (G/100 G FINAL BODY WEIGHT)					
MEAN	0.003	0.004c	0.003	0.003	0.004
% DIFFERENCE		33.3	0.0	0.0	33.3
S.D.	0.0005	0.0004	0.0004	0.0004	0.0005
S.E.	0.0001	0.0001	0.0001	0.0001	0.0002
N	10	10	10	9	9

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

GROUP:	MALES				
	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
PITUITARY (G/100 G BRAIN)					
MEAN	0.665	0.780 ^c	0.730	0.665	0.731
% DIFFERENCE		17.3	9.8	0.0	9.9
S.D.	0.0980	0.1428	0.0703	0.1074	0.0963
S.E.	0.0310	0.0452	0.0222	0.0358	0.0321
N	10	10	10	9	9
PROSTATE (G)					
MEAN	1.08	1.03	1.08	1.09	1.01
% DIFFERENCE		-4.6	0.0	0.9	-6.5
S.D.	0.203	0.166	0.133	0.179	0.175
S.E.	0.064	0.052	0.042	0.060	0.058
N	10	10	10	9	9
PROSTATE (G/100 G FINAL BODY WEIGHT)					
MEAN	0.224	0.222	0.234	0.245	0.266
% DIFFERENCE		-0.9	4.5	9.4	18.8
S.D.	0.0350	0.0405	0.0584	0.0529	0.0433
S.E.	0.0111	0.0128	0.0185	0.0176	0.0144
N	10	10	10	9	9
PROSTATE (G/100 G BRAIN)					
MEAN	50.319	48.255	50.662	51.768	50.273
% DIFFERENCE		-4.1	0.7	2.9	-0.1
S.D.	8.3251	8.3981	7.5479	8.8215	8.3273
S.E.	2.6326	2.6557	2.3869	2.9405	2.7758
N	10	10	10	9	9

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

TABLE S16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

GROUP:		MALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
SPLEEN (G)						
MEAN		0.86	0.86	0.81	0.88	0.78
% DIFFERENCE			0.0	-5.8	2.3	-9.3
S.D.		0.172	0.113	0.111	0.159	0.169
S.E.		0.054	0.036	0.035	0.053	0.056
N		10	10	10	9	9
SPLEEN (G/100 G FINAL BODY WEIGHT)						
MEAN		0.176	0.184	0.173	0.193	0.205
% DIFFERENCE			4.5	-1.7	9.7	16.5
S.D.		0.0269	0.0149	0.0135	0.0227	0.0407
S.E.		0.0085	0.0047	0.0043	0.0076	0.0136
N		10	10	10	9	9
SPLEEN (G/100 G BRAIN)						
MEAN		39.833	40.308	38.053	41.482	38.882
% DIFFERENCE			1.2	-4.5	4.1	-2.4
S.D.		7.6523	4.9023	4.7390	7.5656	8.3563
S.E.		2.4199	1.5502	1.4986	2.5219	2.7854
N		10	10	10	9	9
TESTES (G)						
MEAN		3.64	3.64	3.69	3.63	3.49
% DIFFERENCE			0.0	1.4	-0.3	-4.1
S.D.		0.403	0.185	0.233	0.314	0.259
S.E.		0.128	0.059	0.074	0.105	0.086
N		10	10	10	9	9

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

GROUP:	MALES				
	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
TESTES (G/100 G FINAL BODY WEIGHT)					
MEAN	0.763	0.783	0.793	0.806	0.927b
% DIFFERENCE		2.6	3.9	5.6	21.5
S.D.	0.1337	0.0702	0.1055	0.0727	0.1281
S.E.	0.0423	0.0222	0.0333	0.0242	0.0427
N	10	10	10	9	9
TESTES (G/100 G BRAIN)					
MEAN	169.597	170.659	172.749	171.259	173.938
% DIFFERENCE		0.6	1.9	1.0	2.6
S.D.	17.1287	13.3128	10.3503	12.4577	11.8428
S.E.	5.4166	4.2099	3.2731	4.1526	3.9476
N	10	10	10	9	9
THYMUS (G)					
MEAN	0.2648	0.2618	0.2407	0.1667b	0.0995b
% DIFFERENCE		-1.1	-9.1	-37.0	-62.4
S.D.	0.08422	0.09885	0.04522	0.03419	0.03568
S.E.	0.02663	0.03126	0.01430	0.01140	0.01189
N	10	10	10	9	9
THYMUS (G/100 G FINAL BODY WEIGHT)					
MEAN	0.055	0.056	0.052	0.037b	0.026b
% DIFFERENCE		1.8	-5.5	-32.7	-52.7
S.D.	0.0168	0.0185	0.0097	0.0057	0.0080
S.E.	0.0053	0.0059	0.0031	0.0019	0.0027
N	10	10	10	9	9

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

GROUP:	MALES				
	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
THYMUS (G/100 G BRAIN)					
MEAN	12.349	12.183	11.268	7.899b	4.951b
% DIFFERENCE		-1.3	-8.8	-36.0	-59.9
S.D.	3.8176	4.2990	2.0786	1.7463	1.7583
S.E.	1.2072	1.3594	0.6573	0.5821	0.5861
N	10	10	10	9	9
THYROID/PARATHY (G)					
MEAN	0.0174	0.0197	0.0196	0.0214	0.0215
% DIFFERENCE		13.2	12.6	23.0	23.6
S.D.	0.00338	0.00521	0.00375	0.00297	0.00146
S.E.	0.00107	0.00165	0.00119	0.00099	0.00049
N	10	10	10	9	9
THYROID/PARATHY (G/100 G FINAL BODY WEIGHT)					
MEAN	0.004	0.004	0.004	0.005	0.006b
% DIFFERENCE		0.0	0.0	25.0	50.0
S.D.	0.0008	0.0009	0.0009	0.0006	0.0007
S.E.	0.0003	0.0003	0.0003	0.0002	0.0002
N	10	10	10	9	9
THYROID/PARATHY (G/100 G BRAIN)					
MEAN	0.812	0.921	0.918	1.010	1.076
% DIFFERENCE		13.4	13.1	24.4	32.5
S.D.	0.1466	0.2419	0.1793	0.1389	0.0767
S.E.	0.0464	0.0765	0.0567	0.0463	0.0256
N	10	10	10	9	9

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

GROUP:	FEMALES				
	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
FINAL BODY WT (G)					
MEAN	285.	274.	277.	260.	246. a
% DIFFERENCE		-3.9	-2.8	-8.8	-13.7
S.D.	27.3	15.1	15.6	19.7	28.7
S.E.	8.6	4.8	4.9	6.2	9.1
N	10	10	10	10	10
ADRENAL GLANDS (G)					
MEAN	0.0753	0.0815	0.0734	0.0801	0.0867
% DIFFERENCE		8.2	-2.5	6.4	15.1
S.D.	0.01074	0.00829	0.00769	0.00801	0.01356
S.E.	0.00340	0.00262	0.00243	0.00253	0.00429
N	10	10	10	10	10
ADRENAL GLANDS (G/100 G FINAL BODY WEIGHT)					
MEAN	0.026	0.030c	0.027	0.031	0.035b
% DIFFERENCE		15.4	3.8	19.2	34.6
S.D.	0.0028	0.0039	0.0029	0.0030	0.0052
S.E.	0.0009	0.0012	0.0009	0.0010	0.0016
N	10	10	10	10	10
ADRENAL GLANDS (G/100 G BRAIN)					
MEAN	3.912	4.211	3.817	4.129	4.665
% DIFFERENCE		7.6	-2.4	5.5	19.2
S.D.	0.4939	0.4763	0.3416	0.4096	0.6239
S.E.	0.1562	0.1506	0.1080	0.1295	0.1973
N	10	10	10	10	10

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

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

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

GROUP:		FEMALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
BRAIN (G)						
MEAN		1.92	1.94	1.92	1.94	1.85a
% DIFFERENCE			1.0	0.0	1.0	-3.6
S.D.		0.051	0.059	0.092	0.075	0.075
S.E.		0.016	0.019	0.029	0.024	0.024
N		10	10	10	10	10
BRAIN (G/100 G FINAL BODY WEIGHT)						
MEAN		0.679	0.708	0.696	0.749	0.760
% DIFFERENCE			4.3	2.5	10.3	11.9
S.D.		0.0570	0.0370	0.0348	0.0478	0.0747
S.E.		0.0180	0.0117	0.0110	0.0151	0.0236
N		10	10	10	10	10
HEART (G)						
MEAN		1.15	1.12	1.10	1.09	1.09
% DIFFERENCE			-2.6	-4.3	-5.2	-5.2
S.D.		0.100	0.077	0.108	0.130	0.122
S.E.		0.032	0.024	0.034	0.041	0.039
N		10	10	10	10	10
HEART (G/100 G FINAL BODY WEIGHT)						
MEAN		0.405	0.410	0.399	0.417	0.443
% DIFFERENCE			1.2	-1.5	3.0	9.4
S.D.		0.0313	0.0377	0.0366	0.0402	0.0370
S.E.		0.0099	0.0119	0.0116	0.0127	0.0117
N		10	10	10	10	10

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

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

GROUP:	FEMALES				
	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
HEART (G/100 G BRAIN)					
MEAN	59.877	57.882	57.524	55.861	58.644
% DIFFERENCE		-3.3	-3.9	-6.7	-2.1
S.D.	4.8634	3.6776	6.2862	6.0573	5.9388
S.E.	1.5379	1.1630	1.9879	1.9155	1.8780
N	10	10	10	10	10
KIDNEYS (G)					
MEAN	2.03	2.15	2.02	2.01	1.99
% DIFFERENCE		5.9	-0.5	-1.0	-2.0
S.D.	0.128	0.206	0.165	0.210	0.204
S.E.	0.040	0.065	0.052	0.066	0.064
N	10	10	10	10	10
KIDNEYS (G/100 G FINAL BODY WEIGHT)					
MEAN	0.713	0.784 ^c	0.734	0.774	0.809
% DIFFERENCE		10.0	2.9	8.6	13.5
S.D.	0.0445	0.0743	0.0807	0.0548	0.0496
S.E.	0.0141	0.0235	0.0255	0.0173	0.0157
N	10	10	10	10	10
KIDNEYS (G/100 G BRAIN)					
MEAN	105.324	110.729	105.567	103.721	107.053
% DIFFERENCE		5.1	0.2	-1.5	1.6
S.D.	5.3772	8.6924	10.9337	9.5831	8.2459
S.E.	1.7004	2.7488	3.4575	3.0304	2.6076
N	10	10	10	10	10

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

GROUP:		FEMALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
LIVER (G)						
MEAN		7.95	8.37	8.84	9.58	10.34b
% DIFFERENCE			5.3	11.2	20.5	30.1
S.D.		1.040	1.165	0.403	1.158	1.421
S.E.		0.329	0.368	0.127	0.366	0.449
N		10	10	10	10	10
LIVER (G/100 G FINAL BODY WEIGHT)						
MEAN		2.786	3.055	3.203	3.676b	4.193b
% DIFFERENCE			9.7	15.0	31.9	50.5
S.D.		0.2147	0.4068	0.2060	0.2509	0.1993
S.E.		0.0679	0.1287	0.0652	0.0794	0.0630
N		10	10	10	10	10
LIVER (G/100 G BRAIN)						
MEAN		413.553	432.351	460.761	493.070a	556.837b
% DIFFERENCE			4.5	11.4	19.2	34.6
S.D.		51.4037	59.5917	29.8424	53.5452	63.4355
S.E.		16.2553	18.8445	9.4370	16.9325	20.0601
N		10	10	10	10	10
OVARIES/OVIDUCTS (G)						
MEAN		0.1199	0.1218	0.1333	0.1260	0.1285
% DIFFERENCE			1.6	11.2	5.1	7.2
S.D.		0.01029	0.01758	0.02132	0.02443	0.02126
S.E.		0.00326	0.00556	0.00674	0.00773	0.00672
N		10	10	10	10	10

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

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

GROUP:	FEMALES				
	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY

OVARIES/OVIDUCTS (G/100 G FINAL BODY WEIGHT)					
MEAN	0.042	0.044	0.048	0.049	0.052
% DIFFERENCE		4.8	14.3	16.7	23.8
S.D.	0.0036	0.0062	0.0073	0.0087	0.0054
S.E.	0.0011	0.0020	0.0023	0.0027	0.0017
N	10	10	10	10	10
OVARIES/OVIDUCTS (G/100 G BRAIN)					
MEAN	6.236	6.289	6.926	6.508	6.914
% DIFFERENCE		0.8	11.1	4.4	10.9
S.D.	0.5202	0.8716	1.0243	1.2958	0.9396
S.E.	0.1645	0.2756	0.3239	0.4098	0.2971
N	10	10	10	10	10
PITUITARY (G)					
MEAN	0.0216	0.0219	0.0216	0.0196	0.0175
% DIFFERENCE		1.4	0.0	-9.3	-19.0
S.D.	0.00386	0.00610	0.00116	0.00257	0.00400
S.E.	0.00122	0.00193	0.00037	0.00081	0.00127
N	10	10	10	10	10
PITUITARY (G/100 G FINAL BODY WEIGHT)					
MEAN	0.008	0.008	0.008	0.008	0.007
% DIFFERENCE		0.0	0.0	0.0	-12.5
S.D.	0.0013	0.0023	0.0007	0.0009	0.0011
S.E.	0.0004	0.0007	0.0002	0.0003	0.0003
N	10	10	10	10	10

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

GROUP:	FEMALES				
	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
PITUITARY (G/100 G BRAIN)					
MEAN	1.125	1.126	1.126	1.007	0.937
% DIFFERENCE		0.1	0.1	-10.5	-16.7
S.D.	0.1982	0.3016	0.0986	0.1132	0.1914
S.E.	0.0627	0.0954	0.0312	0.0358	0.0605
N	10	10	10	10	10
SPLEEN (G)					
MEAN	0.59	0.59	0.61	0.54	0.59
% DIFFERENCE		0.0	3.4	-8.5	0.0
S.D.	0.061	0.067	0.065	0.070	0.109
S.E.	0.019	0.021	0.021	0.022	0.034
N	10	10	10	10	10
SPLEEN (G/100 G FINAL BODY WEIGHT)					
MEAN	0.208	0.217	0.220	0.208	0.239
% DIFFERENCE		4.3	5.8	0.0	14.9
S.D.	0.0130	0.0303	0.0166	0.0268	0.0319
S.E.	0.0041	0.0096	0.0053	0.0085	0.0101
N	10	10	10	10	10
SPLEEN (G/100 G BRAIN)					
MEAN	30.792	30.604	31.598	27.737	31.796
% DIFFERENCE		-0.6	2.6	-9.9	3.3
S.D.	2.9924	3.7002	2.7247	3.1003	5.3060
S.E.	0.9463	1.1701	0.8616	0.9804	1.6779
N	10	10	10	10	10

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

GROUP:		FEMALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
THYMUS (G)						
MEAN		0.2506	0.2608	0.2389	0.1664b	0.1186b
% DIFFERENCE			4.1	-4.7	-33.6	-52.7
S.D.		0.06705	0.04744	0.06279	0.04421	0.03178
S.E.		0.02120	0.01500	0.01985	0.01398	0.01005
N		10	10	10	10	10
THYMUS (G/100 G FINAL BODY WEIGHT)						
MEAN		0.088	0.096	0.086	0.064b	0.048b
% DIFFERENCE			9.1	-2.3	-27.3	-45.5
S.D.		0.0216	0.0196	0.0197	0.0187	0.0108
S.E.		0.0068	0.0062	0.0062	0.0059	0.0034
N		10	10	10	10	10
THYMUS (G/100 G BRAIN)						
MEAN		13.051	13.503	12.404	8.628b	6.379b
% DIFFERENCE			3.5	-5.0	-33.9	-51.1
S.D.		3.5360	2.6193	3.0843	2.5006	1.6072
S.E.		1.1182	0.8283	0.9754	0.7908	0.5082
N		10	10	10	10	10
THYROID/SPARATHY (G)						
MEAN		0.0157	0.0169	0.0160	0.0173	0.0193
% DIFFERENCE			7.6	1.9	10.2	22.9
S.D.		0.00330	0.00203	0.00266	0.00416	0.00268
S.E.		0.00104	0.00064	0.00084	0.00132	0.00085
N		10	10	10	10	10

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

GROUP:		FEMALES				
		UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY

THYROID/SPRATHY (G/100 G FINAL BODY WEIGHT)						
MEAN		0.006	0.006	0.006	0.007	0.008a
% DIFFERENCE			0.0	0.0	16.7	33.3
S.D.		0.0012	0.0010	0.0009	0.0017	0.0013
S.E.		0.0004	0.0003	0.0003	0.0005	0.0004
N		10	10	10	10	10
THYROID/SPRATHY (G/100 G BRAIN)						
MEAN		0.814	0.876	0.833	0.891	1.042
% DIFFERENCE			7.6	2.3	9.5	28.0
S.D.		0.1671	0.1229	0.1385	0.2086	0.1504
S.E.		0.0529	0.0389	0.0438	0.0660	0.0475
N		10	10	10	10	10
UTERUS (G)						
MEAN		0.99	1.11	0.83	0.74	0.65a
% DIFFERENCE			12.1	-16.2	-25.3	-34.3
S.D.		0.576	0.496	0.279	0.313	0.213
S.E.		0.182	0.157	0.088	0.099	0.067
N		10	10	10	10	10
UTERUS (G/100 G FINAL BODY WEIGHT)						
MEAN		0.358	0.403	0.299	0.287	0.267
% DIFFERENCE			12.6	-16.5	-19.8	-25.4
S.D.		0.2418	0.1868	0.0920	0.1203	0.0987
S.E.		0.0765	0.0591	0.0291	0.0380	0.0312
N		10	10	10	10	10

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

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

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF ORGAN WEIGHTS AND RELATIVE ORGAN WEIGHTS

PAGE 18

FEMALES					
GROUP:	UNTREATED	0 MG/KG/DAY	100 MG/KG/DAY	450 MG/KG/DAY	750 MG/KG/DAY
UTERUS (G/100 G BRAIN)					
MEAN	51.867	57.003	42.999	38.550	34.998a
% DIFFERENCE		9.9	-17.1	-25.7	-32.5
S.D.	30.9862	25.7550	13.2366	16.7507	11.7624
S.E.	9.7987	8.1444	4.1858	5.2970	3.7196
N	10	10	10	10	10

For statistical analyses, control group 2 was compared to groups 3, 4 and 5; control group 1 was compared to group 2.
a = Significantly different from control group 2 at 0.05 using Dunnett's test

POFBSTv5.26
10/13/2011
R:11/15/2011

CAUSE OF DEATH				MALES				
				GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN GROUP				10	10	10	10	10
ANIMALS FOUND DEAD OR EUTHANIZED IN EXTREMIS				0	0	0	1	1
ANIMALS WITH A SINGLE CAUSE OF DEATH				0	0	0	1	1
ANIMALS WITH MULTIPLE CAUSES OF DEATH				0	0	0	0	0
OTHER								
UNDETERMINED				0	0	0	1	1
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY				

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
TABLE S17 (UNSCHEDULED DEATHS)
SUMMARY OF CAUSE OF DEATH

PAGE 2

CAUSE OF DEATH	FEMALES					
	GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN GROUP		10	10	10	10	10
ANIMALS FOUND DEAD OR EUTHANIZED IN EXTREMIS		0	0	0	0	0
ANIMALS WITH A SINGLE CAUSE OF DEATH		0	0	0	0	0
ANIMALS WITH MULTIPLE CAUSES OF DEATH		0	0	0	0	0

1- UNTREATED 2- 0 MG/KG/DAY 3- 100 MG/KG/DAY 4- 450 MG/KG/DAY 5- 750 MG/KG/DAY

PPCDv4.11
10/13/2011
R:10/14/2011

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S18 (UNSCHEDULED DEATHS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 1

----- MALE -----					
GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED	0	0	0	1	1
ADRENAL CORTEX					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
ADRENAL MEDULLA					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
AORTA					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
BONE					
TOTAL NUMBER EXAMINED	NA	NA	NA	NA	1
EXAMINED, UNREMARKABLE	NA	NA	NA	NA	0
- FRACTURE	NA	NA	NA	NA	1
PRESENT (F M N)	NA	NA	NA	NA	- - 1
- INFLAMMATION, ACUTE	NA	NA	NA	NA	1
SEVERE (F M N)	NA	NA	NA	NA	- - 1
BRAIN					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S18 (UNSCHEDULED DEATHS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 2

----- MALE -----					
GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED	0	0	0	1	1
CECUM					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
COLON					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
DUODENUM					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
EPIDIDYMIDES					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
ESOPHAGUS					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
EYES					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S18 (UNSCHEDULED DEATHS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 3

----- MALE -----					
GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED	0	0	0	1	1
FEMUR					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
HEART					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	0
-CARDIOMYOPATHY	0	0	0	0	1
MINIMAL (F M N)	NONE	NONE	NONE	NONE	1 - -
ILEUM					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
JEJUNUM					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
JOINT					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1

1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S18 (UNSCHEDULED DEATHS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 4

----- MALE -----					
GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED	0	0	0	1	1
KIDNEYS					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	0	0
-NEPHROPATHY, CHRONIC PROGRESSIVE	0	0	0	1	1
MILD (F M N)	NONE	NONE	NONE	- - 1	- - 1
LAC. GLAND EXOR					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
LIVER					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	0
-INFLAMMATION, SUBACUTE	0	0	0	0	1
MILD (F M N)	NONE	NONE	NONE	NONE	- 1 -
LN, AXILLARY					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
LN, MANDIBULAR					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S18 (UNSCHEDULED DEATHS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 5

----- MALE -----					
GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED	0	0	0	1	1
LN, MESENTERIC					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
LUNGS					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
MARROW, FEMUR					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
MARROW, STERN					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
NERVE, SCIATIC					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
NERVES, OPTIC					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S18 (UNSCHEDULED DEATHS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 6

----- MALE -----					
GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED	0	0	0	1	1
PANCREAS					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
PARATHYROID					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
PITUITARY					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
PROSTATE					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	0	1
-HYPERPLASIA, EPITHELIAL	0	0	0	1	0
MILD (F M N)	NONE	NONE	NONE	- - 1	NONE
RECTUM					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S18 (UNSCHEDULED DEATHS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 7

----- MALE -----					
GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED	0	0	0	1	1
SAL. GLAND MAND					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
SEMINAL VESICLES					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
SKELETAL MUSCLE					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
SKIN					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
SKIN, TREATED					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
SKIN, UNTREATED					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S18 (UNSCHEDULED DEATHS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 8

----- MALE -----					
GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED	0	0	0	1	1
SPINAL CORD					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
SPLEEN					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
STERNUM					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
STOMACH, GLAN					
TOTAL NUMBER EXAMINED	0	0	0	0	1
EXAMINED, UNREMARKABLE	0	0	0	0	1
TOO AUTOLYZED TO EXAMINE	0	0	0	1	0
STOMACH, NON					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
TESTES					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S18 (UNSCHEDULED DEATHS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 9

----- MALE -----					
GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED	0	0	0	1	1
THYMUS					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
THYROID GLANDS					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	0
-HYPERPLASIA, FOLLICULAR CELL	0	0	0	0	1
MILD (F M N)	NONE	NONE	NONE	NONE	1 - -
TRACHEA					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
URINARY BLADDER					
TOTAL NUMBER EXAMINED	0	0	0	1	1
EXAMINED, UNREMARKABLE	0	0	0	1	1
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

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11/15/2011
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PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 1

----- MALE -----						
GROUP:		1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12		10	10	10	9	9
ADRENAL CORTEX						
TOTAL NUMBER EXAMINED		10	10	10	9	9
EXAMINED, UNREMARKABLE		10	10	10	7	9
- CONGESTION		0	0	0	1	0
MILD (F M N)		NONE	NONE	NONE	- - 1	NONE
- VACUOLATION, CYTOPLASMIC		0	0	0	1	0
MILD (F M N)		NONE	NONE	NONE	- 1 -	NONE
ADRENAL MEDULLA						
TOTAL NUMBER EXAMINED		10	9	9	9	9
EXAMINED, UNREMARKABLE		10	9	9	9	8
NOT PRESENT FOR EXAMINATION		0	1	1	0	0
- VACUOLATION, CYTOPLASMIC		0	0	0	0	1
MILD (F M N)		NONE	NONE	NONE	NONE	- 1 -
AORTA						
TOTAL NUMBER EXAMINED		10	10	10	9	9
EXAMINED, UNREMARKABLE		10	10	9	9	9
- INFLAMMATION, SUBACUTE		0	0	1	0	0
MINIMAL (F M N)		NONE	NONE	1 - -	NONE	NONE
BRAIN						
TOTAL NUMBER EXAMINED		10	10	10	9	9
EXAMINED, UNREMARKABLE		10	10	10	9	9
1- UNTREATED						
2- 0 MG/KG/DAY						
3- 100 MG/KG/DAY						
4- 450 MG/KG/DAY						
5- 750 MG/KG/DAY						
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED						

PROJECT NO.:WIL-402024
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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 2

----- MALE -----					
GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12	10	10	10	9	9
CECUM					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	10	10	10	9	9
COLON					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	10	10	10	9	9
DUODENUM					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	10	10	10	9	8
-INFILTRATE, LYMPHOCYTE	0	0	0	0	1
MILD (F M N)	NONE	NONE	NONE	NONE	1 - -
EPIDIDYMIDES					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	10	9	10	9	9
-INFLAMMATION, SUBACUTE	0	1	0	0	0
MINIMAL (F M N)	NONE	1 - -	NONE	NONE	NONE
ESOPHAGUS					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	10	10	10	9	9
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

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SPONSOR:AMERICAN PETROLEUM

TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 3

----- MALE -----						
GROUP:		1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12		10	10	10	9	9
EYES						
TOTAL NUMBER EXAMINED		10	10	10	9	9
EXAMINED, UNREMARKABLE		10	10	9	9	9
-CYST		0	0	1	0	0
PRESENT	(F M N)	NONE	NONE	- 1 -	NONE	NONE
FEMUR						
TOTAL NUMBER EXAMINED		10	10	10	9	9
EXAMINED, UNREMARKABLE		10	10	10	9	9
HEART						
TOTAL NUMBER EXAMINED		10	10	10	9	9
EXAMINED, UNREMARKABLE		3	5	3	5	6
-CARDIOMYOPATHY		5	1	5	3	2
MINIMAL	(F M N)	- 3 -	NONE	- 4 1	1 1 1	- 2 -
MILD	(F M N)	- 1 1	- 1 -	NONE	NONE	NONE
-ENDOCARDIOSIS		2	4	4	2	1
MINIMAL	(F M N)	NONE	NONE	1 1 -	NONE	NONE
MILD	(F M N)	- 2 -	- 3 1	- 2 -	- 2 -	1 - -
ILEUM						
TOTAL NUMBER EXAMINED		10	10	10	9	9
EXAMINED, UNREMARKABLE		10	10	10	9	9
1- UNTREATED						
2- 0 MG/KG/DAY						
3- 100 MG/KG/DAY						
4- 450 MG/KG/DAY						
5- 750 MG/KG/DAY						
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED						

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 4

----- MALE -----					
GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12	10	10	10	9	9
JEJUNUM					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	10	10	10	9	9
JOINT					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	10	10	10	9	9
KIDNEYS					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	1	2	1	0	0
-DILATATION, PELVIS	2	0	0	0	0
MODERATE (F M N)	- - 2	NONE	NONE	NONE	NONE
-INFLAMMATION, SUBACUTE	0	1	0	0	0
MINIMAL (F M N)	NONE	- 1 -	NONE	NONE	NONE
-NEPHROPATHY, CHRONIC PROGRESSIVE	9	7	9	9	9
MINIMAL (F M N)	- - 3	- - 2	- - 4	- - 1	NONE
MILD (F M N)	- - 6	- - 5	- - 5	- - 8	- - 8
MODERATE (F M N)	NONE	NONE	NONE	NONE	- - 1
LAC. GLAND EXOR					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	8	8	10	9	9
-INFILTRATE, LYMPHOCYTE	0	1	0	0	0
MINIMAL (F M N)	NONE	- 1 -	NONE	NONE	NONE

1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 5

----- MALE -----						

GROUP:	1	2	3	4	5	

NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10	
NUMBER OF ANIMALS EXAMINED WEEK 12	10	10	10	9	9	
LAC. GLAND EXOR - CONTINUED						
-INFLAMMATION, SUBACUTE	2	1	0	0	0	
MINIMAL (F M N)	1 - -	- 1 -	NONE	NONE	NONE	
MILD (F M N)	1 - -	NONE	NONE	NONE	NONE	
LIVER						
TOTAL NUMBER EXAMINED	10	10	10	9	9	
EXAMINED, UNREMARKABLE	2	2	1	2	1	
-INFILTRATE, MONONUCLEAR	1	1	1	0	0	
MINIMAL (F M N)	- 1 -	- 1 -	NONE	NONE	NONE	
MILD (F M N)	NONE	NONE	- 1 -	NONE	NONE	
-INFLAMMATION, SUBACUTE	7	7	8	7	8	
MINIMAL (F M N)	- 2 -	- 4 -	- 5 -	- 2 -	- 4 -	
MILD (F M N)	- 5 -	- 3 -	- 3 -	- 5 -	- 3 -	
MODERATE (F M N)	NONE	NONE	NONE	NONE	- 1 -	
-VACUOLATION, HEPATOCELLULAR	0	0	0	0	1	
MILD (F M N)	NONE	NONE	NONE	NONE	- 1 -	
LN, AXILLARY						
TOTAL NUMBER EXAMINED	10	10	10	9	9	
EXAMINED, UNREMARKABLE	10	10	10	9	9	

1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY		
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED						

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 6

		----- MALE -----														
GROUP :		1			2			3			4			5		
NUMBER OF ANIMALS IN DOSE GROUP		10			10			10			10			10		
NUMBER OF ANIMALS EXAMINED WEEK 12		10			10			10			9			9		
LN, MANDIBULAR																
TOTAL NUMBER EXAMINED		10			10			10			9			9		
EXAMINED, UNREMARKABLE		10			10			10			9			8		
-HYPERPLASIA, LYMPHOID		0			0			0			0			1		
MODERATE (F M N)		NONE			NONE			NONE			NONE			- - 1		
LN, MESENTERIC																
TOTAL NUMBER EXAMINED		10			10			10			9			9		
EXAMINED, UNREMARKABLE		10			10			10			9			9		
LUNGS																
TOTAL NUMBER EXAMINED		10			10			10			9			9		
EXAMINED, UNREMARKABLE		7			6			7			3			6		
-INFLAMMATION, SUBACUTE		3			4			3			6			3		
MINIMAL (F M N)		1	2	-	1	2	-	1	1	-	-	4	-	1	1	-
MILD (F M N)		NONE			-	1	-	-	1	-	-	2	-	-	1	-
MARROW, FEMUR																
TOTAL NUMBER EXAMINED		10			10			10			9			9		
EXAMINED, UNREMARKABLE		10			10			10			9			9		
MARROW, STERN																
TOTAL NUMBER EXAMINED		10			10			10			9			9		
EXAMINED, UNREMARKABLE		10			10			10			9			9		

1- UNTREATED		2- 0 MG/KG/DAY			3- 100 MG/KG/DAY			4- 450 MG/KG/DAY			5- 750 MG/KG/DAY					
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED																

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 7

----- MALE -----						
GROUP:	1	2	3	4	5	
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10	
NUMBER OF ANIMALS EXAMINED WEEK 12	10	10	10	9	9	
NERVE, SCIATIC						
TOTAL NUMBER EXAMINED	10	10	10	9	9	
EXAMINED, UNREMARKABLE	10	10	10	9	9	
NERVES, OPTIC						
TOTAL NUMBER EXAMINED	10	10	10	9	9	
EXAMINED, UNREMARKABLE	10	10	10	9	9	
PANCREAS						
TOTAL NUMBER EXAMINED	10	10	10	9	9	
EXAMINED, UNREMARKABLE	10	10	10	9	9	
PARATHYROID						
TOTAL NUMBER EXAMINED	9	10	9	8	9	
EXAMINED, UNREMARKABLE	9	10	9	8	9	
NOT PRESENT FOR EXAMINATION	1	0	1	1	0	
PITUITARY						
TOTAL NUMBER EXAMINED	10	10	10	9	9	
EXAMINED, UNREMARKABLE	8	8	9	9	4	
-ATROPHY, PARS DISTALIS	0	1	0	0	0	
MILD (F M N)	NONE	1 - -	NONE	NONE	NONE	
-CYST, PARS DISTALIS	0	1	0	0	1	
PRESENT (F M N)	NONE	1 - -	NONE	NONE	- - 1	
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY		
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED						

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 8

----- MALE -----						
GROUP:		1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12		10	10	10	9	9
PITUITARY - CONTINUED						
-CYST, PARS NERVOSA		1	0	0	0	0
PRESENT (F M N)	- - 1	NONE	NONE	NONE	NONE	NONE
-VACUOLATION, CYTOPLASMIC		1	0	1	0	4
MINIMAL (F M N)	- 1 -	NONE	- 1 -	NONE	NONE	NONE
MILD (F M N)	NONE	NONE	NONE	NONE	- 4 -	
PROSTATE						
TOTAL NUMBER EXAMINED		10	10	10	9	9
EXAMINED, UNREMARKABLE		9	9	10	7	9
-INFLAMMATION, CHRONIC		0	0	0	1	0
MINIMAL (F M N)	NONE	NONE	NONE	- 1 -	NONE	NONE
-INFLAMMATION, SUBACUTE		1	1	0	1	0
MINIMAL (F M N)	NONE	NONE	NONE	- 1 -	NONE	NONE
MILD (F M N)	- 1 -	- 1 -	NONE	NONE	NONE	NONE
RECTUM						
TOTAL NUMBER EXAMINED		10	10	10	9	9
EXAMINED, UNREMARKABLE		9	9	10	9	9
-INFLAMMATION, CHRONIC		1	1	0	0	0
MILD (F M N)	- 1 -	1 - -	NONE	NONE	NONE	NONE
1- UNTREATED 2- 0 MG/KG/DAY 3- 100 MG/KG/DAY 4- 450 MG/KG/DAY 5- 750 MG/KG/DAY						
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED						

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 9

		----- MALE -----				
GROUP:		1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12		10	10	10	9	9
SAL. GLAND MAND						
TOTAL NUMBER EXAMINED		10	10	10	9	9
EXAMINED, UNREMARKABLE		9	10	10	9	9
-INFLAMMATION, SUBACUTE		1	0	0	0	0
MINIMAL (F M N)		1 - -	NONE	NONE	NONE	NONE
SEMINAL VESICLES						
TOTAL NUMBER EXAMINED		10	10	10	9	9
EXAMINED, UNREMARKABLE		10	10	10	9	9
SKELETAL MUSCLE						
TOTAL NUMBER EXAMINED		10	10	10	9	9
EXAMINED, UNREMARKABLE		7	9	10	9	9
-INFLAMMATION, ACUTE		1	0	0	0	0
MINIMAL (F M N)		1 - -	NONE	NONE	NONE	NONE
-INFLAMMATION, SUBACUTE		2	1	0	0	0
MINIMAL (F M N)		1 1 -	1 - -	NONE	NONE	NONE
SKIN						
TOTAL NUMBER EXAMINED		10	10	10	9	9
EXAMINED, UNREMARKABLE		8	10	9	9	9
-INFLAMMATION, SUBACUTE		2	0	1	0	0
MINIMAL (F M N)		1 1 -	NONE	1 - -	NONE	NONE
1- UNTREATED						
2- 0 MG/KG/DAY						
3- 100 MG/KG/DAY						
4- 450 MG/KG/DAY						
5- 750 MG/KG/DAY						
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED						

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 10

----- MALE -----					
GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12	10	10	10	9	9
SKIN, TREATED					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	10	10	10	9	9
SKIN, UNTREATED					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	10	9	9	9	9
-GRANULOMA	0	1	0	0	0
MILD (F M N)	NONE	- - 1	NONE	NONE	NONE
-HYPERPLASIA, EPITHELIAL, PAPILLARY	0	0	1	0	0
MILD (F M N)	NONE	NONE	1 - -	NONE	NONE
SPINAL CORD					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	10	10	10	9	9
SPLEEN					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	10	10	10	9	9
STERNUM					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	9	10	10	8	9
-CHONDRODYSTROPHY	1	0	0	0	0
MODERATE (F M N)	1 - -	NONE	NONE	NONE	NONE
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 11

----- MALE -----					

GROUP:	1	2	3	4	5

NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12	10	10	10	9	9
STERNUM - CONTINUED					
-INFLAMMATION, SUBACUTE	0	0	0	1	0
MILD (F M N)	NONE	NONE	NONE	- 1 -	NONE
STOMACH, GLAN					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	9	7	10	8	8
-DILATATION, GLANDULAR	1	0	0	0	0
MINIMAL (F M N)	- 1 -	NONE	NONE	NONE	NONE
-EDEMA, SUBMUCOSAL	0	2	0	0	0
MILD (F M N)	NONE	- - 2	NONE	NONE	NONE
-INFILTRATE, LYMPHOCYTE	0	0	0	0	1
MINIMAL (F M N)	NONE	NONE	NONE	NONE	- 1 -
-INFLAMMATION, SUBACUTE	0	1	0	0	0
MINIMAL (F M N)	NONE	1 - -	NONE	NONE	NONE
-METAPLASIA, SQUAMOUS	0	0	0	1	0
MILD (F M N)	NONE	NONE	NONE	1 - -	NONE
STOMACH, NON					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	10	10	10	9	9

1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 12

----- MALE -----						
GROUP:		1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12		10	10	10	9	9
TAIL						
TOTAL NUMBER EXAMINED		NA	NA	NA	NA	1
EXAMINED, UNREMARKABLE		NA	NA	NA	NA	0
-HYPERKERATOSIS		NA	NA	NA	NA	1
MILD (F M N)		NA	NA	NA	NA	- - 1
-HYPERPLASIA, EPITHELIAL		NA	NA	NA	NA	1
MODERATE (F M N)		NA	NA	NA	NA	1 - -
-INFLAMMATION, ACUTE		NA	NA	NA	NA	1
MILD (F M N)		NA	NA	NA	NA	- - 1
TESTES						
TOTAL NUMBER EXAMINED		10	10	10	9	9
EXAMINED, UNREMARKABLE		10	10	10	9	9
THYMUS						
TOTAL NUMBER EXAMINED		10	10	10	9	9
EXAMINED, UNREMARKABLE		10	10	10	9	9
THYROID GLANDS						
TOTAL NUMBER EXAMINED		10	10	10	9	9
EXAMINED, UNREMARKABLE		5	9	9	7	8
-HYPERPLASIA, FOLLICULAR CELL		5	1	1	2	1
MINIMAL (F M N)		- 3 -	NONE	NONE	- 1 -	NONE
MILD (F M N)		- 2 -	- 1 -	- 1 -	- 1 -	- 1 -
1- UNTREATED		2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED						

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 13

----- MALE -----					
GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12	10	10	10	9	9
TRACHEA					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	10	10	10	8	9
-DILATATION, GLANDULAR	0	0	0	1	0
MILD (F M N)	NONE	NONE	NONE	- 1 -	NONE
URETERS					
TOTAL NUMBER EXAMINED	2	NA	NA	NA	NA
EXAMINED, UNREMARKABLE	2	NA	NA	NA	NA
URINARY BLADDER					
TOTAL NUMBER EXAMINED	10	10	10	9	9
EXAMINED, UNREMARKABLE	10	10	10	8	9
-INFLAMMATION, CHRONIC	0	0	0	1	0
MILD (F M N)	NONE	NONE	NONE	- 1 -	NONE
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 14

----- FEMALE -----						
GROUP:		1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12		10	10	10	10	10
ADRENAL CORTEX						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	9	10	10	8
-HYPERPLASIA		0	0	0	0	1
MILD (F M N)		NONE	NONE	NONE	NONE	- - 1
-VACUOLATION, CYTOPLASMIC		0	1	0	0	1
MILD (F M N)		NONE	1 - -	NONE	NONE	1 - -
ADRENAL MEDULLA						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	10	10	10	9
-DILATATION, VASCULAR		0	0	0	0	1
MILD (F M N)		NONE	NONE	NONE	NONE	- - 1
AORTA						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	10	10	10	10
BRAIN						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	10	10	10	10

1- UNTREATED 2- 0 MG/KG/DAY 3- 100 MG/KG/DAY 4- 450 MG/KG/DAY 5- 750 MG/KG/DAY						
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED						

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 15

----- FEMALE -----

GROUP:		1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12		10	10	10	10	10
CECUM						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	10	10	10	10
CERVIX						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	10	10	10	10
COLON						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		9	10	10	10	10
-HYPERPLASIA, LYMPHOID		1	0	0	0	0
MILD	(F M N)	- - 1	NONE	NONE	NONE	NONE
DUODENUM						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	10	10	10	10
EARS						
TOTAL NUMBER EXAMINED		NA	NA	NA	NA	1
EXAMINED, UNREMARKABLE		NA	NA	NA	NA	0
-HYPERKERATOSIS		NA	NA	NA	NA	1
MODERATE	(F M N)	NA	NA	NA	NA	- 1 -
-HYPERPLASIA, EPITHELIAL		NA	NA	NA	NA	1
MODERATE	(F M N)	NA	NA	NA	NA	- 1 -

1- UNTREATED 2- 0 MG/KG/DAY 3- 100 MG/KG/DAY 4- 450 MG/KG/DAY 5- 750 MG/KG/DAY
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 16

----- FEMALE -----					

GROUP:	1	2	3	4	5

NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12	10	10	10	10	10
EARS - CONTINUED					
-INFLAMMATION, CHRONIC ACTIVE	NA	NA	NA	NA	1
MILD (F M N)	NA	NA	NA	NA	- 1 -
ESOPHAGUS					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	10	10	10	10
EYES					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	10	10	10	10
FEMUR					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	10	10	10	10
HEART					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	5	6	6	4	7
-CARDIOMYOPATHY	1	1	1	3	0
MINIMAL (F M N)	- - 1	- 1 -	NONE	2 1 -	NONE
MODERATE (F M N)	NONE	NONE	1 - -	NONE	NONE
-ENDOCARDIOSIS	5	4	2	4	2
MINIMAL (F M N)	1 1 -	2 1 -	- - 2	- 1 -	- - 1
MILD (F M N)	- 2 1	- 1 -	NONE	- 3 -	- 1 -

1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

PROJECT NO.:WIL-402024
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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 17

----- FEMALE -----					

GROUP:	1	2	3	4	5

NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12	10	10	10	10	10
HEART - CONTINUED					
-ENDOCARDIOSIS, VALVULAR	0	0	1	1	1
MINIMAL (F M N)	NONE	NONE	- 1 -	- - 1	NONE
MILD (F M N)	NONE	NONE	NONE	NONE	- - 1
ILEUM					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	10	10	10	10
JEJUNUM					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	10	10	10	10
JOINT					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	10	10	10	10
KIDNEYS					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	1	2	2	1	2
-CYST	0	0	0	0	1
PRESENT (F M N)	NONE	NONE	NONE	NONE	- 1 -
-DILATATION, PELVIS	1	0	0	0	0
MODERATE (F M N)	- - 1	NONE	NONE	NONE	NONE

1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 18

----- FEMALE -----

GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12	10	10	10	10	10
KIDNEYS - CONTINUED					
-INFLAMMATION, SUBACUTE	2	3	4	5	3
MINIMAL (F M N)	- 1 -	- 3 -	- 3 -	- 3 -	- 2 -
MILD (F M N)	- 1 -	NONE	- 1 -	- 2 -	- 1 -
-MINERALIZATION	6	5	5	5	6
MINIMAL (F M N)	- 1 -	- 3 -	1 2 -	- 5 -	1 1 -
MILD (F M N)	- 5 -	- 2 -	- 2 -	NONE	- 4 -
-NEPHROPATHY, CHRONIC PROGRESSIVE	2	1	1	0	4
MINIMAL (F M N)	- - 1	NONE	- - 1	NONE	- - 3
MILD (F M N)	- - 1	- - 1	NONE	NONE	- - 1
LAC. GLAND EXOR					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	9	10	10	8
-INFLAMMATION, SUBACUTE	0	1	0	0	2
MILD (F M N)	NONE	1 - -	NONE	NONE	1 1 -
LIVER					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	1	1	2	2	1
-INFILTRATE, MONONUCLEAR	0	0	0	0	3
MINIMAL (F M N)	NONE	NONE	NONE	NONE	- 2 -
MILD (F M N)	NONE	NONE	NONE	NONE	- 1 -
-INFLAMMATION, SUBACUTE	9	9	8	8	6
MINIMAL (F M N)	- 7 -	- 5 -	- 5 -	- 2 -	- 1 -
MILD (F M N)	- 2 -	- 4 -	- 3 -	- 6 -	- 5 -
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

PROJECT NO.:WIL-402024
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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 19

----- FEMALE -----						

GROUP:		1	2	3	4	5

NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12		10	10	10	10	10

LN, AXILLARY						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		9	10	10	10	10
-HYPERPLASIA, LYMPHOID		1	0	0	0	0
MILD (F M N)		- - 1	NONE	NONE	NONE	NONE

LN, MANDIBULAR						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		8	10	10	9	10
-GRANULOMA		1	0	0	0	0
MILD (F M N)		1 - -	NONE	NONE	NONE	NONE
-HYPERPLASIA, LYMPHOID		1	0	0	1	0
MILD (F M N)		- - 1	NONE	NONE	- - 1	NONE

LN, MESENTERIC						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	10	10	10	9
-INFLAMMATION, SUBACUTE		0	0	0	0	1
MILD (F M N)		NONE	NONE	NONE	NONE	1 - -

1- UNTREATED 2- 0 MG/KG/DAY 3- 100 MG/KG/DAY 4- 450 MG/KG/DAY 5- 750 MG/KG/DAY						
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED						

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SPONSOR:AMERICAN PETROLEUM

TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 20

----- FEMALE -----					
GROUP:	1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12	10	10	10	10	10
LUNGS					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	10	7	6	10
-INFLAMMATION, SUBACUTE	0	0	3	4	0
MINIMAL (F M N)	NONE	NONE	- 3 -	- 4 -	NONE
MAMMARY GLAND					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	10	10	10	10
MARROW, FEMUR					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	10	10	10	10
MARROW, STERN					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	10	10	10	10
NERVE, SCIATIC					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	10	10	10	10
1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 21

----- FEMALE -----

GROUP:		1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12		10	10	10	10	10
NERVES, OPTIC						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	10	10	10	10
OVARIES						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	10	10	10	10
OVIDUCTS						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	10	10	10	10
PANCREAS						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		9	10	9	10	8
-INFLAMMATION, CHRONIC		1	0	0	0	2
MILD (F M N)		1 - -	NONE	NONE	NONE	2 - -
-INFLAMMATION, SUBACUTE		0	0	1	0	0
MILD (F M N)		NONE	NONE	1 - -	NONE	NONE
PARATHYROIDS						
TOTAL NUMBER EXAMINED		6	7	7	8	8
EXAMINED, UNREMARKABLE		6	7	7	8	8
NOT PRESENT FOR EXAMINATION		4	3	3	2	2
1- UNTREATED						
2- 0 MG/KG/DAY						
3- 100 MG/KG/DAY						
4- 450 MG/KG/DAY						
5- 750 MG/KG/DAY						
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED						

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SPONSOR:AMERICAN PETROLEUM

TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 22

----- FEMALE -----

GROUP:		1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12		10	10	10	10	10
PAWS						
TOTAL NUMBER EXAMINED		NA	NA	NA	NA	1
EXAMINED, UNREMARKABLE		NA	NA	NA	NA	0
-HYPERKERATOSIS		NA	NA	NA	NA	1
MILD (F M N)		NA	NA	NA	NA	- 1 -
-HYPERPLASIA, EPITHELIAL		NA	NA	NA	NA	1
MODERATE (F M N)		NA	NA	NA	NA	- 1 -
-INFLAMMATION, CHRONIC ACTIVE		NA	NA	NA	NA	1
MILD (F M N)		NA	NA	NA	NA	- 1 -
PITUITARY						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	10	9	10	10
-VACUOLATION, CYTOPLASMIC		0	0	1	0	0
MILD (F M N)		NONE	NONE	- - 1	NONE	NONE
RECTUM						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	10	10	10	10
SAL. GLAND MAND						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	9	10	10	10
-INFLAMMATION, SUBACUTE		0	1	0	0	0
MINIMAL (F M N)		NONE	1 - -	NONE	NONE	NONE
1- UNTREATED		2- 0 MG/KG/DAY				
NA = NOT APPLICABLE		(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED				
		3- 100 MG/KG/DAY				
		4- 450 MG/KG/DAY				
		5- 750 MG/KG/DAY				

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 23

----- FEMALE -----

GROUP:		1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12		10	10	10	10	10
SKELETAL MUSCLE						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	10	10	10	9
-INFLAMMATION, SUBACUTE		0	0	0	0	1
MINIMAL	(F M N)	NONE	NONE	NONE	NONE	- 1 -
SKIN						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	10	10	10	8
-HYPERPLASIA, EPITHELIAL		0	0	0	0	2
MILD	(F M N)	NONE	NONE	NONE	NONE	2 - -
SKIN, TREATED						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	9	9	9	9
-CYST, KERATIN		0	0	1	0	0
PRESENT	(F M N)	NONE	NONE	- - 1	NONE	NONE
-HYPERPLASIA, EPITHELIAL		0	1	0	0	0
MILD	(F M N)	NONE	- 1 -	NONE	NONE	NONE
-INFLAMMATION, GRANULOMATOUS		0	0	0	0	1
MINIMAL	(F M N)	NONE	NONE	NONE	NONE	1 - -
-INFLAMMATION, SUBACUTE		0	0	0	1	0
MINIMAL	(F M N)	NONE	NONE	NONE	- 1 -	NONE
1- UNTREATED						
2- 0 MG/KG/DAY						
3- 100 MG/KG/DAY						
4- 450 MG/KG/DAY						
5- 750 MG/KG/DAY						

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

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 24

----- FEMALE -----					

GROUP:	1	2	3	4	5

NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12	10	10	10	10	10
SKIN, UNTREATED					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	9	10	10	10	10
-INFLAMMATION, SUBACUTE	1	0	0	0	0
MINIMAL (F M N)	- 1 -	NONE	NONE	NONE	NONE
SPINAL CORD					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	10	10	10	10
SPLEEN					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	10	10	10	10
STERNUM					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	9	10	10	10
-INFLAMMATION, SUBACUTE	0	1	0	0	0
MILD (F M N)	NONE	1 - -	NONE	NONE	NONE
STOMACH, GLAN					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	10	10	10	9
-INFILTRATE, LYMPHOCYTE	0	0	0	0	1
MILD (F M N)	NONE	NONE	NONE	NONE	1 - -

1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 25

----- FEMALE -----

GROUP:		1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12		10	10	10	10	10
STOMACH, GLAN - CONTINUED						
STOMACH, NON						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	10	9	9	9
-EDEMA, SUBMUCOSAL		0	0	1	0	0
MILD	(F M N)	NONE	NONE	- - 1	NONE	NONE
-HYPERKERATOSIS		0	0	0	1	0
MILD	(F M N)	NONE	NONE	NONE	- 1 -	NONE
-HYPERPLASIA, EPITHELIAL		0	0	0	0	1
MILD	(F M N)	NONE	NONE	NONE	NONE	1 - -
-INFLAMMATION, CHRONIC ACTIVE		0	0	0	0	1
MILD	(F M N)	NONE	NONE	NONE	NONE	1 - -
TAIL						
TOTAL NUMBER EXAMINED		NA	NA	NA	NA	1
EXAMINED, UNREMARKABLE		NA	NA	NA	NA	0
-HYPERKERATOSIS		NA	NA	NA	NA	1
MODERATE	(F M N)	NA	NA	NA	NA	- 1 -
-HYPERPLASIA, EPITHELIAL		NA	NA	NA	NA	1
MILD	(F M N)	NA	NA	NA	NA	- 1 -
1- UNTREATED 2- 0 MG/KG/DAY 3- 100 MG/KG/DAY 4- 450 MG/KG/DAY 5- 750 MG/KG/DAY						
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED						

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 26

----- FEMALE -----					

GROUP:	1	2	3	4	5

NUMBER OF ANIMALS IN DOSE GROUP	10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12	10	10	10	10	10
THYMUS					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	9	10	10	10	10
-CONGESTION	1	0	0	0	0
MILD (F M N)	- - 1	NONE	NONE	NONE	NONE
THYROID GLANDS					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	9	10	10	10	10
-HYPERPLASIA, FOLLICULAR CELL	1	0	0	0	0
MINIMAL (F M N)	- 1 -	NONE	NONE	NONE	NONE
TRACHEA					
TOTAL NUMBER EXAMINED	10	10	10	10	10
EXAMINED, UNREMARKABLE	10	9	10	10	10
-INFLAMMATION, SUBACUTE	0	1	0	0	0
MILD (F M N)	NONE	- 1 -	NONE	NONE	NONE
URETERS					
TOTAL NUMBER EXAMINED	1	NA	NA	NA	NA
EXAMINED, UNREMARKABLE	1	NA	NA	NA	NA

1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY	
NA = NOT APPLICABLE (F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED					

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TABLE S19 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
SUMMARY OF MICROSCOPIC FINDINGS

PAGE 27

----- FEMALE -----

GROUP:		1	2	3	4	5
NUMBER OF ANIMALS IN DOSE GROUP		10	10	10	10	10
NUMBER OF ANIMALS EXAMINED WEEK 12		10	10	10	10	10
URINARY BLADDER						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		10	10	9	10	10
-INFLAMMATION, SUBACUTE		0	0	1	0	0
MINIMAL	(F M N)	NONE	NONE	- 1 -	NONE	NONE
UTERUS						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		5	4	9	8	10
-DILATATION, GLANDULAR		0	1	0	0	0
MODERATE	(F M N)	NONE	1 - -	NONE	NONE	NONE
-DILATATION, LUMEN		5	5	1	2	0
MINIMAL	(F M N)	- - 5	NONE	NONE	NONE	NONE
MILD	(F M N)	NONE	- - 4	- - 1	- - 2	NONE
MODERATE	(F M N)	NONE	- - 1	NONE	NONE	NONE
VAGINA						
TOTAL NUMBER EXAMINED		10	10	10	10	10
EXAMINED, UNREMARKABLE		0	0	0	0	0
-ESTROUS CYCLE: DIELSTRUS		3	3	1	6	3
PRESENT	(F M N)	- - 3	- - 3	- - 1	- - 6	- - 3
-ESTROUS CYCLE: ESTRUS		3	3	4	2	3
PRESENT	(F M N)	- - 3	- - 3	- - 4	- - 2	- - 3
-ESTROUS CYCLE: PROESTRUS		4	4	5	2	4
PRESENT	(F M N)	- - 4	- - 4	- - 5	- - 2	- - 4
1- UNTREATED						
2- 0 MG/KG/DAY						
3- 100 MG/KG/DAY						
4- 450 MG/KG/DAY						
5- 750 MG/KG/DAY						
(F M N) = FOCAL/SOLITARY, MULTIFOCAL/MULTIPLE, NOT SPECIFIED						

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11/15/2011
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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 2** states that the study will be conducted in general accordance with the Guidelines for Testing of Chemicals, Health Effects Test Guidelines, Section 474, 21 July 1997. However, this was not the intent for this study design; therefore, the study was not conducted in general accordance with these guidelines.

Reason for Deviation: Erroneous protocol wording.

- **Protocol Section 6.5** states that the male animals will weigh approximately 240 g to 340 g and the female animals will weigh approximately 170 g to 270 g at randomization. However, on 12 May 2011 (study day -4), body weights ranged from 199 g to 246 g and 148 g to 190 g for males and females, respectively.

Reason for Deviation: Body weights outside of protocol-specified range.

- **Protocol Section 8.1** 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 3 May 2011 and study day 0 was 16 May 2011; therefore, the acclimation period was only 13 days.

Reason for Deviation: Scheduling error.

- **Protocol section 8.4.3** states that test substance formulation samples will be collected using class A pipettes. However, due to the nature of the vehicle, the use of class A pipettes was not feasible; therefore, the samples were collected using a 1-mL syringe and cannula.

Reason for Deviation: Use of different laboratory tools for sample collection due to the nature of the vehicle.

- **Protocol section 9.3.3** states that dermal scoring will be conducted on all animals at the end of each 5-day dosing period at approximately 1 to 2 hours following the removal of residual test substance. However, on 20 May 2011 (study day 4), a dermal observation for 100 mg/kg/day group male no. 12659 was recorded 37 minutes later than the WIL Research SOP allowable range.

Reason for Deviation: Technician error.

- **Protocol section 9.8.1** states that bone marrow smears will be prepared using the sternum. However, on 13 August 2011 (study day 89), the following animals had bone marrow smears collected from the left femur.

Animal no.	Group	Sex
12649	Sham control	Male
12654	Sham control	Male
12648	Vehicle control	Male
12650	Vehicle control	Male
12645	450 mg/kg/day	Male
12652	450 mg/kg/day	Male
12669	450 mg/kg/day	Male
12709	450 mg/kg/day	Female
12719	450 mg/kg/day	Female
12673	750 mg/kg/day	Male
12739	750 mg/kg/day	Female

Reason for Deviation: Technician error.

On 22 July 2011, WIL Research experienced power fluctuations throughout the day. As a result, there were sporadic interruptions in the light cycle and recording of the light status within the animal rooms. In addition, excursions in temperature and humidity and recording of these parameters, as well as interruptions in the number of air changes per hour were possible. As these occurrences were sporadic in nature and any excursions in temperature and humidity were minor, these deviations from the protocol-specified environmental conditions were not deemed to have an adverse impact on the health and well-being of the animals or the outcome of the study.

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



Study Number: WIL-402024

PROTOCOL AMENDMENT 6

Sponsor: American Petroleum Institute

Study Title:

A 90-Day Repeat-Dose Dermal Toxicity Study Utilizing Distillates (Petroleum), Light Catalytic Cracked in Sprague Dawley Rats

Protocol Modifications:

1) 4 Study Schedule

Experimental Completion Date:
(Last histopathological examination)

14 October 2011

Reasons for Protocol Modification:

- 1) Addition of experimental completion date.

Approval:

Sponsor's approval was obtained via e-mail on November 15, 2011
Date

WIL Research Laboratories, LLC

Angela S. Burke
Angela S. Burke, PhD, DABT
Study Director

16 November 2011
Date

Jozef J.W.M. Mertens
Jozef J.W.M. Mertens, PhD, DABT
Senior Director, General Toxicology

16 Nov 2011
Date

American Petroleum Institute

Russell D. White
Russell White
Sponsor Representative

16 Nov 2011
Date



Study Number: WIL-402024

PROTOCOL AMENDMENT 5

Sponsor: American Petroleum Institute

Title of Study:

A 90-Day Repeat-Dose Dermal Toxicity Study Utilizing Distillates (Petroleum), Light Catalytic Cracked in Sprague Dawley Rats

Protocol Modifications:

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

10 Statistical Methods:

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 ($p < 0.05$).

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.

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

17 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

Angela S. Burke
Angela S. Burke, PhD
Study Director

04 November 2011
Date

Jozef J.W.M. Mertens
Jozef J.W.M. Mertens, PhD, DABT
Senior Director, General Toxicology

04 Nov 2011
Date

American Petroleum Institute

Russell White
Russell White
Sponsor Representative

10 Nov 2011
Date



Study Number: WIL-402024

PROTOCOL AMENDMENT 4

Sponsor: American Petroleum Institute

Study Title:

A 90-Day Repeat-Dose Dermal Toxicity Study Utilizing Distillates (Petroleum), Light Catalytic Cracked in Sprague Dawley Rats

Protocol Modifications:

1) 2 Regulatory Compliance

The United States EPA Health Effects Test Guideline 40 CFR 798.5395 will be removed from the protocol.

Reasons for Protocol Modification:

- 1) The guideline does not pertain to this study design and was inadvertently included in the protocol.

Approval:

Sponsor's approval was obtained via e-mail on 14 October 2011
Date

WIL Research Laboratories, LLC

Angela S Burke
Angela S. Burke, PhD
Study Director

17 October 2011
Date

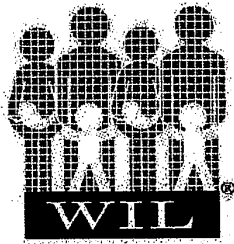
Jozef J.W.M. Mertens
Jozef J.W.M. Mertens, PhD, DABT
Senior Director, General Toxicology

17 Oct 2011
Date

American Petroleum Institute

Russell White
Russell White
Sponsor Representative

15 Nov. 2011
Date



Study Number: WIL-402024

PROTOCOL AMENDMENT 3

Sponsor: American Petroleum Institute

Title of Study:

A 90-Day Repeat-Dose Dermal Toxicity Study Utilizing Distillates (Petroleum), Light Catalytic Cracked in Sprague Dawley Rats

Protocol Modifications:

1) 9.8.3 Microscopic Examination:

Tissues will be shipped from WIL Research Laboratories, LLC in Ashland, OH to Biotechnics, in Hillsborough, NC for histopathology slide preparation.

The tissues will be shipped to the following address:

Biotechnics, Inc.
310 Millstone Drive
Hillsborough, NC 27278

The Principal Investigator for the slide preparation phase will be Kate Marks.

Reasons for Protocol Modification:

- 1) Designation of facility where slides will be prepared.

Approval:

Sponsor's approval was obtained via e-mail on 06 June 2011.
Date

WIL Research Laboratories, LLC

Angela S. Burke
Angela S. Burke, PhD
Study Director

06 June 2011
Date

Jozef J.W.M. Mertens
For Jozef J.W.M. Mertens, PhD, DABT
Senior Director, General Toxicology

6 JUN 11
Date

American Petroleum Institute

Russell D. White
Russell White, PhD
Sponsor Representative

08 June 2011
Date



Study Number: WIL-402024

PROTOCOL AMENDMENT 2

Sponsor: American Petroleum Institute

Study Title:

A 90-Day Repeat-Dose Dermal Toxicity Study Utilizing Distillates (Petroleum), Light Catalytic Cracked in Sprague Dawley Rats

Protocol Modifications:

1) **5.3 Lot Number:**

The lot number is changed to the following:

Site 26:Sample18

Reasons for Protocol Modification:

- 1) Correction of lot number.

Approval:

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

WIL Research Laboratories, LLC

Angela S. Burke
Angela S. Burke, PhD
Study Director

13 May 2011
Date

Jozef J.W.M. Mertens
Jozef J.W.M. Mertens, PhD, DABT
Senior Director, General Toxicology

13 May 2011
Date

American Petroleum Institute

Russell D. White
Russell White
Sponsor Representative

13 May 2011
Date



Study Number: WIL-402024

PROTOCOL AMENDMENT 1

Sponsor: American Petroleum Institute

Title of Study:

A 90-Day Repeat-Dose Dermal Toxicity Study Utilizing Distillates (Petroleum), Light Catalytic Cracked in Sprague Dawley Rats

Protocol Modifications:

1) 5.12.7 Analysis of Vehicle Preparation (non-GLP):

The vehicle sample will be shipped under ambient conditions to the Sponsor Contact (address in Section 5.11 of the protocol)

2) 9.8.1 Macroscopic Examination:

The footnote "a" designation is removed from the tissue "Femur with joint."

3) 9.8.3 Microscopic Examination:

Microscopic examination of hematoxylin-eosin stained paraffin sections will be conducted on all tissues listed in Section 9.8.1 from all animals euthanized *in extremis* or found dead, and from all surviving animals euthanized at the scheduled necropsy.

Reasons for Protocol Modification:

- 1) Clarification of shipping contact for shipment of vehicle sample.
- 2) Removal of footnote designation from selected tissue.
- 3) Change in scope of microscopic examination.

Approval:

Sponsor's approval was obtained via e-mail on 5/2/2011.
Date

WIL Research Laboratories, LLC

Angela S. Burke
Angela S. Burke, PhD
Study Director

02 May 2011
Date

Jozef J.W.M. Mertens
Jozef J.W.M. Mertens, PhD, DABT
Senior Director, General Toxicology

2 May 2011
Date

American Petroleum Institute

Russell A. White
Russell White
Sponsor Representative

3 May 2011
Date



PROTOCOL

A 90-DAY REPEAT-DOSE DERMAL TOXICITY STUDY UTILIZING DISTILLATES (PETROLEUM), LIGHT CATALYTIC CRACKED 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 Distillate (Petroleum), Light Catalytic Cracked 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 assist in dose selection for potential future two-generation reproductive studies to be conducted, (OECD 414) in Sprague Dawley rats.

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] with the exception of the non-GLP vehicle formulation analyses. The study will also be performed according to the protocol and WIL standard operating procedures.

3 PERSONNEL INVOLVED IN THE STUDY:**3.1 Sponsor's Representative:**

Russell White, PhD
American Petroleum Institute
1220 L Street, NW
Washington, DC 20005
Tel: (202) 682-8344
Email: whiter@api.org

3.2 Sponsor's Technical Monitor:

Katy O. Goyak, PhD
Senior Toxicologist
ExxonMobil Biomedical Sciences, Inc.
1545 Route 22 East
Annandale, New Jersey 08801
Tel: (908) 730-1017
Email: kathy.o.goyak@exxonmobil.com

3.3 WIL Study Director:

Angela S. Burke, PhD
Staff Toxicologist, General Toxicology
Tel: (419) 289-8700
Fax: (419) 289-3650
E-mail: aburke@wilresearch.com

3.4 WIL Departmental Responsibilities:

Teresa D. Morris, BS
Senior Toxicologist, General Toxicology
Emergency Contact
Tel: (419) 289-8700
Fax: (419) 289-3650
E-mail: tmorris@wilresearch.com

Mark D. Nemec, BS, DABT
President and Chief Operating Officer

Jozef J.W.M. Mertens, PhD, DABT
Senior Director, General Toxicology

Bennett Varsho, MPH, DABT
Director, Operations

Sally A. Keets, AS
Senior Operations Manager, Vivarium

Erica L. Lashley, BS, LAT
Operations Manager, Toxicology

Gwendalyn M. Maginnis, DVM
Clinical Veterinarian

Theresa M. Rafeld, CPhT
Group Manager, Formulations Laboratory

Carol S. Wally, BA, RLATG, SRS
Group Supervisor, Sample Processing Laboratory

George A. Parker, DVM, PhD, DACVP, DABT
Vice President, Pathology

Susan C. Haley, BS
Operations Manager, Pathology

Evelyn Vedaa, MT
Manager, Clinical Pathology

Carol A. Kopp, BS, LAT
Manager, Gross Pathology
and Developmental Toxicology Laboratory

Michael A. Safron, AS, HT (ASCP)^{CM}
Manager, Histology

Robert A. Wally, BS
Operations Manager, Reporting
and Technical Support Services

Heather L. Johnson, BS, RQAP-GLP
Manager, Quality Assurance

Ronald E. Wilson, BS
Director, Informational Systems

Scott D. Freer, BA
Manager and Research Chemist, Analytical Chemistry

Eric S. Bodle, PhD
Assistant Director, Analytical Chemistry

3.5 Contributing Scientists:

David A. Wilkie, DVM, MS, DACVO
Consulting Ophthalmologist
The Ohio State University

or

Brain C. Gilger, DVM, MS, DACVO
Consulting Ophthalmologist
Ophthalmic Consulting

4 STUDY SCHEDULE:

Proposed Experimental Starting Date: 03 May 2011
(Animal Receipt Date)

Proposed Experimental Start Dates: 16 May 2011
(Proposed Initiation of Dosing)

Proposed Necropsy Dates: 13 August 2011 (half of each sex/group)
14 August 2011 (half of each sex/group)

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

5 TEST SUBSTANCE INFORMATION:**5.1 Test Substance Shipment:**

Test substance and applicable documentation, including a Certificate of Analysis, will be shipped under Sponsor's responsibility to:

Formulations Laboratory (WIL-402024; Angela S. Burke, PhD)
Attn. Larry Blessing
WIL Research Laboratories, LLC
1407 George Road
Ashland, Ohio 44805-8946

5.2 Identification:

Distillates (petroleum), light catalytic cracked, (CAS 64741-59-9), also known as Cat Cracked Distillate Light

5.3 Lot Number:

Site 7:Sample 23

5.4 Expiration/Retest Date:

Retest in 5 years

5.5 Purity:

100%

5.6 Stability:

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

5.7 Physical Description:

To be documented by WIL Research Laboratories, LLC.

5.8 Storage Conditions:

Room temperature, protected from light.

5.9 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.

5.10 Personnel Safety:

Provided by the Sponsor. A Material Safety Data Sheet (MSDS) should accompany the test substance upon arrival at the laboratory.

5.11 Test Substance Disposition:

Unless otherwise indicated, all unused test substance will be returned to the Sponsor contact listed below:

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

5.12 Vehicle:**5.12.1 Identification:**

Mineral Oil, USP (Spectrum Chemicals and Laboratory Products)

5.12.2 Stability:

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

5.12.3 Physical Description:

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

5.12.4 Storage Conditions:

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

5.12.5 Reserve Samples:

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

5.12.6 Personnel Safety:

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

5.12.7 Analysis of Vehicle Preparation (non-GLP):

An approximate 200-mL sample will be collected from the first prep of the vehicle formulations (Group 2). Vehicle sample will be stored at room temperature until shipped to the Sponsor on a non-holiday Monday, Tuesday or Wednesday. The vehicle sample will be shipped in ambient conditions to the Sponsor Representative (address in Section 3.1 of the protocol) for Sponsor-designated labs to perform non-GLP assessment analysis, results of which will not be reported as part of this study and will not be used in the interpretation of the study results.

6 TEST SYSTEM:**6.1 Species:**

Rat

6.2 Strain:

CrI:CD(SD)

6.3 Source:

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

6.4 Number of Animals:

Sixty (60) naïve males and 60 naïve females will be purchased. Fifty (50) males and 50 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.

6.5 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.

6.6 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.

6.7 Justification for Selection and Number of Animals:

This species and strain of animal is recognized as appropriate for subchronic and chronic toxicity studies. The CrI: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 SPECIFIC MAINTENANCE SCHEDULE:**7.1 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).

7.2 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.

7.3 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.

7.4 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.

7.5 Enrichment:

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

8 EXPERIMENTAL DESIGN:**8.1 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.

8.2 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.

8.3 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.

8.3.1 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	
					Males	Females
1	Sham Control	NA	NA	NA	10	10
2	Vehicle ^a	0	0	1.5	10	10
3	Test Substance ^b	100	66.7	1.5	10	10
4	Test Substance ^b	450	300	1.5	10	10
5	Test Substance ^b	750	500	1.5	10	10

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

b) The test substance used for Groups 3-5 is cat cracked distillate, light.

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

8.3.2 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.

8.3.3 Adjustment of Dose Volumes:

Individual doses will be calculated based upon the most recent body weights to provide the proper dosage.

8.3.4 Justification of Dose Level:

The dosage levels for this study were selected by the Sponsor based upon dose range finding toxicity studies in rats. Doses were selected to cover a range extending from a minimal pharmacological dose level to a dose which is likely to show signs of toxicity.

8.3.5 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 require the dosing for half of each sex for all dose groups to occur on Monday-Friday and the

dosing for the remaining half of each sex for all dose groups to occur on Tuesday-Saturday. By 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 90-day treatment period (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 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 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 (as much as possible without introducing irritation of skin) by washing each animal with a warm, 1% mild soap (1% Ivory Liquid Soap in tap water) 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 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. If the use of replacement animals becomes necessary, these animals may receive fewer doses than specified.

8.3.6 Method of Administration and Dose Calculations:

Prior to dose administration, the back (down each side to the ventral surface) and flanks of each animal 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 and remarked as necessary for the duration of the study.

The vehicle and test substance formulations, adjusted as mL/kg per the most recent individual 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 (as much as possible without introducing irritation of skin) and the collars removed. The collars will be replaced after the 2-day nondosing period prior to the next exposure period with the exception of the last week of dosing (see Section 8.3.5).

8.3.7 Removal of Test Substance:

Residual test material will be gently removed (as much as possible without introducing irritation of 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 deionized water and gently patted dry and animals will be placed in clean caging.

8.4 Preparation and Analysis of Test Substance Formulations:

8.4.1 Method and Frequency of Preparation:

The test substance will be prepared for dosing as a weight-to-volume mixture in mineral oil. 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.

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

Analyses to demonstrate homogeneity and resuspension homogeneity as well as 8-day and 15-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-402027, Bodle, Draft) prior to the initiation of dosing (if possible).

8.4.3 Concentration and Homogeneity Analysis

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 class A pipettes. 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.

9 PARAMETERS TO BE EVALUATED:

9.1 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 9.8.1.

9.2 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.

9.3 Clinical Observations:

9.3.1 Daily Observations:

A clinical examination will be performed on all animals 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.

9.3.2 Detailed Physical Examinations:

A detailed physical examination will be conducted for all animals 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.

9.3.3 Dermal Observations:

Dermal scoring according to Appendix A will be conducted on all animals once during the pretreatment period 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 skin) of residual test substance from the animal's back.

9.4 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.**

9.5 Individual Food Consumption:

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

9.6 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 prior to the scheduled necropsy.

9.7 Clinical Pathology:

The following hematology, serum chemistry, and coagulation parameters will be evaluated on all surviving animals on the day of the scheduled necropsy. The animals 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.

9.7.1 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.

9.7.2 Coagulation:

Prothrombin time	Activated partial thromboplastin Time

9.7.3 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

9.8 Anatomic Pathology:

9.8.1 Macroscopic Examination:

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

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
Aorta	(females only)
Bone with marrow	Skeletal Muscle (Rectus Femoris)
Femur with joint ^a	Ovaries (2) with oviducts ^e
Sternum	Pancreas
Bone marrow smear	Peripheral nerve (sciatic)
(from sternum) ^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
Eyes with optic nerves (2) ^b	sections)
Epididymides (2) ^c	Untreated (posterior to treated
Gastrointestinal tract	skin)
Esophagus	Spinal cord
Stomach	Cervical
Duodenum	Thoracic
Jejunum	Lumbar
Ileum	Spleen
Cecum	Testes (2) ^c
Colon	Thymus
Rectum	Thyroid with parathyroids (2) ^e
Heart	Trachea
Kidneys (2)	Urinary bladder
Liver (sections of two lobes)	Uterus
Lungs (including bronchi, fixed by	Vagina
inflation with fixative)	All gross lesions
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.

9.8.2 Organ Weights:

The following organs 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.

9.8.3 Microscopic Examination:

Microscopic examination of hematoxylin-eosin stained paraffin sections will be conducted on all tissues listed in section 9.8.1 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 STATISTICAL METHODS:

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 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 sham control and vehicle control groups will be compared using a separate Kruskal-Wallis nonparametric ANOVA test (Kruskal and Wallis, 1952).

11 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.

12 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 13.

13 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 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 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.

14 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) 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.

15 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.

16 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.

17 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.

Bodle, E.S. Analytical Validation and Stability Study of Distillates (Petroleum), Light Catalytic Cracked in Mineral Oil Formulations (Study No. WIL-402027), WIL Research Laboratories, LLC, Ashland, OH, Draft.

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

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.

18 PROTOCOL APPROVAL:

Sponsor approval received via e-mail on 4/26/11
Date

American Petroleum Institute

Russell D. White
Russell White
Sponsor Representative

28 April 2011
Date

WIL Research Laboratories, LLC

Angela S. Burke
Angela S. Burke, PhD
Study Director

27 April 2011
Date

John J. O'Mall
For Jozef J.W.M. Mertens, PhD, DABT
Senior Director, General Toxicology

27 APR 11
Date

APPENDIX A

SCORING CRITERIA FOR DERMAL REACTIONSEvaluation of Dermal Reactions*

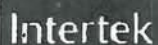
<u>Value</u>	<u>Erythema and Eschar Formation</u>	<u>Computer Designation</u>
0	No erythema	No erythema
1	Very slight erythema (barely perceptible, edges of area not well defined)	Very slight erythema
2	Slight erythema (pale red in color and edges definable)	Slight erythema
3	Moderate to severe erythema (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>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



Report of Analysis

Sample ID:2009-DRPK-000651-041		Date Taken:16-January-2009	
Drawn By:Client		Date Submitted:16-January-2009	
Sample Designated As:Crude Oil		Date Tested:04-March-2009	
Representing:Site#26 Sx #18 (As Received)			
Method	Test	Result	Units
ASTM D4052	Density of Liquids by Digital Density Meter		
	Relative Density @ 60/60°F	0.9390	
	API Gravity @ 60°F	19.2	*API
ASTM D2887	Boiling Range Distribution of Petroleum Fractions by GC (Simulated Distillation)	See Attached Report	
	Boiling Point Distribution		
ASTM D1319	Hydrocarbon Types (Aromatics, Olefins, Saturates) by FIA	Couldn't Run (Water)	
	Comment		
ASTM D5186	Determination of Aromatic Content and Polynuclear Aromatic Content of Diesel Fuels and Aviation Turbine Fuels by Supercritical Fluid Chromatography		
	Monoaromatics by SFC	35.3	Wt %
	Polynuclear Aromatics by SFC	45.7	Wt %
	Total Aromatics	80.9	Wt %

Sample ID:2009-DRPK-000651-042		Date Taken:16-January-2009	
Drawn By:Client		Date Submitted:16-January-2009	
Sample Designated As:Crude Oil		Date Tested:26-January-2009	
Representing:Site#26 Sx #21 (As Received)			
Method	Test	Result	Units
ASTM D4052	Density of Liquids by Digital Density Meter		
	Relative Density @ 60/60°F	0.8057	
	API Gravity @ 60°F	44.1	*API
ASTM D2887	Boiling Range Distribution of Petroleum Fractions by GC (Simulated Distillation)	See Attached Report	
	Boiling Point Distribution		
ASTM D1319	Hydrocarbon Types (Aromatics, Olefins, Saturates) by FIA		
	Aromatics	14.7	Vol %
	Olefins	2.3	Vol %
	Saturates	83.0	Vol %
ASTM D5186	Determination of Aromatic Content and Polynuclear Aromatic Content of Diesel Fuels and Aviation Turbine Fuels by Supercritical Fluid Chromatography		
	Monoaromatics by SFC	19.9	Wt %
	Polynuclear Aromatics by SFC	1.1	Wt %
	Total Aromatics	21.0	Wt %

Simdist-2000
ITS Caleb Brett - Houston

SAMPLE:	09-0651-41 (Site #26 Sx. #18)	Injection Date:	0090117095350-0600
FILE:	C:\CP32 Instruments\ID2887 & D3710\Data\2009\JAN-09\09-0651-41.0001.CDF	Report Date:	1/18/09 8:08
PROCEDURE:	C:\CP32 Instruments\ID2887 & D3710\PROCEDURES\122308-D2887.prc		
EXCEL FILE:	C:\CP32 Instruments\ID2887 & D3710\Reports\2009\JAN-09\09-0651-41_0001_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	254.7	123.7	40%	473.4	245.2	80%	607.4	319.7
1%	288.2	142.3	41%	478.6	248.1	81%	613.0	322.8
2%	314.5	156.9	42%	481.0	249.4	82%	615.8	324.3
3%	330.8	166.0	43%	483.4	250.8	83%	620.0	326.7
4%	340.8	171.6	44%	484.6	251.4	84%	625.7	329.9
5%	351.3	177.4	45%	485.7	252.1	85%	632.8	333.8
6%	364.6	184.8	46%	488.0	253.4	86%	639.9	337.7
7%	369.8	187.7	47%	489.0	253.9	87%	645.2	340.7
8%	376.0	191.1	48%	489.7	254.3	88%	649.2	342.9
9%	379.2	192.9	49%	490.6	254.8	89%	653.5	345.3
10%	389.4	198.5	50%	493.8	256.6	90%	660.9	349.4
11%	391.2	199.6	51%	495.6	257.6	91%	669.4	354.1
12%	395.9	202.2	52%	499.2	259.5	92%	676.5	358.1
13%	398.6	203.7	53%	506.6	263.7	93%	682.7	361.5
14%	400.1	204.5	54%	510.9	266.1	94%	691.9	366.6
15%	401.9	205.5	55%	514.5	268.1	95%	700.1	371.1
16%	405.2	207.3	56%	516.3	269.1	96%	711.0	377.2
17%	407.7	208.7	57%	519.9	271.0	97%	722.1	383.4
18%	408.7	209.3	58%	522.3	272.4	98%	739.4	393.0
19%	410.4	210.2	59%	524.5	273.6	99%	768.2	409.0
20%	413.3	211.8	60%	527.5	275.3	FBP	800.2	426.8
21%	415.2	212.9	61%	530.1	276.7			
22%	417.9	214.4	62%	533.1	278.4			
23%	421.9	216.6	63%	537.3	280.7			
24%	428.0	220.0	64%	540.7	282.6			
25%	431.7	222.0	65%	543.5	284.2			
26%	435.5	224.2	66%	547.3	286.3			
27%	438.9	226.0	67%	551.0	288.4			
28%	441.9	227.7	68%	554.9	290.5			
29%	446.4	230.2	69%	559.0	292.8			
30%	447.6	230.9	70%	566.0	296.7			
31%	448.3	231.3	71%	568.8	298.2			
32%	448.9	231.6	72%	571.9	300.0			
33%	449.5	231.9	73%	574.6	301.5			
34%	451.2	232.9	74%	578.8	303.8			
35%	452.8	233.8	75%	582.7	305.9			
36%	453.7	234.3	76%	585.7	307.6			
37%	456.4	235.8	77%	592.1	311.2			
38%	462.2	239.0	78%	597.5	314.2			
39%	467.0	241.7	79%	602.2	316.8			

Start Elution Time (mins):	0.151	Sample Wt:	0 g
End Elution Time (mins):	23.761	Solvent Wt:	0 g
		Material Balance:	100.0 wt%
Blank File:	C:\CP32 Instruments\ID2887 & D3710\Data\2009\JAN-09\CS2-BLANK.0009.CDF		
Calib File:	D:\CP32 Instruments\ID2887 & D3710\DATA\RTMIX-060905.0006.CDF		
Resp Factor:	1.000E+00		

CHARACTERIZATION AND QUANTITATION OF POLYNUCLEAR AROMATIC
COMPOUNDS (PAC) IN HPV KEROSENE, GAS OIL, HEAVY FUEL OIL AND
HYDROCARBON WASTE SAMPLES BY PRR ("MOBIL" METHOD 2) PAC

STUDY NO.: 2009-0102

MATERIALS TESTED: 46 assorted HPV oils

CRU SAMPLE NOS.: 010901 - 010949

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

LIAISON: T. A. Roy

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

EXPERIMENTAL START DATE: January 9, 2009

EXPERIMENTAL TERMINATION DATE: February 10, 2009

PORT ROYAL RESEARCH

STUDY 2009-0102

 2/12/09
T.A. Roy Date
Study Director

DISTRIBUTION

• Study Director
API Liaison (original)

T.A. Roy
P. Podhasky

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Correspondence

Sample Description and Identification Sheets

PRR Test Article Receipt Log

Study Worksheets PRR ("Mobil" Method 2) PAC

6-PAC Standard Response/Correction Factor Determinations &
Standard Chromatograms

Test Material GC/MS Chromatograms (Group Assignments)

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

source/chemical abstract no.	sample identification	total Wt. %	Group Percentages of total Wt. %						
			I	II	III	IV	V	VI	≥VII
SITE 13, SAMPLE 2, CAS# 64742-81-0	KEROSENE	1.90	20	80	0	0	0	0	0
SITE 26, SAMPLE 21, CAS# 8008-20-6	KEROSENE	1.93	30	70	0	0	0	0	0
SITE 9, SAMPLE 8, CAS# 64742-81-0	KEROSENE	2.23	30	70	0	0	0	0	0
SITE 25, SAMPLE 7, CAS# 64742-81-0	KEROSENE	3.38	30	70	0	0	0	0	0
SITE 28, SAMPLE 7, CAS# 64742-81-0	KEROSENE	2.04	30	70	1	0	0	0	0
SITE 26, SAMPLE 18, CAS# 64741-59-9	GAS OILS	32.50	10	60	30	0	0	0	0
SITE 7, SAMPLE 2, CAS# 64741-82-8	GAS OILS	0.18	20	50	30	1	0	0	0
SITE 26, SAMPLE 12, CAS# 64741-82-8	GAS OILS	1.38	50	50	4	0	0	0	0
SITE 22, SAMPLE 1, CAS# 64742-80-9	GAS OILS	5.09	10	70	10	0	0	0	0
SITE 3, SAMPLE 2, CAS# 64742-80-9	GAS OILS	3.38	1	70	30	0	0	0	0
SITE 26, SAMPLE 2, CAS# 64742-80-9	GAS OILS	4.38	8	70	20	0	0	0	0
SITE 28, SAMPLE 2, CAS# 64741-59-9	GAS OILS	39.80	1	70	20	0	0	0	0
SITE 17, SAMPLE 5, CAS# 64741-59-9	GAS OILS	23.90	10	70	20	0	0	0	0
SITE 5, SAMPLE 1, CAS# 64741-59-9	GAS OILS	38.20	0	90	10	0	0	0	0
SITE 1, SAMPLE 7, CAS# 64741-59-9	GAS OILS	31.50	0	70	30	0	0	0	0
SITE 28, SAMPLE 8, CAS# 64742-80-9	GAS OILS	2.52	6	80	20	0	0	0	0
SITE 12, SAMPLE 18, CAS# 64742-80-9	GAS OILS	7.39	3	50	50	0	0	0	0

TABLE 1 (CONTINUED)

source/chemical abstract no.	sample identification	total Wt. %	Group Percentages of total Wt. %						
			I	II	III	IV	V	VI	≥ VII
SITE 12, SAMPLE 5, CAS# 64741-82-8	GAS OILS	9.82	5	80	10	0	0	0	0
SITE 2, SAMPLE 7, CAS# 64741-82-8	GAS OILS	12.00	30	40	30	0	0	0	0
SITE 9, SAMPLE 4, CAS# 64741-82-8	GAS OILS	7.91	4	50	40	2	0	0	0
SITE 29, SAMPLE 1, CAS# 68333-23-3	INDIVIDUAL	0.38	20	70	9	0	0	0	0
SITE 9, SAMPLE 3, CAS# 64741-81-7	HEAVY FUEL OILS	11.30	0	6	20	30	20	10	2
SITE 6, SAMPLE 3, CAS# 64741-62-4	HEAVY FUEL OILS	44.40	0	2	70	20	5	4	0
SITE 1, SAMPLE 4, CAS# 64741-62-4	HEAVY FUEL OILS	30.50	0	2	60	30	7	3	0
SITE 2, SAMPLE 6, CAS# 64741-81-7	HEAVY FUEL OILS	10.00	0	10	40	20	10	9	3
SITE 8, SAMPLE 1, CAS# 64741-81-7	HEAVY FUEL OILS	16.50	0	3	40	30	20	8	2
SITE 30, SAMPLE 3, CAS# 64741-62-4	HEAVY FUEL OILS	43.20	0	3	30	30	20	10	4
SITE 17, SAMPLE 10, CAS# 64741-62-4	HEAVY FUEL OILS	31.00	0	1	20	40	20	10	5
SITE 30, SAMPLE 2, CAS# 64741-81-7	HEAVY FUEL OILS	18.40	0	3	20	30	20	20	10
SITE 12, SAMPLE 2, CAS# 64741-62-4	HEAVY FUEL OILS	52.00	0	2	30	30	20	10	5
SITE 21, SAMPLE 2, CAS# 68477-26-9	HYDROCARBON WASTES	1.80	2	80	20	0	0	0	0
SITE 28, SAMPLE 5, CAS# 68477-26-9	HYDROCARBON WASTES	4.11	30	70	5	0	0	0	0
SITE 1, SAMPLE 10, CAS# 68477-26-9	HYDROCARBON WASTES	15.70	10	60	20	2	0	0	0
SITE 2, SAMPLE 4, CAS# 68477-26-9	HYDROCARBON WASTES	12.70	5	70	30	2	0	0	0
SITE 16, SAMPLE 7, CAS# 68477-26-9	HYDROCARBON WASTES	5.21	3	50	20	10	7	5	0
SITE 26, SAMPLE 10, CAS# 68477-26-9	HYDROCARBON WASTES	0.33	0	30	60	9	5	2	0
SITE 21, SAMPLE 3, CAS# 68956-70-7	HYDROCARBON WASTES	0.35	0	50	40	5	2	0	0
SITE 4, SAMPLE 2, CAS# 68477-26-9	HYDROCARBON WASTES	1.74	4	50	30	8	5	0	0
SITE 10, SAMPLE 2, CAS# 68956-48-9	HYDROCARBON WASTES	2.60	3	80	20	0	0	0	0
SITE 2, SAMPLE 3, CAS# 68477-26-9	HYDROCARBON WASTES	16.40	10	40	30	10	7	8	0
SITE 10 SAMPLE 1, CAS# 68477-26-9	HYDROCARBON WASTES	2.01	7	70	20	0	0	0	0
SITE 2, SAMPLE 2, CAS# 68477-26-9	HYDROCARBON WASTES	15.90	10	50	20	6	5	6	0

TABLE 1 CONTINUED

source/chemical abstract no.	sample identification	total Wt. %	Group Percentages of total Wt. %						
			I	II	III	IV	V	VI	≥VII
SITE 23, SAMPLE 17, CAS# 68956-70-7	HYDROCARBON WASTES	2.83	0	10	20	10	20	20	20
SITE 5, SAMPLE 3, CAS# 68956-48-9	HYDROCARBON WASTES	9.66	0	50	40	5	2	0	0
SITE 26, SAMPLE 16, CAS# 68956-70-7	HYDROCARBON WASTES	3.46	0	10	70	10	3	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

source/chemical abstract no.	sample identification	total Wt. %	Group Wt%						
			I	II	III	IV	V	VI	≥VII
SITE 13, SAMPLE 2, CAS# 64742-81-0	KEROSENE	1.90	0.38	1.52	0.00	0.00	0.00	0.00	0.00
SITE 26, SAMPLE 21, CAS# 8008-20-6	KEROSENE	1.93	0.58	1.35	0.00	0.00	0.00	0.00	0.00
SITE 9, SAMPLE 8, CAS# 64742-81-0	KEROSENE	2.23	0.67	1.56	0.00	0.00	0.00	0.00	0.00
SITE 25, SAMPLE 7, CAS# 64742-81-0	KEROSENE	3.38	1.01	2.37	0.00	0.00	0.00	0.00	0.00
SITE 28, SAMPLE 7, CAS# 64742-81-0	KEROSENE	2.04	0.61	1.43	0.02	0.00	0.00	0.00	0.00
SITE 26, SAMPLE 18, CAS# 64741-59-9	GAS OILS	32.50	3.25	19.50	9.75	0.00	0.00	0.00	0.00
SITE 7, SAMPLE 2, CAS# 64741-82-8	GAS OILS	0.18	0.04	0.09	0.05	0.00	0.00	0.00	0.00
SITE 26, SAMPLE 12, CAS# 64741-82-8	GAS OILS	1.38	0.69	0.69	0.06	0.00	0.00	0.00	0.00
SITE 22, SAMPLE 1, CAS# 64742-80-9	GAS OILS	5.09	0.51	3.56	0.51	0.00	0.00	0.00	0.00
SITE 3, SAMPLE 2, CAS# 64742-80-9	GAS OILS	3.38	0.03	2.37	1.01	0.00	0.00	0.00	0.00

TABLE II (CONTINUED)

source/chemical abstract no.	sample identification	total Wt. %	Group Wt%						
			I	II	III	IV	V	VI	≥VII
SITE 26, SAMPLE 2, CAS# 64742-80-9	GAS OILS	4.38	0.35	3.07	0.88	0.00	0.00	0.00	0.00
SITE 28, SAMPLE 2, CAS# 64741-59-9	GAS OILS	39.80	0.40	27.86	7.96	0.00	0.00	0.00	0.00
SITE 17, SAMPLE 5, CAS# 64741-59-9	GAS OILS	23.90	2.39	16.73	4.78	0.00	0.00	0.00	0.00
SITE 5, SAMPLE 1, CAS# 64741-59-9	GAS OILS	38.20	0.00	34.38	3.82	0.00	0.00	0.00	0.00
SITE 1, SAMPLE 7, CAS# 64741-59-9	GAS OILS	31.50	0.00	22.05	9.45	0.00	0.00	0.00	0.00
SITE 28, SAMPLE 8, CAS# 64742-80-9	GAS OILS	2.52	0.15	2.02	0.50	0.00	0.00	0.00	0.00
SITE 12, SAMPLE 18, CAS# 64742-80-9	GAS OILS	7.39	0.22	3.70	3.70	0.00	0.00	0.00	0.00
SITE 12, SAMPLE 5, CAS# 64741-82-8	GAS OILS	9.82	0.49	7.86	0.98	0.00	0.00	0.00	0.00
SITE 2, SAMPLE 7, CAS# 64741-82-8	GAS OILS	12.00	3.60	4.80	3.60	0.00	0.00	0.00	0.00
SITE 9, SAMPLE 4, CAS# 64741-82-8	GAS OILS	7.91	0.32	3.96	3.16	0.16	0.00	0.00	0.00
SITE 29, SAMPLE 1, CAS# 68333-23-3	INDIVIDUAL	0.38	0.08	0.27	0.03	0.00	0.00	0.00	0.00
SITE 9, SAMPLE 3, CAS# 64741-81-7	HEAVY FUEL OILS	11.30	0.00	0.68	2.26	3.39	2.26	1.13	0.23
SITE 6, SAMPLE 3, CAS# 64741-62-4	HEAVY FUEL OILS	44.40	0.00	0.89	31.08	8.88	2.22	1.78	0.00
SITE 1, SAMPLE 4, CAS# 64741-62-4	HEAVY FUEL OILS	30.50	0.00	0.61	18.30	9.15	2.14	0.92	0.00
SITE 2, SAMPLE 6, CAS# 64741-81-7	HEAVY FUEL OILS	10.00	0.00	1.00	4.00	2.00	1.00	0.90	0.30
SITE 8, SAMPLE 1, CAS# 64741-81-7	HEAVY FUEL OILS	16.50	0.00	0.50	6.60	4.95	3.30	1.32	0.33
SITE 30, SAMPLE 3, CAS# 64741-62-4	HEAVY FUEL OILS	43.20	0.00	1.30	12.96	12.96	8.64	4.32	1.73
SITE 17, SAMPLE 10, CAS# 64741-62-4	HEAVY FUEL OILS	31.00	0.00	0.31	6.20	12.40	6.20	3.10	1.55
SITE 30, SAMPLE 2, CAS# 64741-81-7	HEAVY FUEL OILS	18.40	0.00	0.55	3.68	5.52	3.68	3.68	1.84
SITE 12, SAMPLE 2, CAS# 64741-62-4	HEAVY FUEL OILS	52.00	0.00	1.04	15.60	15.60	10.40	5.20	2.60
SITE 21, SAMPLE 2, CAS# 68477-26-9	HYDROCARBON WASTES	1.80	0.04	1.44	0.36	0.00	0.00	0.00	0.00
SITE 28, SAMPLE 5, CAS# 68477-26-9	HYDROCARBON WASTES	4.11	1.23	2.88	0.21	0.00	0.00	0.00	0.00
SITE 1, SAMPLE 10, CAS# 68477-26-9	HYDROCARBON WASTES	15.70	1.57	9.42	3.14	0.31	0.00	0.00	0.00
SITE 2, SAMPLE 4, CAS# 68477-26-9	HYDROCARBON WASTES	12.70	0.64	8.89	3.81	0.25	0.00	0.00	0.00
SITE 16, SAMPLE 7, CAS# 68477-26-9	HYDROCARBON WASTES	5.21	0.16	2.61	1.04	0.52	0.36	0.26	0.00
SITE 26, SAMPLE 10, CAS# 68477-26-9	HYDROCARBON WASTES	0.33	0.00	0.10	0.20	0.03	0.02	0.01	0.00

source/chemical abstract no.	sample identification	total Wt. %	Group Wt%						
			I	II	III	IV	V	VI	≥VII
SITE 21, SAMPLE 3, CAS# 68956-70-7	HYDROCARBON WASTES	0.35	0.00	0.18	0.14	0.02	0.01	0.00	0.00
SITE 4, SAMPLE 2, CAS# 68477-26-9	HYDROCARBON WASTES	1.74	0.07	0.87	0.52	0.14	0.09	0.00	0.00
SITE 10, SAMPLE 2, CAS# 68956-48-9	HYDROCARBON WASTES	2.60	0.08	2.08	0.52	0.00	0.00	0.00	0.00
SITE 2, SAMPLE 3, CAS# 68477-26-9	HYDROCARBON WASTES	16.40	1.64	6.56	4.92	1.64	1.15	1.31	0.00
SITE 10 SAMPLE 1, CAS# 68477-26-9	HYDROCARBON WASTES	2.01	0.14	1.41	0.40	0.00	0.00	0.00	0.00
SITE 2, SAMPLE 2, CAS# 68477-26-9	HYDROCARBON WASTES	15.90	1.59	7.95	3.18	0.95	0.80	0.95	0.00
SITE 2, SAMPLE 1, CAS# 68477-26-9	HYDROCARBON WASTES	16.20	3.24	6.48	3.24	1.46	1.13	0.97	0.00
SITE 23, SAMPLE 17, CAS# 68956-70-7	HYDROCARBON WASTES	2.83	0.00	0.28	0.57	0.28	0.57	0.57	0.57
SITE 5, SAMPLE 3, CAS# 68956-48-9	HYDROCARBON WASTES	9.66	0.00	4.83	3.86	0.48	0.19	0.00	0.00
SITE 26, SAMPLE 16, CAS# 68956-70-7	HYDROCARBON WASTES	3.46	0.00	0.35	2.42	0.35	0.10	0.07	0.00

DISCUSSION

Four of the samples were analyzed in duplicate, one each from the four categories of streams, kerosene, gas oil, heavy fuel oil and hydrocarbon waste. The relative percent difference (%RPD)¹ for the duplicate values were 22.5, 6.0, 3.6 and 6.8% for the four categories, respectively. Generally, RPD values ≤20% are considered to be within precision standards. The kerosene value is outside this limit and likely reflects the variable loss of volatile components from this stream which is outside the designed scope and limitation of the PAC2 assay.

¹ RPD = (R1 - R2)/[(R1 + R2)/2] X 100 where R1 and R2 are replicates 1 and 2.

APPENDIX C

Analyses of Dosing Formulations (WIL Research Laboratories, LLC)

A 90-Day Repeat-Dose Dermal Toxicity
Study Utilizing Distillates (Petroleum),
Light Catalytic Cracked in Sprague Dawley Rats

Analyses of Dosing Formulations

Analytical Chemistry Department

WIL Research Laboratories, LLC



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1. SUMMARY

A high performance liquid chromatography method using ultraviolet absorbance detection at a wavelength of 254 nm for the determination of distillates (petroleum), light catalytic cracked (CAS# 64741-59-9) concentration in mineral oil formulations containing test substance ranging in concentration from 50.0 to 500 mg/mL was validated in a previous study (Bodle, 2011, WIL-402027). In the present study, test substance homogeneity and concentration acceptability were assessed in formulations used for dose administration and prepared at target concentrations of 66.7, 300, and 500 mg CAS# 64741-59-9/mL.

The results of the test substance homogeneity assessment in formulations used for dose administration and prepared at target concentrations of 66.7, 300, and 500 mg CAS# 64741-59-9/mL met the WIL Research SOP acceptance criteria, *i.e.*, the relative standard deviation for the mean concentration was $\leq 10\%$ at a concentration within the acceptable limits (85% to 115% of target). The analyzed formulations used for dose administration met the WIL Research SOP requirement for 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 vehicle control group.

2. INTRODUCTION

This report provides a detailed description of a validated high performance liquid chromatography (HPLC) method using ultraviolet (UV) absorbance detection at a wavelength of 254 nm for the determination of distillates (petroleum), light catalytic cracked (CAS# 64741-59-9) concentration in mineral oil formulations containing test substance ranging in concentration from 50.0 to 500 mg/mL. The assay was validated in a previous study (Bodle, 2011, WIL-402027) where assay specificity/selectivity, calibration reproducibility, precision, accuracy, and ruggedness were assessed. Also in the previous study, formulations prepared at target concentrations of 50 and

500 mg CAS# 64741-59-9/mL were analyzed to assess test substance homogeneity and, following up to 15 days of room temperature storage, resuspension homogeneity and stability. 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>
17 May 2011	First date of analysis
6 August 2011	Last date of analysis

2.2. WIL RESEARCH KEY STUDY PERSONNEL

J. Fabricio Beltran, BA	Associate Research Chemist, Analytical Chemistry
Jonathan G. Bernauer, BA	Chemist II, Analytical Chemistry
Eric S. Bodle, PhD	Assistant Director, Analytical Chemistry
Jena M. Jenkins, BA	Chemist I, Analytical Chemistry
Gregory A. Hawks, AS	Group Supervisor, Reporting & Technical Support Services
Melissa A. Hull, BS	Group Manager, Reporting & Technical Support Services

3. EXPERIMENTAL PROCEDURES - MATERIALS AND METHODS

3.1. HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

Instrument: Agilent 1100 liquid chromatograph equipped with a variable wavelength detector, autosampler, and Dionex Chromeleon[®] software, or equivalent system

Column: Phenomenex Jupiter[®] C4, 150 × 4.6 mm, 5-μm particle-size, 30 nm

Mobile Phase: A: Deionized (DI) water
B: Methanol (MeOH)

Gradient:	Time (minutes)	A (%)	B (%)
	0.0	50.0	50.0
	2.0	50.0	50.0
	7.0	10.0	90.0
	9.0	10.0	90.0
	9.1	50.0	50.0
	11.5 or 11.8	50.0	50.0

Flow Rate: 1.50 mL/minute

Column Temperature: 30°C

Detector: UV absorbance at 254 nm

Injection Volume: 10 μL

Retention Time: Approximately 5.5 to 9.0 minutes for CAS# 64741-59-9 peak group

Run Time: 11.5 minutes or 11.8 minutes

3.2. PREPARATION OF CALIBRATION STOCK SOLUTION

The calibration standard stock solution was prepared at a concentration of 0.500 mg CAS# 64741-59-9/mL by transferring 28 μL of CAS# 64741-59-9 (WIL log no. ARS-8471A, density of 0.92851 mg/mL) to a 50-mL volumetric flask. Approximately 40 mL of ethyl acetate (EtOAc) was added, and the preparation was mixed as needed to achieve dissolution of the test substance. Additional EtOAc was added as needed to obtain the desired concentration, and the solution was stirred to mix.

3.3. PREPARATION OF CALIBRATION STANDARDS

Aliquots of the calibration stock solution were combined in amber autosampler vials with appropriate volumes of EtOAc to obtain calibration standards ranging in concentration from 25.0 to 200 µg CAS# 64741-59-9/mL. Triplicate calibration standards were prepared at each concentration for the validation sessions; at least single calibration standards were prepared at each concentration thereafter.

3.4. PREPARATION OF QUALITY CONTROL STOCK SOLUTIONS

The quality control (QC) stock solution was prepared at a concentration of 100 mg CAS# 64741-59-9/mL by transferring 2.70 mL of CAS# 64741-59-9 (WIL log no. 8471A, density of 0.92851 mg/mL) into a 25-mL volumetric flask. Approximately 20 mL of EtOAc was added and the preparation was mixed as needed to achieve dissolution of the test substance. Additional EtOAc was added as needed to obtain the desired concentration, and the solution was stirred to mix.

3.5. PREPARATION OF QUALITY CONTROL SAMPLES

As detailed in the following table, QC samples were prepared to simulate the processing of formulations at concentrations of 50.0, 250, and 500 mg CAS# 64741-59-9/mL (nominal QC concentrations) by combining aliquots of the QC stock solution, vehicle (mineral oil), and EtOAc in polypropylene tubes. The processed samples were mixed with vortex action. Portions of the processed samples were further diluted with EtOAc in amber autosampler vials or polypropylene tubes. QC samples were prepared in triplicate at each concentration; a single blank was prepared.

QC Level	QC Conc. (mg/mL)	Vehicle Volume (mL)	QC Stock Conc. (mg/mL)	QC Stock Volume (mL)	EtOAc Volume (mL)	Secondary Dilution	Final Conc. (µg/mL)
BQC	0	1.00	NA	NA	39.00	10-fold	0
QC1	50.0	1.00	100	0.500	38.50	10-fold	125
QC2	250	1.00	100	2.50	36.50	50-fold	125
QC3	500	1.00	100	5.00	34.00	100-fold	125

NA = Not applicable

3.6. FORMULATION SAMPLE PROCESSING

Quadruplicate formulation samples were collected using a syringe and dosing cannula and placed in polypropylene tubes. Two samples from each quadruplicate set were processed for analysis and the remaining 2 samples (back-up samples) were stored at room temperature and, if not processed for analysis, were discarded after Study Director's acceptance of results. As detailed in the following table, formulation samples were processed by adding EtOAc and mixing with vortex action. Portions of the processed samples were further diluted with EtOAc in amber autosampler vials or polypropylene tubes. The vials were capped, and the diluted samples mixed with vortex action.

Group	Theoretical Test Substance Conc. (mg/mL)	Sample Volume (mL)	EtOAc Volume (mL)	Secondary Dilution	Theoretical Final Conc. (µg/mL)
2	0	1.0	39.00	16.7-fold	0
3	66.7	1.0	39.00	16.7-fold	100
4	300	1.0	39.00	50-fold	150
5	500	1.0	39.00	100-fold	125

3.7. CONCENTRATION 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 CAS# 64741-59-9 peak group height (y) and the theoretical concentrations (x) of the calibration standards were fit with least-squares regression analysis to the linear function:

$$y = ax + b$$

Concentrations were calculated from the results of the regression analysis using Dionex Chromeleon[®] software. The concentration data were transferred to a Microsoft Excel[®] spreadsheet, 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 the formulation and QC samples were calculated by applying any necessary factors to correct for dilution and/or unit conversion.

4. RESULTS AND DISCUSSION

Under the described chromatographic conditions, the retention time of the test substance peak group was approximately 5.5 to 9.0 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 vehicle blank sample, respectively. The total analysis time required for each run was 11.5 minutes or 11.8 minutes.

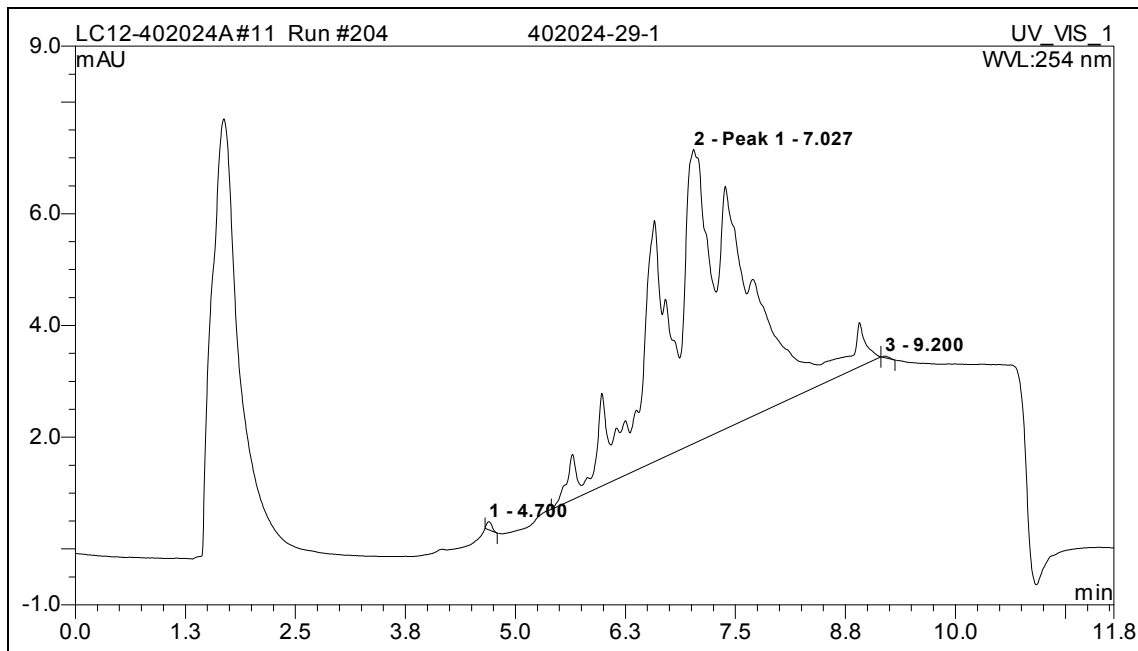


Figure 1: Representative Chromatogram of a 25.0 µg CAS# 64741-59-9/mL Calibration Standard

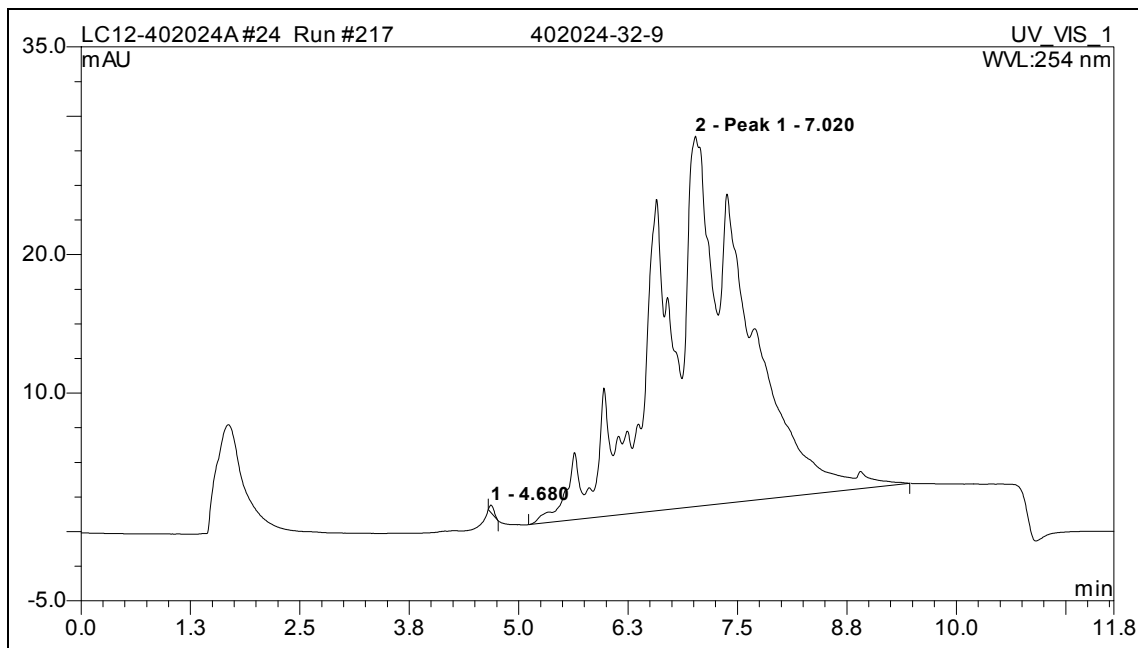


Figure 2: Representative Chromatogram of a Processed 500 mg CAS# 64741-59-9/mL Quality Control Sample

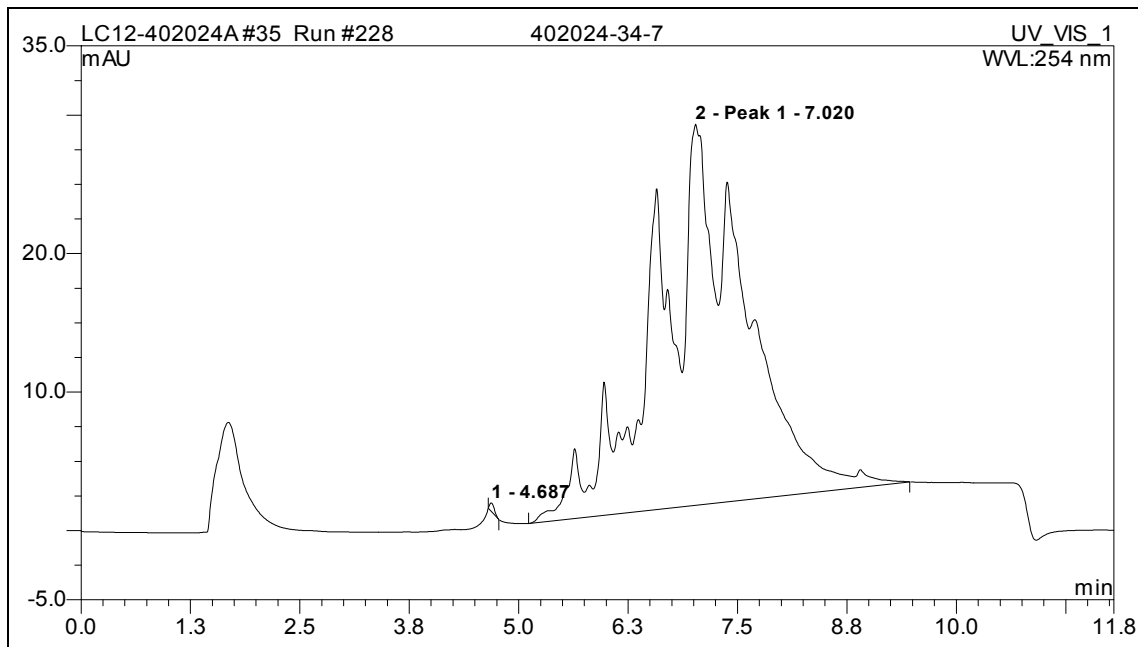


Figure 3: Representative Chromatogram of a Processed 500 mg CAS# 64741-59-9/mL Formulation Sample

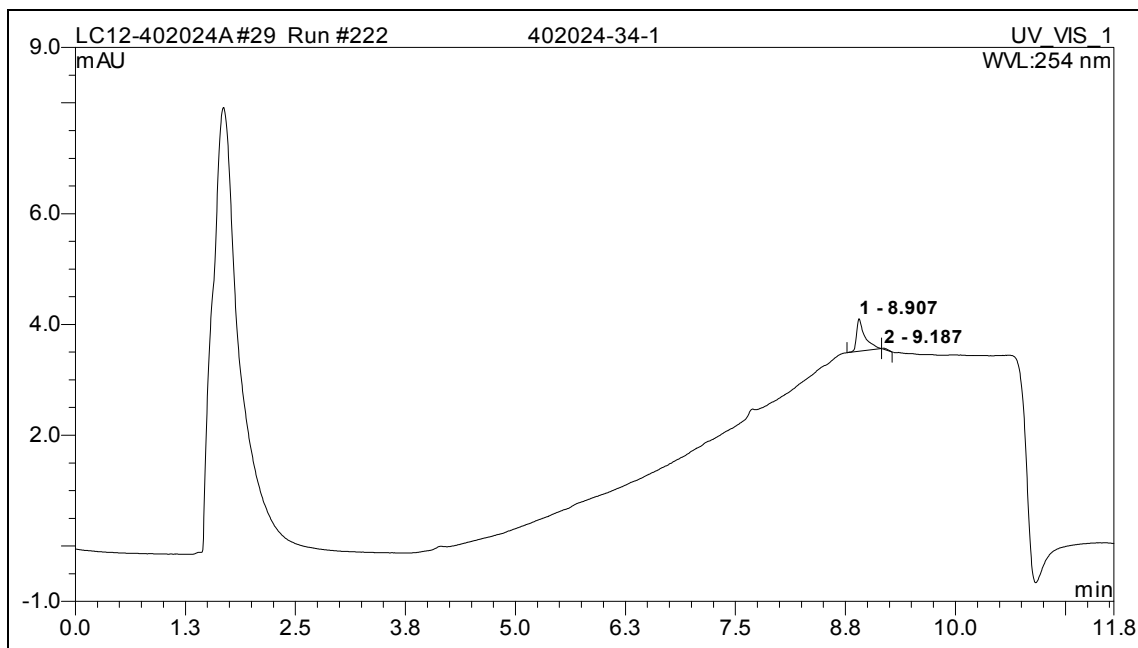


Figure 4: Chromatogram of a Processed Vehicle Blank Sample

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 HPLC/UV 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 peaks (approximately 5.5 to 9.0 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 66.7, 300, and 500 mg CAS# 64741-59-9/mL, and the QC samples were prepared at nominal concentrations of 50.0, 250, and 500 mg CAS# 64741-59-9/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 ASSESSMENT OF FORMULATIONS

Duplicate samples from the top, middle, and bottom strata of the formulations prepared on 13 May 2011 at target test substance concentrations of 66.7, 300, and 500 mg/mL were analyzed to assess test substance homogeneity. Duplicate samples from the top, middle, and bottom strata of the vehicle control were also collected and analyzed. The results of the homogeneity analyses are presented in Table 1, with the overall statistics summarized as follows:

Homogeneity Assessment of the 13 May 2011 Formulations				
	Group 2 (0 mg/mL)	Group 3 (66.7 mg/mL)	Group 4 (300 mg/mL)	Group 5 (500 mg/mL)
Mean Concentration (mg/mL)	ND	69.2	310	517
SD	NA	0.81	2.3	2.5
RSD (%)	NA	1.2	0.75	0.49
Mean Concentration % of Target	NA	104	103	103

ND = No test substance chromatographic peak detected

NA = Not applicable

The homogeneity assessment of the 13 May 2011 formulations met the WIL Research SOP requirement, *i.e.*, the RSD for the mean concentration was $\leq 10\%$ at a concentration within the acceptable limits (within 85% to 115% of target concentration). No test substance was detected in the analyzed vehicle administered to the control group (Group 1).

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 (66.7 mg/mL)	Group 4 (300 mg/mL)	Group 5 (500 mg/mL)
23 June 2011	ND	68.4 (103)	315 (105)	518 (104)
5 August 2011	ND	66.5 (99.7)	296 (98.5)	509 (102)

ND = No test substance chromatographic peak detected

The analyzed formulations used for dose administration met the WIL Research SOP requirement for 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 (Group 2).

5. CONCLUSIONS

A validated HPLC/UV method for the analysis of CAS# 64741-59-9 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-402024 Analytical Chemistry Report

Report Prepared and Approved by:



Eric S. Bodle, PhD
Assistant Director, Analytical Chemistry

08 Aug 2012
Date

7. REFERENCES

Bodle, E.S. Analytical Validation and Stability Study of Distillates (Petroleum), Light Catalytic Cracked in Mineral Oil Formulations (Study No. WIL-402027). WIL Research Laboratories, LLC, Ashland, OH, **2011**.

8. ABBREVIATIONS

The following abbreviations may apply to this report:

μ	-	micro
μL	-	microliter
ACN	-	acetonitrile
btm	-	bottom
cm	-	centimeter
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
WIL Research	-	WIL Research Laboratories, LLC

TABLES 1 - 3

Table 1. Homogeneity Assessment of the 13 May 2011 Formulations
(Analyzed 17 - 18 May 2011)

<u>Group/Strata</u>	<u>Dose Conc</u> (mg/mL)	<u>Ref #</u> (402024-)	<u>Run #</u> (402027-)	<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	2 - 1	111	.....	Not Detected	.....			
		2 - 2	112	.....	Not Detected	.....			
2/Mid	0	2 - 3	116	.....	Not Detected	.....			
		2 - 4	117	.....	Not Detected	.....			
2/Btm	0	2 - 5	118	.....	Not Detected	.....			
		2 - 6	119	.....	Not Detected	.....			
3/Top	66.7	2 - 7	120	67.7	101	69.2	0.81	1.2	104
		2 - 8	121	69.2	104				
3/Mid	66.7	2 - 9	122	69.3	104				
		2 - 10	123	69.1	104				
3/Btm	66.7	2 - 11	124	69.7	104				
		2 - 12	125	70.0	105				

Samples collected 13 May 2011 were stored at room temperature until processing on 17 May 2011, and were stored at room temperature until injection on 18 May 2011.

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Table 1 (continued). Homogeneity Assessment of the 13 May 2011 Formulations
(Analyzed 17 - 18 May 2011)

<u>Group/Strata</u>	<u>Dose</u> <u>Conc</u> (mg/mL)	<u>Ref #</u> (402024-)	<u>Run #</u> (402027-)	<u>Analyzed</u> <u>Conc</u> (mg/mL)	<u>Percent of</u> <u>Target</u> (%)	<u>Mean</u> <u>Conc</u> (mg/mL)	<u>SD</u>	<u>RSD</u> (%)	<u>Mean Conc</u> <u>% of Target</u> (%)
4/Top	300	2 - 13	126	306	102	310	2.3	0.75	103
		2 - 14	127	310	103				
4/Mid	300	2 - 15	128	311	104				
		2 - 16	129	313	104				
4/Btm	300	2 - 17	130	311	104				
		2 - 18	131	309	103				
5/Top	500	2 - 19	132	515	103	517	2.5	0.49	103
		2 - 20	133	517	103				
5/Mid	500	2 - 21	134	514	103				
		2 - 22	135	519	104				
5/Btm	500	2 - 23	136	521	104				
		2 - 24	137	514	103				

Samples collected 13 May 2011 were stored at room temperature until processing on 17 May 2011, and were stored at room temperature until injection on 18 May 2011.

Table 2. Concentration Assessment of the 23 June 2011 Formulations
(Analyzed 23 June 2011)

<u>Group/Strata</u>	<u>Dose Conc</u> (mg/mL)	<u>Ref #</u> (402024-)	<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	19 - 1	176	.....	Not Detected	.....			
		19 - 2	177	.....	Not Detected	.....			
3/Mid	66.7	19 - 3	178	68.5	103	68.4	0.19	0.27	103
		19 - 4	179	68.3	102				
4/Mid	300	19 - 5	180	316	105	315	1.7	0.55	105
		19 - 6	181	314	105				
5/Mid	500	19 - 7	182	519	104	518	1.6	0.31	104
		19 - 8	183	517	103				

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Table 3. Concentration Assessment of the 5 August 2011 Formulations
(Analyzed 5 August 2011)

<u>Group/Strata</u>	<u>Dose Conc</u> (mg/mL)	<u>Ref #</u> (402024-)	<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	34 - 1	222	 Not Detected					
		34 - 2	223	 Not Detected					
3/Mid	66.7	34 - 3	224	66.1	99.1	66.5	0.54	0.82	99.7
		34 - 4	225	66.9	100				
4/Mid	300	34 - 5	226	296	98.7	296	0.69	0.23	98.5
		34 - 6	227	295	98.3				
5/Mid	500	34 - 7	228	514	103	509	6.2	1.2	102
		34 - 8	229	505	101				

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APPENDIX D

Pretest Clinical Observations

----- M A L E -----		
TABLE RANGE:	05-06-11 TO 05-15-11	
GROUP:		1

NORMAL -NO SIGNIFICANT CLINICAL OBSERVATIONS	119/60

BODY/INTEG II -SCABBING DORSAL HEAD	1/ 1

1- PRETEST	

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

TABLE RANGE:	05-06-11 TO 05-15-11	
GROUP:		1

NORMAL		
-NO SIGNIFICANT CLINICAL OBSERVATIONS		116/60
EXCRETA		
-DECREASED DEFECATION		1/ 1
BODY/INTEG II		
-SCABBING DORSAL HEAD		1/ 1
-SCABBING VENTRAL TRUNK		1/ 1
-SCABBING RIGHT LATERAL TRUNK		1/ 1
SPECIAL II		
-WATER BOTTLE ADDED - LOW BODY WEIGHT		1/ 1

1- PRETEST		
		PCSUV4.07 11/15/2011

----- M A L E -----		
TABLE RANGE:	05-06-11 TO 05-15-11	
GROUP:		1

DERMAL OBS	
-SCORED, NOT REMARKABLE	60/60
1- PRETEST	

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

TABLE RANGE:	05-06-11 TO 05-15-11	
GROUP:		1

DERMAL OBS		
-SCORED, NOT REMARKABLE		57/57
-NO ERYTHEMA		2/ 2
-ERYTHEMA - VERY SLIGHT		1/ 1
-NO EDEMA		3/ 3
-PINPOINT SCABBING		2/ 2

1- PRETEST		
		PCSUv4.07
		10/13/2011

APPENDIX E

Animal Room Environmental Conditions

90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED

PROJECT NO.:WIL- 402024

TEMPERATURE/HUMIDITY - STUDY SUMMARY REPORT

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STUDY SPECIFICATIONS: 402024

DATE IN 05/03/11 TIME IN 08:00

DATE OUT 08/14/11 TIME OUT 16:00

ROOM SPECIFICATIONS: B ROOM 107

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)
05/03/11	69.8	21.0	68.9	20.5	43.1	43.7
05/04/11	70.4	21.3	69.5	20.8	43.2	44.1
05/05/11	70.3	21.3	69.4	20.8	43.6	44.5
05/06/11	70.2	21.2	69.4	20.8	44.4	45.4
05/07/11	70.2	21.2	69.4	20.8	45.5	46.5
05/08/11	70.4	21.3	69.5	20.8	46.5	47.6
05/09/11	70.4	21.3	69.6	20.9	43.7	44.5
05/10/11	70.3	21.3	69.4	20.8	45.1	46.1
05/11/11	70.2	21.2	69.3	20.7	50.8	52.4
05/12/11	70.5	21.4	69.6	20.9	52.6	54.8
05/13/11	70.2	21.2	69.3	20.7	52.1	54.0
05/14/11	70.5	21.4	69.6	20.9	50.3	51.7
05/15/11	70.5	21.4	69.6	20.9	46.7	47.6
05/16/11	70.5	21.4	69.5	20.8	40.8	41.3
05/17/11	68.0	20.0	67.3	19.6	48.5	49.6
05/18/11	70.6	21.4	70.5	21.4	49.1	50.3
05/19/11	68.9	20.5	68.8	20.4	49.6	50.6
05/20/11	70.2	21.2	70.0	21.1	48.4	49.3
05/21/11	70.2	21.2	70.1	21.2	48.3	49.2

90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED

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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)
05/22/11	70.2	21.2	70.0	21.1	49.0	50.0
05/23/11	70.3	21.3	70.1	21.2	49.8	50.9
05/24/11	70.1	21.2	69.9	21.1	50.6	52.1
05/25/11	70.4	21.3	70.2	21.2	50.2	51.4
05/26/11	69.8	21.0	69.6	20.9	50.3	51.5
05/27/11	70.5	21.4	70.2	21.2	48.8	49.9
05/28/11	70.9	21.6	70.9	21.6	48.1	48.8
05/29/11	70.2	21.2	69.9	21.1	52.7	54.5
05/30/11	70.4	21.3	70.2	21.2	56.3	59.2
05/31/11	70.6	21.4	70.5	21.4	57.3	60.4
06/01/11	70.2	21.2	70.0	21.1	50.3	51.8
06/02/11	70.1	21.2	70.0	21.1	44.8	45.4
06/03/11	70.2	21.2	70.0	21.1	43.9	44.7
06/04/11	69.5	20.8	69.3	20.7	53.0	54.9
06/05/11	70.3	21.3	70.0	21.1	51.4	53.0
06/06/11	70.3	21.3	70.1	21.2	49.4	50.6
06/07/11	70.2	21.2	70.0	21.1	51.7	53.1
06/08/11	70.5	21.4	70.2	21.2	54.7	56.9
06/09/11	70.5	21.4	70.3	21.3	52.5	54.2
06/10/11	70.1	21.2	69.9	21.1	51.3	52.7
06/11/11	70.3	21.3	70.1	21.2	50.6	51.8
06/12/11	70.4	21.3	70.2	21.2	48.5	49.4
06/13/11	69.8	21.0	69.7	20.9	48.0	48.8

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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)
06/14/11	70.0	21.1	69.9	21.1	47.8	48.6
06/15/11	70.0	21.1	69.7	20.9	49.0	49.9
06/16/11	70.4	21.3	70.2	21.2	48.4	49.4
06/17/11	70.5	21.4	70.2	21.2	49.2	50.3
06/18/11	70.4	21.3	70.1	21.2	50.5	51.6
06/19/11	70.2	21.2	70.0	21.1	50.9	52.1
06/20/11	70.2	21.2	70.1	21.2	51.4	52.7
06/21/11	70.3	21.3	70.1	21.2	54.7	56.7
06/22/11	70.1	21.2	70.0	21.1	52.7	54.1
06/23/11	70.1	21.2	69.9	21.1	50.9	52.0
06/24/11	70.7	21.5	70.5	21.4	48.8	49.6
06/25/11	69.8	21.0	69.5	20.8	48.7	49.7
06/26/11	70.2	21.2	70.0	21.1	48.6	49.5
06/27/11	70.3	21.3	70.0	21.1	50.4	51.7
06/28/11	70.2	21.2	69.9	21.1	52.1	53.7
06/29/11	70.2	21.2	69.9	21.1	47.9	48.7
06/30/11	69.7	20.9	69.4	20.8	49.3	50.3
07/01/11	69.4	20.8	69.2	20.7	52.4	53.8
07/02/11	69.5	20.8	69.2	20.7	54.7	56.6
07/03/11	69.9	21.1	69.6	20.9	53.8	55.6
07/04/11	69.7	20.9	69.2	20.7	52.3	53.9
07/05/11	70.0	21.1	69.8	21.0	49.2	50.1
07/06/11	69.7	20.9	69.4	20.8	54.2	56.0

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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)
07/07/11	70.2	21.2	69.9	21.1	54.4	56.3
07/08/11	69.7	20.9	69.4	20.8	52.6	54.0
07/09/11	69.6	20.9	69.1	20.6	50.6	51.7
07/10/11	69.4	20.8	69.1	20.6	51.7	53.0
07/11/11	70.2	21.2	69.8	21.0	53.9	55.7
07/12/11	70.1	21.2	69.5	20.8	56.5	59.0
07/13/11	69.9	21.1	69.3	20.7	52.8	54.3
07/14/11	70.8	21.6	70.0	21.1	48.3	49.0
07/15/11	69.9	21.1	69.2	20.7	51.8	53.0
07/16/11	70.5	21.4	69.8	21.0	52.8	54.1
07/17/11	70.5	21.4	69.6	20.9	53.7	55.4
07/18/11	70.2	21.2	69.4	20.8	61.5	67.2
07/19/11	70.2	21.2	68.9	20.5	61.8	66.7
07/20/11	69.8	21.0	68.4	20.2	58.8	61.8
07/21/11	70.7	21.5	69.5	20.8	61.7	67.6
07/22/11	70.6	21.4	69.6	20.9	57.8	61.1
07/23/11	70.8	21.6	69.9	21.1	53.5	55.3
07/24/11	70.2	21.2	69.5	20.8	56.1	58.8
07/25/11	69.9	21.1	69.4	20.8	58.2	61.5
07/26/11	70.6	21.4	69.8	21.0	51.8	53.1
07/27/11	69.6	20.9	68.9	20.5	51.4	52.5
07/28/11	70.0	21.1	69.0	20.6	56.0	60.2
07/29/11	70.4	21.3	69.3	20.7	59.5	67.7

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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)
07/30/11	69.6	20.9	68.6	20.3	52.2	53.4
07/31/11	70.7	21.5	69.6	20.9	50.1	51.0
08/01/11	70.1	21.2	68.7	20.4	55.9	58.3
08/02/11	70.6	21.4	68.9	20.5	58.2	61.2
08/03/11	70.3	21.3	68.9	20.5	59.6	63.0
08/04/11	69.8	21.0	68.4	20.2	55.4	57.2
08/05/11	69.9	21.1	67.8	19.9	55.0	56.8
08/06/11	70.3	21.3	69.5	20.8	53.4	54.8
08/07/11	70.3	21.3	69.4	20.8	53.6	55.1
08/08/11	69.7	20.9	67.2	19.6	55.9	58.0
08/09/11	70.6	21.4	69.5	20.8	54.5	56.0
08/10/11	70.4	21.3	69.6	20.9	53.1	54.5
08/11/11	70.6	21.4	69.1	20.6	53.6	55.0
08/12/11	70.1	21.2	69.1	20.6	54.3	55.8
08/13/11	70.7	21.5	69.8	21.0	53.0	54.4
08/14/11	70.8	21.6	69.6	20.9	53.1	54.3

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TEMPERATURE/HUMIDITY - STUDY SUMMARY REPORT

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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:	70.2	68.0	70.9				
PRIMARY TEMP °C:	21.2	20.0	21.6				
SECONDARY TEMP °F:	69.6	67.2	70.9				
SECONDARY TEMP °C:	20.9	19.6	21.6				
PRIMARY HUM %RH:	51.6	40.8	61.8				
SECONDARY HUM %RH:	53.2	41.3	67.7				
N DAYS	104						

90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED

PROJECT NO.:WIL- 402024

TEMPERATURE/HUMIDITY - STUDY SUMMARY REPORT

SPONSOR: 402 - AMERICAN PETROLEUM

Page 7 of 8

B ROOM 107 SUMMARY OF HOURLY VALUES

	PRIMARY TEMP				SECONDARY TEMP				PRIMARY HUM		SECONDARY HUM	
MEAN	70.2	°F	21.2	°C	69.6	°F	20.9	°C	51.6	%RH	53.2	%RH
MIN	64.9	°F	18.3	°C	63.6	°F	17.6	°C	36.2	%RH	36.4	%RH
MAX	74.9	°F	23.8	°C	73.8	°F	23.2	°C	74.7	%RH	97.0	%RH
SD	1.49		0.83		1.64		0.91		5.41		6.83	
SE	0.03		0.02		0.03		0.02		0.11		0.14	
N SAMPLES	2468				2468				2468		2466	
FIRST DAY	05/03/11											
LAST DAY	08/14/11											
N DAYS	104											

90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED

PROJECT NO.:WIL- 402024

TEMPERATURE/HUMIDITY - STUDY SUMMARY REPORT

SPONSOR: 402 - AMERICAN PETROLEUM

Page 8 of 8

STUDY 402024 SUMMARY OF HOURLY VALUES

	PRIMARY TEMP				SECONDARY TEMP				PRIMARY HUM		SECONDARY HUM	
MEAN	70.2	°F	21.2	°C	69.6	°F	20.9	°C	51.6	%RH	53.2	%RH
MIN	64.9	°F	18.3	°C	63.6	°F	17.6	°C	36.2	%RH	36.4	%RH
MAX	74.9	°F	23.8	°C	73.8	°F	23.2	°C	74.7	%RH	97.0	%RH
SD	1.49		0.83		1.64		0.91		5.41		6.83	
SE	0.03		0.02		0.03		0.02		0.11		0.14	
N SAMPLES	2468				2468				2468		2466	
FIRST DAY	05/03/11											
LAST DAY	08/14/11											
N DAYS	104											

APPENDIX F

Treatments

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE U1 (TREATMENTS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 1

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12694	M	UNTREATED	SPECIAL II	63	9:18	P	WATER BOTTLE ADDED - BODY WEIGHT LOSS
12652	M	450 MG/KG/DAY	SPECIAL II	77	11:25	P	WATER BOTTLE ADDED - BODY WEIGHT LOSS
12671	M	450 MG/KG/DAY	SPECIAL II	56	10:55	P	WATER BOTTLE ADDED - BODY WEIGHT LOSS
12698	M	750 MG/KG/DAY	SPECIAL II	49	20:51	P	WATER BOTTLE ADDED - BODY WEIGHT LOSS
12705	F	UNTREATED	SPECIAL II	56	10:54	P	WATER BOTTLE ADDED - BODY WEIGHT LOSS
12733	F	UNTREATED	SPECIAL II	77	11:25	P	WATER BOTTLE ADDED - BODY WEIGHT LOSS
12740	F	100 MG/KG/DAY	SPECIAL II	21	11:28	P	WATER BOTTLE ADDED - BODY WEIGHT LOSS
12720	F	750 MG/KG/DAY	SPECIAL II	84	9:30	P	WATER BOTTLE ADDED - BODY WEIGHT LOSS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PCRDv4.17
10/24/2011

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: Fructose + NADH $\xleftarrow{\text{SDH}}$ Sorbitol + 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).

FINAL REPORT



Contents: Volume 2 of 4
Appendices I - K

Study Title: A 90-Day Repeat-Dose Dermal Toxicity
Study Utilizing Distillates (Petroleum),
Light Catalytic Cracked in Sprague Dawley Rats

Laboratory Project ID: WIL-402024

Author: Angela S. Burke, PhD, DABT

Test Guideline: OPPTS Guideline 870.3250
40 CFR 798.2250
OECD Guideline 411

Study Completion Date: 8 August 2012

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

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

Total Number of Pages: 1295

APPENDIX I

Pathology Report (WIL Research Laboratories, LLC)

WIL-402024
American Petroleum Institute

Distillates (Petroleum), Light Catalytic Cracked

A 90-Day Repeat-Dose Dermal Toxicity
Study Utilizing Distillates (Petroleum),
Light Catalytic Cracked in Sprague Dawley Rats

Pathology Report

Pathology Department

WIL Research Laboratories, LLC



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1. INTRODUCTION

The objectives of this study were to 1) evaluate the toxicity potential of repeated dermal exposure of Distillate (Petroleum), Light Catalytic Cracked 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) assist in dose selection for potential future two-generation reproductive studies in Sprague Dawley rats. This pathology report addresses the anatomical and clinical pathology endpoints of the study.

2. STUDY DESIGN

Male and female Crl:CD(SD) rats, approximately 8 weeks of age at the initiation of dosing, were administered vehicle or distillate (petroleum), light catalytic cracked (also known as cat cracked distillate light) formulations by dermal exposure (Groups 2-5) once daily, 5 days a week for a minimum 90-day treatment period (last dose occurred the day prior to the scheduled necropsy) as indicated in the following table. All animals were collared during each 5-day dosing period. After an approximate 6-hour exposure period, all animals were gently wiped with a paper towel to remove unabsorbed test substance. The Group 1 sham control 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 substances were applied to the sham control animals. The dose volume was 1.5 mL/kg for Groups 2-5.

Group Number	Treatment	Dose Level (mg/kg/day)	Number of Animals	
			Males	Females
1	Sham Control	NA	10	10
2	Vehicle ^a	0	10	10
3	Cat Cracked Distillate Light	100	10	10
4	Cat Cracked Distillate Light	450	10	10
5	Cat Cracked Distillate Light	750	10	10

^a - The vehicle was mineral oil.

3. METHODS

3.1. CLINICAL PATHOLOGY

Hematology, coagulation, and serum chemistry parameters were evaluated on all surviving animals 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 inhalation of 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)	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 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 found dead, euthanized *in extremis*, or at the scheduled necropsy. The animal *in extremis* was euthanized by carbon dioxide inhalation. Animals surviving to the scheduled necropsy were euthanized via isoflurane inhalation 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	Mesenteric
Sternum	Ovaries (2) with oviducts ^d
Bone marrow smear (from sternum) ^a	Pancreas
Brain	Peripheral nerve (sciatic)
Cerebrum (2 levels)	Pituitary
Cerebellum with pons/medulla	Prostate
Cervix	Salivary glands [mandibular (2)]
Epididymides (2) ^b	Seminal vesicles (2)
Exorbital lacrimal glands (2)	Skeletal muscle (rectus femoris)
Eyes with optic nerves (2) ^c	Skin with mammary gland ^e
Gastrointestinal tract	Skin
Esophagus	Sham, Vehicle, and Treated (3 sections)
Stomach	Untreated (posterior to treated skin)
Duodenum	Spinal cord (cervical, thoracic,
Jejunum	lumbar)
Ileum	Spleen
Cecum	Testes (2) ^b
Colon	Thymus
Rectum	Thyroid with parathyroids (2) ^d
Heart	Trachea
Kidneys (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 smears were not collected from the animal found dead and not placed in formalin; slides were not examined.
- ^b - Fixed in Bouin's solution
- ^c - Fixed in Davidson's solution
- ^d - Oviducts and parathyroids were examined microscopically when in the plane of section and in all cases where a gross lesion was present.
- ^e - 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 at the scheduled necropsy:

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

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 collected at necropsy from all animals, with exceptions as indicated on the tissue list above. 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. A cause-of-death/debility determination was attempted for all animals that died or were euthanized 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 grades were assigned to non-neoplastic histopathologic diagnoses in compliance with the following general guidelines, as presented in the following table. Severity grades 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 grade (<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 ($p < 0.05$ or $p < 0.01$ using Dunnett’s test) difference 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 Cr1:CD(SD) rats, 19-21 weeks of age (version 3.1), were used as historical reference data.

4. RESULTS

4.1. SURVIVAL

Male no. 12658 (750 mg/kg/day) was euthanized *in extremis* due to a fractured tibia and fibula on study day 50 and male no. 12699 (450 mg/kg/day) was found dead on study day 69. Complete necropsies and histologic examinations were conducted on both animals. The cause of death was not evident in the submitted tissues examined for the animal that was found dead. The cause of the fractured tibia and fibula in the animal euthanized *in extremis* was presumed to be trauma unrelated to test substance administration.

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 control group.

4.2.1. HEMATOLOGY AND COAGULATION

Test substance-related statistically significant differences in hematology parameters compared to the vehicle control group were noted as follows: lower absolute eosinophil counts in the 100 mg/kg/day group males and lower absolute and percentage eosinophils in the 450 and 750 mg/kg/day group males and females; lower hemoglobin (HGB) and hematocrit (HCT) values and higher red cell distribution widths (RDW) and hemoglobin distribution widths (HDW) in the 450 mg/kg/day group males and the 750 mg/kg/day group males and females; lower red blood cell (RBC) counts in the 450 and 750 mg/kg/day group males; lower mean corpuscular volume (MCV) and mean hemoglobin concentration (MCH) in the 450 and 750 mg/kg/day group females; and higher percent reticulocyte counts in the 750 mg/kg/day group males. Additionally, lower HGB and HCT values were noted in the 450 mg/kg/day female group, but did not reach statistical significance. The combination of lower RBC counts and lower HGB,

HCT, MCV, and MCH values along with higher RDW and HDW values and higher reticulocyte counts indicated the presence of a regenerative anemia.

Dose-dependent, lower eosinophil counts (absolute and percentages) for the 100, 450, and 750 mg/kg/day groups suggest a selective cytotoxicity for eosinophil precursors in the bone marrow that was not evident histologically. Eosinophil values (absolute and percentages) for vehicle controls and sham controls were not significantly different for males or females.

There were no other test substance-related effects on hematology or coagulation parameters. However, statistically significantly lower prothrombin time was noted in the 450 mg/kg/day group males, but was not considered test substance-related as it did not occur in the higher dose group. Additionally, lower mean activated partial thromboplastin time (APTT) was noted in the 750 mg/kg/day group males (suggestive of faster clotting) and was considered a spurious finding as it indicated increased clotting efficiency for which there was no other evidence. Statistically significant lower mean absolute monocyte counts were noted in the 750 mg/kg/day group males; however, the difference was compounded by statistically significant higher absolute monocyte counts in the vehicle control group compared to the sham control group. Additionally, the mean absolute value reported in the 750 mg/kg/day group was within the range of means recorded in the WIL historical database. Due to these factors, the lower monocyte count was not considered test substance-related, but the result of biological variability between groups.

4.2.2. SERUM CHEMISTRY

Test substance-related statistically significant differences in serum chemistry parameters compared to the vehicle control group included higher urea nitrogen values in the 450 and 750 mg/kg/day group males and females and higher chloride and gamma glutamyltransferase (GGT) values in the 750 mg/kg/day group males.

While statistically significant when compared to the vehicle control group, all of the test substance-related changes noted above, except urea nitrogen, were within the range of means recorded in the WIL Research historical control database and were not considered adverse.

There were no other test substance-related effects on serum chemistry parameters. However, some statistically significant differences were observed when the control and test substance-treated groups were compared. Higher mean cholesterol values in the 450 and 750 mg/kg/day group males were partially attributed to lower (but not statistically significant) cholesterol values noted in the vehicle control group versus the untreated control group. The cholesterol values noted in the 450 and 750 mg/kg/day group males were within the range of means recorded in the WIL Research historical control database and were more similar to the untreated control group, and therefore were not considered test substance-related.

Higher mean creatinine values in the 450 and 750 mg/kg/day group females were attributed to lower, but not statistically significant values noted in the vehicle control group versus the untreated control group. Creatinine values in the 450 and 750 mg/kg/day group females were equal to the creatinine values in the untreated control group females and were within the range of means recorded in the WIL Research historical control database and were therefore not considered test substance-related.

Higher mean albumin/globulin (A/G) ratios in the 100, 450, and 750 mg/kg/day group males and females with corresponding lower mean globulin levels were noted in the 100, 450, and 750 mg/kg/day group males as well as in the 100 and 750 mg/kg/day group females and were associated with higher mean albumin levels in the 450 mg/kg/day group females. Globulin levels in the vehicle control group males were statistically significantly higher than in the untreated control group and were higher, but not statistically significantly, in the vehicle control group females than the untreated control group females. These higher values contributed to the statistically significant differences

noted in the 100, 450, and/or 750 mg/kg/day groups which had mean globulin levels similar to or equal to the mean values recorded for the untreated control group. Mean albumin values in the vehicle control group females were statistically significantly lower than the untreated control group females resulting in a statistically significant difference between the two control groups which further contributed to the statistically significant difference in A/G ratios noted in the 100, 450, and 750 mg/kg/day group females. With 1 exception, mean albumin and globulin values and A/G ratios for the 100, 450, and 750 mg/kg/day group males and females were consistently closer to the untreated control group mean values and were within the range of mean values recorded in the WIL Research historical control database; the mean albumin value for the 450 mg/kg/day group males was minimally (0.1g/dL) less than the historical control mean value but was equal to the mean value for the vehicle control group.

4.3. GROSS OBSERVATIONS

Scabbing of the tail, paws, and ears was noted in the 750 mg/kg/day group.

One 750 mg/kg/day group male (no. 12680) had scabbing and nodules on the tail and one 750 mg/kg/day group female (no. 12755) was noted with scabbing of the tail, paws, and ears. Although these findings were only noted in the 750 mg/kg/day group, the scabbing was considered likely to be the result of excess grooming while the restraining collars were removed per the protocol due to their locations rather than a direct result of test substance exposure.

4.4. ORGAN WEIGHTS

Test substance-related lower final body weights were noted in the 750 mg/kg/day group and lower absolute weights were noted for the thymus (450 and 750 mg/kg/day), uterus (750 mg/kg/day, females), brain (750 mg/kg/day), epididymides, heart, and kidneys (750 mg/kg/day, males). Lower uterine weight relative to brain weight was noted in the 750 mg/kg/day group females and lower epididymides weights relative to brain were noted in the 750 mg/kg/day group males. Higher thyroid/parathyroid weight relative to

body weight was noted in the 750 mg/kg/day group males and females and higher brain weight and testes weight relative to body weight was noted in the 750 mg/kg/day group males. Lower thymus weights relative to brain and body weights were noted in the 450 and 750 mg/kg/day groups. Higher liver weights (absolute and relative to body and brain weight) were noted in the 450 and/or 750 mg/kg/day group males and/or females. Adrenal gland weights were higher relative to body weight (450 mg/kg/day, males and 750 mg/kg/day, males and females) and higher relative to brain weight in the 750 mg/kg/day group males.

Lower absolute weights for brain, epididymides, heart, kidney, uterus, and thymus were statistically significant when compared to the vehicle control group but were considered to be a result of a test substance-related effect on final body weight. Lower weights relative to the brain weight for the epididymides, uterus, and thymus were also considered to be the result of lower final body weight. Higher brain and testes weight relative to body weight in 750 mg/kg/day group males were also considered to be the result of lower final body weight probably due to slower weight change in these organs when compared to rate of change in other organs and tissues.

Higher absolute and relative weights for the liver and adrenal glands were considered test substance-related effects although they could not be confirmed histologically.

There were no other test substance-related effects on organ weights.

4.5. HISTOLOGIC CHANGES

Test substance-related microscopic findings were noted in the ears, paws, and/or nonglandular stomach of the 750 mg/kg/day group females.

Epithelial hyperplasia and hyperkeratosis associated with chronic-active inflammation was observed in the ears and paws of a single female (no. 12755) and epithelial hyperplasia and chronic-active inflammation was noted in the nonglandular stomach of

another female (no. 12750) from the 750 mg/kg/day group. The cause of the hyperplasia and hyperkeratosis could not be determined microscopically.

There were no other test substance-related histologic changes. Remaining histologic changes were considered to be incidental findings or related to some aspect of experimental manipulation other than administration 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

The finding of epithelial hyperplasia and/or hyperkeratosis associated with chronic-active inflammation only in the 750 mg/kg/day group suggests that the test substance may interfere with the development of normal stratified squamous epithelium at this exposure level. In the 2 animals presenting with some combinations of these lesions, the epithelial changes appeared to be the primary lesion and chronic-active inflammation a secondary response to the epithelial changes. Both haired and glabrous skin, as well as stratified squamous epithelium, was affected. The skin that was directly exposed to the test substance; however, was not affected suggesting that grooming or some other behavioral activity could have been a contributing factor. Lower RBC, HCT, and HGB values, in conjunction with higher RDW and HDW values, are indicative of a regenerative anemia in the 750 mg/kg/day group, which coupled with lower eosinophil counts (absolute and percentages), suggests a negative effect on bone marrow precursor cells that was not evident histologically.

6. CONCLUSIONS

Repeated dermal exposure of distillates (petroleum), light catalytic cracked for a minimum of 90 days to male and female Sprague Dawley rats resulted in hematologic, serum chemistry, histologic, and organ weight changes. Changes were noted in erythrocyte counts and RBC indices, the final body weight, and absolute and/or relative organ weights of adrenal gland, brain, and liver in the 450 and/or 750 mg/kg/day groups.

Histologic changes were noted in the squamous epithelium of skin and the nonglandular stomach. Changes in hematology parameters that were considered adverse included lower RBC and eosinophil counts, lower hemoglobin and hematocrit levels, and higher RDW and HDW values. Serum chemistry changes were considered adaptive changes (urea nitrogen) or the product of metabolism changes secondary to lower final body weight (GGT and chloride) and were not considered adverse. Lower final body weight was considered an adverse change. Higher liver and adrenal gland weights were mildly elevated above the historical control reference range and were most likely adaptive changes, although the reason for the increased organ weights could not be determined histologically. Due to the mild nature of the change and the lack of corroborating histological changes, the increased organ weights were not considered adverse. Epithelial hyperplasia, hyperkeratosis, and chronic-active inflammation of the squamous epithelium of skin and nonglandular stomach mucosa of a small number of rats were considered adverse changes as well.

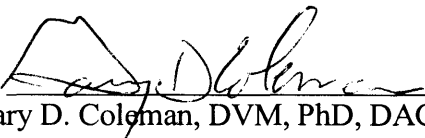
WIL-402024
American Petroleum Institute

Distillates (Petroleum), Light Catalytic Cracked

7. REPORT SUBMISSION

WIL-402024 Pathology Report

Report Submitted By:



Gary D. Coleman, DVM, PhD, DACVP, DACVPM
Study Pathologist

6 Aug 2012

Date

APPENDIX J

Ophthalmic Examinations
(Brian C. Gilger, DVM, MS, DACVO, DABT
and David A. Wilkie, DVM, MS, DACVO)

**OPHTHALMIC EXAMINATION STATEMENT FOR
STUDY WIL-402024**

Ophthalmic examinations were performed at WIL Research Laboratories, LLC during the pretest phase for all animals on 5/12/11. 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 David A. Wilkie, DVM, MS, DACVO. All the ophthalmological diagnoses rendered by Dr. Wilkie, presented in this appendix, and the individual tables included in this report were accurately transcribed by the WIL Research Laboratories, LLC technical staff.



David A. Wilkie, DVM., MS, DACVO

5/12/11
Date

**OPHTHALMIC EXAMINATION STATEMENT FOR
STUDY WIL-402024**

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, 100, 450 and 750 mg/kg/day groups on 8/12/11. Examinations were performed by Brian C. Gilger, DVM, MS, DACVO. All the ophthalmological diagnoses rendered by Dr. Gilger, 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.



Brian C. Gilger, DVM, MS, DACVO



Date

APPENDIX K

Individual Animal Data

TABLE A1
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL SURVIVAL AND DISPOSITION

ANIMAL	SEX	GROUP	TYPE OF DEATH		AGE IN WEEKS A	DATE OF DEATH	DAYS ON STUDY
12649	M	UNTREATED	SCHEDULED	EUTHANASIA	20	13-AUG-11	89
12654	M	UNTREATED	SCHEDULED	EUTHANASIA	20	13-AUG-11	89
12660	M	UNTREATED	SCHEDULED	EUTHANASIA	20	13-AUG-11	89
12668	M	UNTREATED	SCHEDULED	EUTHANASIA	20	13-AUG-11	89
12684	M	UNTREATED	SCHEDULED	EUTHANASIA	20	13-AUG-11	89
12686	M	UNTREATED	SCHEDULED	EUTHANASIA	20	14-AUG-11	90
12691	M	UNTREATED	SCHEDULED	EUTHANASIA	20	14-AUG-11	90
12694	M	UNTREATED	SCHEDULED	EUTHANASIA	20	14-AUG-11	90
12701	M	UNTREATED	SCHEDULED	EUTHANASIA	20	14-AUG-11	90
12703	M	UNTREATED	SCHEDULED	EUTHANASIA	20	14-AUG-11	90
12648	M	0 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	13-AUG-11	89
12650	M	0 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	13-AUG-11	89
12661	M	0 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	13-AUG-11	89
12675	M	0 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	13-AUG-11	89
12676	M	0 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	13-AUG-11	89
12679	M	0 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	14-AUG-11	90
12683	M	0 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	14-AUG-11	90
12693	M	0 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	14-AUG-11	90
12697	M	0 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	14-AUG-11	90
12700	M	0 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	14-AUG-11	90
12646	M	100 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	13-AUG-11	89
12655	M	100 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	13-AUG-11	89
12656	M	100 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	13-AUG-11	89
12659	M	100 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	13-AUG-11	89
12662	M	100 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	13-AUG-11	89
12664	M	100 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	14-AUG-11	90
12670	M	100 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	14-AUG-11	90
12682	M	100 MG/KG/DAY	SCHEDULED	EUTHANASIA	20	14-AUG-11	90

A = CALCULATED TO THE NEAREST WHOLE WEEK USING THE MEAN AGE IN WEEKS AT INITIATION OF DOSING (8)

TABLE A1
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL SURVIVAL AND DISPOSITION

ANIMAL	SEX	GROUP	TYPE OF DEATH	AGE IN WEEKS A	DATE OF DEATH	DAYS ON STUDY
12688	M	100 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12695	M	100 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12645	M	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12652	M	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12669	M	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12671	M	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12674	M	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12677	M	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12685	M	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12690	M	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12692	M	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12699	M	450 MG/KG/DAY	FOUND DEAD	17	24-JUL-11	69
12658	M	750 MG/KG/DAY	EUTHANIZED IN EXTREMIS	15	05-JUL-11	50
12666	M	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12672	M	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12673	M	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12680	M	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12681	M	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12687	M	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12689	M	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12698	M	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12704	M	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90

A = CALCULATED TO THE NEAREST WHOLE WEEK USING THE MEAN AGE IN WEEKS AT INITIATION OF DOSING (8)

TABLE A1
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL SURVIVAL AND DISPOSITION

ANIMAL	SEX	GROUP	TYPE OF DEATH	AGE IN WEEKS A	DATE OF DEATH	DAYS ON STUDY
12705	F	UNTREATED	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12712	F	UNTREATED	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12716	F	UNTREATED	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12724	F	UNTREATED	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12730	F	UNTREATED	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12733	F	UNTREATED	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12734	F	UNTREATED	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12736	F	UNTREATED	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12737	F	UNTREATED	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12748	F	UNTREATED	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12706	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12708	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12711	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12714	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12718	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12721	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12744	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12752	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12757	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12758	F	0 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12707	F	100 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12715	F	100 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12722	F	100 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12738	F	100 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12740	F	100 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12743	F	100 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12746	F	100 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12753	F	100 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90

A = CALCULATED TO THE NEAREST WHOLE WEEK USING THE MEAN AGE IN WEEKS AT INITIATION OF DOSING (8)

TABLE A1
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL SURVIVAL AND DISPOSITION

ANIMAL	SEX	GROUP	TYPE OF DEATH	AGE IN WEEKS A	DATE OF DEATH	DAYS ON STUDY
12754	F	100 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12759	F	100 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12709	F	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12719	F	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12726	F	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12727	F	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12728	F	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12732	F	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12735	F	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12747	F	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12760	F	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12763	F	450 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12720	F	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12723	F	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12731	F	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12739	F	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12742	F	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	13-AUG-11	89
12749	F	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12750	F	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12755	F	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12761	F	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90
12764	F	750 MG/KG/DAY	SCHEDULED EUTHANASIA	20	14-AUG-11	90

A = CALCULATED TO THE NEAREST WHOLE WEEK USING THE MEAN AGE IN WEEKS AT INITIATION OF DOSING (8)

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 1

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12649	M	UNTREATED	NORMAL	0	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12649	M	UNTREATED	DISPOSITION	89	8:50	P	PRIMARY NECROPSY (WEEK 12)
12649	M	UNTREATED	BODY/INTEGUMENT	14	6:27	P	HAIR LOSS DORSAL NECK
				14	6:27	P	HAIR LOSS VENTRAL NECK
				21	6:41	P	HAIR LOSS VENTRAL NECK
				28	6:32	P	HAIR LOSS VENTRAL NECK
				35	6:50	P	HAIR LOSS DORSAL NECK
				35	6:50	P	HAIR LOSS VENTRAL NECK
				42	6:50	P	HAIR LOSS VENTRAL NECK
				63	6:32	P	HAIR LOSS DORSAL NECK
				63	6:32	P	HAIR LOSS VENTRAL NECK
				63	6:33	P	MOIST ALOPECIA VENTRAL NECK
				70	6:51	P	HAIR LOSS VENTRAL NECK
				77	6:42	P	HAIR LOSS VENTRAL NECK
				84	6:26	P	HAIR LOSS VENTRAL NECK
				89	6:39	P	HAIR LOSS VENTRAL NECK
12649	M	UNTREATED	BODY/INTEG II	14	6:27	P	SCABBING VENTRAL NECK
				56	6:28	P	SCABBING VENTRAL NECK
				84	6:26	P	SCABBING VENTRAL NECK
12654	M	UNTREATED	NORMAL	0	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 2

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12654	M	UNTREATED	DISPOSITION	89	8:50	P	PRIMARY NECROPSY (WEEK 12)
12654	M	UNTREATED	BODY/INTEGUMENT	35	6:52	P	MOIST ALOPECIA DORSAL NECK
				63	6:33	P	HAIR LOSS VENTRAL NECK
				84	6:27	P	HAIR LOSS VENTRAL NECK
				89	6:39	P	HAIR LOSS VENTRAL NECK
12654	M	UNTREATED	BODY/INTEG II	21	6:42	P	SCABBING VENTRAL NECK
				21	6:42	P	SCABBING DORSAL NECK
				28	6:33	P	SCABBING DORSAL NECK
				63	6:33	P	SCABBING DORSAL NECK
				84	6:27	P	SCABBING VENTRAL NECK
12660	M	UNTREATED	NORMAL	0	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12660	M	UNTREATED	DISPOSITION	89	8:50	P	PRIMARY NECROPSY (WEEK 12)
12660	M	UNTREATED	BODY/INTEGUMENT	14	6:29	P	HAIR LOSS DORSAL NECK
				21	6:43	P	HAIR LOSS VENTRAL NECK
				63	6:34	P	HAIR LOSS VENTRAL NECK
				84	6:28	P	HAIR LOSS DORSAL NECK
				84	6:28	P	HAIR LOSS VENTRAL NECK
				89	6:40	P	HAIR LOSS FORELIMB(S)
				89	6:40	P	HAIR LOSS VENTRAL NECK
12660	M	UNTREATED	ORAL/DENTAL	49	9:37	P	WET CLEAR MATERIAL AROUND MOUTH
12668	M	UNTREATED	NORMAL	0	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12668	M	UNTREATED	NORMAL	42	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12668	M	UNTREATED	DISPOSITION	89	8:50	P	PRIMARY NECROPSY (WEEK 12)
12668	M	UNTREATED	BODY/INTEGUMENT	14	6:30	P	HAIR LOSS DORSAL NECK
				28	6:35	P	HAIR LOSS VENTRAL NECK
				35	6:54	P	HAIR LOSS DORSAL NECK
				63	6:35	P	HAIR LOSS DORSAL NECK
				63	6:35	P	HAIR LOSS VENTRAL NECK
				63	6:35	P	MOIST ALOPECIA VENTRAL NECK
				70	6:53	P	HAIR LOSS VENTRAL NECK
				77	6:44	P	HAIR LOSS DORSAL NECK
				84	6:29	P	HAIR LOSS VENTRAL NECK
				89	6:40	P	HAIR LOSS VENTRAL NECK
12668	M	UNTREATED	BODY/INTEG II	21	6:43	P	SCABBING VENTRAL NECK
				70	6:54	P	SCABBING VENTRAL NECK
				77	6:45	P	SCABBING VENTRAL NECK
				84	6:29	P	SCABBING VENTRAL NECK
12668	M	UNTREATED	ORAL/DENTAL	49	9:37	P	WET CLEAR MATERIAL AROUND MOUTH
12684	M	UNTREATED	NORMAL	0	6:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12684	M	UNTREATED	DISPOSITION	89	8:50	P	PRIMARY NECROPSY (WEEK 12)
12684	M	UNTREATED	BODY/INTEGUMENT	14	6:31	P	HAIR LOSS DORSAL NECK
				21	6:44	P	HAIR LOSS VENTRAL NECK
				28	6:36	P	HAIR LOSS DORSAL NECK
				28	6:36	P	HAIR LOSS VENTRAL NECK
				42	6:53	P	HAIR LOSS VENTRAL NECK
				49	9:38	P	HAIR LOSS VENTRAL NECK
				49	9:38	P	HAIR LOSS DORSAL NECK
				56	6:31	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12684	M	UNTREATED	BODY/INTEGUMENT	63	6:36	P	HAIR LOSS VENTRAL NECK
				70	6:54	P	HAIR LOSS DORSAL NECK
				77	6:45	P	HAIR LOSS DORSAL NECK
				77	6:45	P	HAIR LOSS VENTRAL NECK
				84	6:29	P	HAIR LOSS VENTRAL NECK
				89	6:40	P	HAIR LOSS VENTRAL NECK
				89	6:40	P	HAIR LOSS DORSAL NECK
12684	M	UNTREATED	BODY/INTEG II	35	6:54	P	SCABBING DORSAL NECK
				35	6:54	P	SCABBING VENTRAL NECK
12686	M	UNTREATED	NORMAL	0	6:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	6:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12686	M	UNTREATED	DISPOSITION	90	8:03	P	PRIMARY NECROPSY (WEEK 12)
12686	M	UNTREATED	BODY/INTEGUMENT	14	6:31	P	HAIR LOSS DORSAL NECK
				21	6:45	P	HAIR LOSS DORSAL NECK
				28	6:37	P	HAIR LOSS VENTRAL NECK
				42	6:54	P	HAIR LOSS VENTRAL NECK
				56	6:32	P	HAIR LOSS VENTRAL NECK
				63	6:36	P	HAIR LOSS DORSAL NECK
				63	6:36	P	HAIR LOSS VENTRAL NECK
				84	6:30	P	HAIR LOSS VENTRAL NECK
				84	6:30	P	HAIR LOSS FORELIMB(S)
				90	6:40	P	HAIR LOSS VENTRAL NECK
				90	6:40	P	HAIR LOSS VENTRAL TRUNK
12686	M	UNTREATED	BODY/INTEG II	21	6:45	P	SCABBING VENTRAL NECK
12691	M	UNTREATED	NORMAL	0	6:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12691	M	UNTREATED	NORMAL	7	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12691	M	UNTREATED	DISPOSITION	90	8:03	P	PRIMARY NECROPSY (WEEK 12)
12691	M	UNTREATED	BODY/INTEGUMENT	14	6:32	P	HAIR LOSS DORSAL NECK
				21	6:46	P	HAIR LOSS VENTRAL NECK
				35	6:56	P	HAIR LOSS DORSAL NECK
				42	6:55	P	HAIR LOSS DORSAL NECK
				42	6:55	P	HAIR LOSS VENTRAL NECK
				56	6:33	P	HAIR LOSS VENTRAL NECK
				63	6:37	P	HAIR LOSS DORSAL NECK
				63	6:37	P	HAIR LOSS VENTRAL NECK
				70	6:55	P	HAIR LOSS DORSAL NECK
				70	6:56	P	HAIR LOSS VENTRAL NECK
				77	6:47	P	HAIR LOSS DORSAL NECK
				77	6:47	P	HAIR LOSS VENTRAL NECK
				84	6:31	P	HAIR LOSS VENTRAL NECK
				90	6:41	P	HAIR LOSS DORSAL NECK
				90	6:41	P	HAIR LOSS VENTRAL NECK
				90	6:41	P	HAIR LOSS FORELIMB(S)
12694	M	UNTREATED	NORMAL	0	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12694	M	UNTREATED	DISPOSITION	90	8:03	P	PRIMARY NECROPSY (WEEK 12)
12694	M	UNTREATED	BODY/INTEGUMENT	14	6:33	P	HAIR LOSS DORSAL NECK
				21	6:47	P	HAIR LOSS DORSAL NECK
				21	6:47	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12694	M	UNTREATED	BODY/INTEGUMENT	56	6:34	P	HAIR LOSS VENTRAL NECK
				56	6:34	P	HAIR LOSS DORSAL NECK
				63	6:38	P	HAIR LOSS DORSAL NECK
				63	6:38	P	HAIR LOSS VENTRAL NECK
				70	6:56	P	HAIR LOSS DORSAL NECK
				77	6:48	P	HAIR LOSS DORSAL NECK
				77	6:48	P	HAIR LOSS VENTRAL NECK
				84	6:32	P	HAIR LOSS DORSAL NECK
				84	6:32	P	HAIR LOSS VENTRAL NECK
				84	6:32	P	MOIST ALOPECIA LEFT LATERAL NECK
				90	6:41	P	HAIR LOSS VENTRAL NECK
12694	M	UNTREATED	EYES/EARS/NOSE	7	6:52	P	DRIED RED MATERIAL AROUND NOSE
				90	6:41	P	DRIED RED MATERIAL AROUND NOSE
12694	M	UNTREATED	BODY/INTEG II	14	6:34	P	SCABBING DORSAL NECK
				63	6:38	P	SCABBING VENTRAL NECK
12701	M	UNTREATED	NORMAL	0	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12701	M	UNTREATED	DISPOSITION	90	8:03	P	PRIMARY NECROPSY (WEEK 12)
12701	M	UNTREATED	BODY/INTEGUMENT	63	6:39	P	HAIR LOSS DORSAL NECK
				63	6:39	P	HAIR LOSS VENTRAL NECK
				77	6:49	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12701	M	UNTREATED	BODY/INTEGUMENT	84	6:33	P	HAIR LOSS VENTRAL NECK
				90	6:42	P	HAIR LOSS DORSAL NECK
				90	6:42	P	HAIR LOSS VENTRAL NECK
12703	M	UNTREATED	NORMAL	0	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12703	M	UNTREATED	DISPOSITION	90	8:03	P	PRIMARY NECROPSY (WEEK 12)
12703	M	UNTREATED	BODY/INTEGUMENT	21	6:49	P	HAIR LOSS FORELIMB(S)
				21	6:49	P	HAIR LOSS VENTRAL NECK
				28	6:40	P	HAIR LOSS FORELIMB(S)
				35	6:59	P	HAIR LOSS FORELIMB(S)
				42	6:58	P	HAIR LOSS FORELIMB(S)
				42	6:58	P	HAIR LOSS VENTRAL NECK
				49	9:42	P	HAIR LOSS FORELIMB(S)
				56	6:35	P	HAIR LOSS VENTRAL NECK
				56	6:35	P	HAIR LOSS FORELIMB(S)
				63	6:39	P	HAIR LOSS FORELIMB(S)
				63	6:39	P	HAIR LOSS DORSAL NECK
				63	6:39	P	HAIR LOSS VENTRAL NECK
				70	6:57	P	HAIR LOSS FORELIMB(S)
				70	6:57	P	HAIR LOSS DORSAL NECK
				77	6:49	P	HAIR LOSS FORELIMB(S)
				77	6:49	P	HAIR LOSS VENTRAL NECK
				84	6:34	P	HAIR LOSS FORELIMB(S)
				84	6:34	P	HAIR LOSS VENTRAL NECK
				90	6:42	P	HAIR LOSS DORSAL NECK
				90	6:42	P	HAIR LOSS VENTRAL NECK
				90	6:42	P	HAIR LOSS FORELIMB(S)
12703	M	UNTREATED	BODY/INTEG II	14	6:35	P	SCABBING DORSAL NECK
				21	6:49	P	SCABBING FORELIMB(S)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12703	M	UNTREATED	BODY/INTEG II	21	6:49	P	SCABBING VENTRAL NECK
				63	6:39	P	SCABBING VENTRAL NECK
12648	M	0 MG/KG/DAY	NORMAL	0	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12648	M	0 MG/KG/DAY	DISPOSITION	89	8:51	P	PRIMARY NECROPSY (WEEK 12)
12648	M	0 MG/KG/DAY	BODY/INTEGUMENT	14	6:45	P	MOIST ALOPECIA DORSAL NECK
				56	6:45	P	HAIR LOSS DORSAL NECK
				56	6:45	P	HAIR LOSS VENTRAL NECK
				63	6:48	P	HAIR LOSS DORSAL NECK
				63	6:48	P	HAIR LOSS VENTRAL NECK
				70	7:06	P	HAIR LOSS DORSAL NECK
				77	6:58	P	HAIR LOSS DORSAL NECK
				77	6:58	P	HAIR LOSS VENTRAL NECK
				84	6:42	P	HAIR LOSS DORSAL NECK
				84	6:42	P	HAIR LOSS VENTRAL NECK
				89	6:42	P	HAIR LOSS VENTRAL NECK
12648	M	0 MG/KG/DAY	BODY/INTEG II	21	6:59	P	SCABBING DORSAL NECK
				21	6:59	P	SCABBING VENTRAL NECK
				28	6:49	P	SCABBING DORSAL NECK
				49	9:53	P	SCABBING VENTRAL NECK
				56	6:46	P	SCABBING VENTRAL NECK
				63	6:48	P	SCABBING DORSAL NECK
				63	6:48	P	SCABBING VENTRAL NECK
				70	7:06	P	SCABBING DORSAL NECK
				77	6:58	P	SCABBING LEFT LATERAL NECK
				84	6:42	P	SCABBING VENTRAL NECK
12650	M	0 MG/KG/DAY	NORMAL	0	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12650	M	0 MG/KG/DAY	NORMAL	7	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12650	M	0 MG/KG/DAY	DISPOSITION	89	8:51	P	PRIMARY NECROPSY (WEEK 12)
12650	M	0 MG/KG/DAY	BODY/INTEGUMENT	14	6:46	P	HAIR LOSS DORSAL NECK
				21	7:00	P	HAIR LOSS VENTRAL NECK
				42	7:10	P	HAIR LOSS VENTRAL NECK
				56	6:46	P	HAIR LOSS VENTRAL NECK
				63	6:50	P	HAIR LOSS DORSAL NECK
				63	6:50	P	HAIR LOSS VENTRAL NECK
				70	7:07	P	HAIR LOSS DORSAL NECK
				77	6:59	P	HAIR LOSS VENTRAL NECK
				84	6:43	P	HAIR LOSS DORSAL NECK
				84	6:43	P	HAIR LOSS VENTRAL NECK
				89	6:42	P	HAIR LOSS VENTRAL NECK
				89	6:42	P	HAIR LOSS FORELIMB(S)
12650	M	0 MG/KG/DAY	BODY/INTEG II	14	6:46	P	SCABBING DORSAL NECK
				21	7:00	P	SCABBING DORSAL NECK
				28	6:50	P	SCABBING DORSAL NECK
				28	6:50	P	SCABBING VENTRAL NECK
				49	9:53	P	SCABBING VENTRAL NECK
				56	6:46	P	SCABBING VENTRAL NECK
				84	6:43	P	SCABBING DORSAL NECK
				84	6:43	P	SCABBING VENTRAL NECK
12661	M	0 MG/KG/DAY	NORMAL	0	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12661	M	0 MG/KG/DAY	DISPOSITION	89	8:51	P	PRIMARY NECROPSY (WEEK 12)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12661	M	0 MG/KG/DAY	BODY/INTEGUMENT	21	7:01	P	MOIST ALOPECIA VENTRAL NECK
				56	6:47	P	HAIR LOSS VENTRAL NECK
				63	6:51	P	HAIR LOSS DORSAL NECK
				63	6:51	P	HAIR LOSS VENTRAL NECK
				70	7:07	P	HAIR LOSS DORSAL NECK
				77	7:00	P	HAIR LOSS DORSAL NECK
				77	7:00	P	HAIR LOSS VENTRAL NECK
				84	6:45	P	HAIR LOSS DORSAL NECK
				84	6:45	P	HAIR LOSS VENTRAL NECK
				89	6:42	P	HAIR LOSS VENTRAL NECK
12661	M	0 MG/KG/DAY	BODY/INTEG II	14	6:46	P	SCABBING DORSAL NECK
				14	6:47	P	SCABBING VENTRAL NECK
				28	6:51	P	SCABBING DORSAL NECK
				56	6:47	P	SCABBING VENTRAL NECK
				84	6:45	P	SCABBING VENTRAL NECK
				89	6:43	P	SCABBING VENTRAL NECK
12675	M	0 MG/KG/DAY	NORMAL	0	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12675	M	0 MG/KG/DAY	DISPOSITION	89	8:51	P	PRIMARY NECROPSY (WEEK 12)
12675	M	0 MG/KG/DAY	BODY/INTEGUMENT	35	7:17	P	HAIR LOSS FORELIMB(S)
				42	7:12	P	HAIR LOSS FORELIMB(S)
				42	7:12	P	HAIR LOSS VENTRAL NECK
				49	9:54	P	HAIR LOSS FORELIMB(S)
				56	6:48	P	HAIR LOSS FORELIMB(S)
				56	6:48	P	HAIR LOSS VENTRAL NECK
				63	6:52	P	HAIR LOSS DORSAL NECK
				63	6:52	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12675	M	0 MG/KG/DAY	BODY/INTEGUMENT	63	6:52	P	HAIR LOSS FORELIMB(S)
				70	7:08	P	HAIR LOSS FORELIMB(S)
				77	7:00	P	HAIR LOSS FORELIMB(S)
				77	7:01	P	HAIR LOSS VENTRAL NECK
				84	6:45	P	HAIR LOSS VENTRAL NECK
				84	6:45	P	HAIR LOSS FORELIMB(S)
				89	6:43	P	HAIR LOSS FORELIMB(S)
				89	6:43	P	HAIR LOSS VENTRAL NECK
12675	M	0 MG/KG/DAY	BODY/INTEG II	28	6:52	P	SCABBING VENTRAL NECK
				49	9:54	P	SCABBING FORELIMB(S)
				56	6:48	P	SCABBING FORELIMB(S)
				56	6:48	P	SCABBING VENTRAL NECK
				63	6:52	P	SCABBING VENTRAL NECK
				63	6:52	P	SCABBING FORELIMB(S)
12676	M	0 MG/KG/DAY	NORMAL	0	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12676	M	0 MG/KG/DAY	DISPOSITION	89	8:51	P	PRIMARY NECROPSY (WEEK 12)
12676	M	0 MG/KG/DAY	BODY/INTEGUMENT	14	6:48	P	HAIR LOSS DORSAL NECK
				56	6:49	P	HAIR LOSS VENTRAL NECK
				63	6:53	P	HAIR LOSS DORSAL NECK
				63	6:53	P	HAIR LOSS VENTRAL NECK
				77	7:01	P	HAIR LOSS VENTRAL NECK
				84	6:46	P	HAIR LOSS VENTRAL NECK
				89	6:43	P	HAIR LOSS VENTRAL NECK
12676	M	0 MG/KG/DAY	EYES/EARS/NOSE	89	6:43	P	DRIED RED MATERIAL AROUND NOSE
12676	M	0 MG/KG/DAY	EXCRETA	14	6:48	P	SOFT FECES

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12676	M	0 MG/KG/DAY	BODY/INTEG II	28	6:53	P	SCABBING DORSAL NECK
				35	7:18	P	SCABBING DORSAL NECK
				49	9:55	P	SCABBING VENTRAL NECK
				56	6:49	P	SCABBING VENTRAL NECK
				63	6:53	P	SCABBING VENTRAL NECK
				84	6:46	P	SCABBING VENTRAL NECK
12679	M	0 MG/KG/DAY	NORMAL	0	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12679	M	0 MG/KG/DAY	DISPOSITION	90	8:04	P	PRIMARY NECROPSY (WEEK 12)
12679	M	0 MG/KG/DAY	BODY/INTEGUMENT	49	9:56	P	HAIR LOSS VENTRAL NECK
				56	6:50	P	HAIR LOSS VENTRAL NECK
				63	6:53	P	HAIR LOSS DORSAL NECK
				63	6:53	P	HAIR LOSS VENTRAL NECK
				70	7:09	P	HAIR LOSS DORSAL NECK
				77	7:02	P	HAIR LOSS VENTRAL NECK
				84	6:47	P	HAIR LOSS VENTRAL NECK
				90	6:44	P	HAIR LOSS VENTRAL NECK
12679	M	0 MG/KG/DAY	BODY/INTEG II	7	7:04	P	SCABBING DORSAL TRUNK
				14	6:50	P	SCABBING DORSAL NECK
				84	6:47	P	SCABBING VENTRAL NECK
12679	M	0 MG/KG/DAY	ORAL/DENTAL	49	9:56	P	WET CLEAR MATERIAL AROUND MOUTH
12683	M	0 MG/KG/DAY	NORMAL	0	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12683	M	0 MG/KG/DAY	DISPOSITION	90	8:04	P	PRIMARY NECROPSY (WEEK 12)
12683	M	0 MG/KG/DAY	BODY/INTEGUMENT	35	7:20	P	HAIR LOSS FORELIMB(S)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12683	M	0 MG/KG/DAY	BODY/INTEGUMENT	42	7:14	P	HAIR LOSS FORELIMB(S)
				49	9:57	P	HAIR LOSS FORELIMB(S)
				56	6:50	P	HAIR LOSS FORELIMB(S)
				56	6:50	P	HAIR LOSS DORSAL NECK
				56	6:50	P	HAIR LOSS VENTRAL NECK
				63	6:54	P	HAIR LOSS FORELIMB(S)
				63	6:54	P	HAIR LOSS DORSAL NECK
				63	6:54	P	HAIR LOSS VENTRAL NECK
				70	7:10	P	HAIR LOSS FORELIMB(S)
				77	7:03	P	HAIR LOSS VENTRAL NECK
				84	6:48	P	HAIR LOSS FORELIMB(S)
				84	6:48	P	HAIR LOSS DORSAL NECK
				84	6:48	P	HAIR LOSS VENTRAL NECK
				90	6:44	P	HAIR LOSS VENTRAL NECK
				90	6:44	P	HAIR LOSS FORELIMB(S)
12683	M	0 MG/KG/DAY	BODY/INTEG II	14	6:51	P	SCABBING DORSAL NECK
				21	7:05	P	SCABBING DORSAL NECK
12693	M	0 MG/KG/DAY	NORMAL	0	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12693	M	0 MG/KG/DAY	DISPOSITION	90	8:04	P	PRIMARY NECROPSY (WEEK 12)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12693	M	0 MG/KG/DAY	BODY/INTEGUMENT	63	6:55	P	HAIR LOSS DORSAL NECK
				63	6:55	P	HAIR LOSS VENTRAL NECK
				84	6:48	P	HAIR LOSS VENTRAL NECK
				90	6:44	P	HAIR LOSS VENTRAL NECK
12693	M	0 MG/KG/DAY	BODY/INTEG II	63	6:55	P	SCABBING VENTRAL NECK
12697	M	0 MG/KG/DAY	NORMAL	0	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12697	M	0 MG/KG/DAY	DISPOSITION	90	8:04	P	PRIMARY NECROPSY (WEEK 12)
12697	M	0 MG/KG/DAY	BODY/INTEGUMENT	21	7:06	P	MOIST ALOPECIA VENTRAL NECK
				35	7:22	P	HAIR LOSS FORELIMB(S)
				42	7:16	P	HAIR LOSS FORELIMB(S)
				49	9:58	P	HAIR LOSS FORELIMB(S)
				56	6:52	P	HAIR LOSS FORELIMB(S)
				56	6:52	P	HAIR LOSS DORSAL NECK
				56	6:52	P	HAIR LOSS VENTRAL NECK
				63	6:56	P	HAIR LOSS FORELIMB(S)
				63	6:56	P	HAIR LOSS VENTRAL NECK
				70	7:11	P	HAIR LOSS FORELIMB(S)
				77	7:04	P	HAIR LOSS VENTRAL NECK
				77	7:04	P	HAIR LOSS FORELIMB(S)
				84	6:49	P	HAIR LOSS FORELIMB(S)
				84	6:49	P	HAIR LOSS VENTRAL NECK
				90	6:44	P	HAIR LOSS VENTRAL NECK
				90	6:44	P	HAIR LOSS FORELIMB(S)
12697	M	0 MG/KG/DAY	BODY/INTEG II	14	6:52	P	SCABBING DORSAL NECK
				21	7:07	P	SCABBING DORSAL HEAD
				35	7:22	P	SCABBING DORSAL NECK
				49	9:58	P	SCABBING FORELIMB(S)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12697	M	0 MG/KG/DAY	BODY/INTEG II	49	9:58	P	SCABBING VENTRAL NECK
				56	6:52	P	SCABBING VENTRAL NECK
				63	6:56	P	SCABBING VENTRAL NECK
12700	M	0 MG/KG/DAY	NORMAL	0	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12700	M	0 MG/KG/DAY	DISPOSITION	90	8:04	P	PRIMARY NECROPSY (WEEK 12)
12700	M	0 MG/KG/DAY	BODY/INTEGUMENT	42	7:17	P	HAIR LOSS VENTRAL NECK
				49	9:58	P	HAIR LOSS DORSAL NECK
				49	9:58	P	HAIR LOSS VENTRAL NECK
				56	6:52	P	HAIR LOSS VENTRAL NECK
				63	6:56	P	HAIR LOSS DORSAL NECK
				63	6:56	P	HAIR LOSS VENTRAL NECK
				70	7:12	P	HAIR LOSS DORSAL NECK
				77	7:05	P	HAIR LOSS VENTRAL NECK
				77	7:05	P	HAIR LOSS DORSAL NECK
				84	6:50	P	HAIR LOSS VENTRAL NECK
				90	6:45	P	HAIR LOSS VENTRAL NECK
12700	M	0 MG/KG/DAY	EXCRETA	14	6:53	P	SOFT FECES
12700	M	0 MG/KG/DAY	BODY/INTEG II	63	6:57	P	SCABBING DORSAL NECK
				63	6:57	P	SCABBING VENTRAL NECK
				84	6:50	P	SCABBING VENTRAL NECK
12646	M	100 MG/KG/DAY	NORMAL	0	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12646	M	100 MG/KG/DAY	DISPOSITION	89	8:51	P	PRIMARY NECROPSY (WEEK 12)
12646	M	100 MG/KG/DAY	BODY/INTEGUMENT	49	10:11	P	HAIR LOSS FORELIMB(S)
				56	7:02	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12646	M	100 MG/KG/DAY	BODY/INTEGUMENT	63	7:07	P	HAIR LOSS DORSAL NECK
				63	7:07	P	HAIR LOSS VENTRAL NECK
				70	7:21	P	HAIR LOSS DORSAL NECK
				70	7:21	P	HAIR LOSS VENTRAL NECK
				77	7:14	P	HAIR LOSS VENTRAL NECK
				84	6:59	P	HAIR LOSS DORSAL NECK
				84	6:59	P	HAIR LOSS VENTRAL NECK
				89	6:45	P	HAIR LOSS VENTRAL NECK
				89	6:45	P	HAIR LOSS DORSAL NECK
12646	M	100 MG/KG/DAY	BODY/INTEG II	7	7:14	P	SCABBING DORSAL NECK
				14	7:04	P	SCABBING DORSAL NECK
				21	7:18	P	SCABBING DORSAL NECK
				28	7:08	P	SCABBING DORSAL NECK
				35	7:36	P	SCABBING DORSAL NECK
				49	10:11	P	SCABBING DORSAL NECK
12655	M	100 MG/KG/DAY	NORMAL	0	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12655	M	100 MG/KG/DAY	DISPOSITION	89	8:51	P	PRIMARY NECROPSY (WEEK 12)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12655	M	100 MG/KG/DAY	EYES/EARS/NOSE	89	6:45	P	DRIED RED MATERIAL AROUND NOSE
12656	M	100 MG/KG/DAY	NORMAL	0	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12656	M	100 MG/KG/DAY	DISPOSITION	89	8:51	P	PRIMARY NECROPSY (WEEK 12)
12656	M	100 MG/KG/DAY	BODY/INTEGUMENT	28	7:09	P	HAIR LOSS VENTRAL NECK
				63	7:09	P	HAIR LOSS DORSAL NECK
				63	7:09	P	HAIR LOSS VENTRAL NECK
				70	7:22	P	HAIR LOSS DORSAL NECK
				84	7:00	P	HAIR LOSS VENTRAL NECK
				89	6:46	P	HAIR LOSS VENTRAL NECK
12656	M	100 MG/KG/DAY	BODY/INTEG II	28	7:09	P	SCABBING DORSAL NECK
12659	M	100 MG/KG/DAY	NORMAL	0	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12659	M	100 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12659	M	100 MG/KG/DAY	BODY/INTEGUMENT	63	7:10	P	HAIR LOSS DORSAL NECK
				63	7:10	P	HAIR LOSS VENTRAL NECK
				84	7:01	P	HAIR LOSS VENTRAL NECK
				89	6:46	P	HAIR LOSS VENTRAL NECK
12659	M	100 MG/KG/DAY	BODY/INTEG II	84	7:01	P	SCABBING VENTRAL NECK
12662	M	100 MG/KG/DAY	NORMAL	0	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12662	M	100 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12662	M	100 MG/KG/DAY	BODY/INTEGUMENT	56	7:05	P	HAIR LOSS VENTRAL NECK
				63	7:10	P	HAIR LOSS DORSAL NECK
				63	7:10	P	HAIR LOSS VENTRAL NECK
				70	7:23	P	HAIR LOSS DORSAL NECK
				77	7:17	P	HAIR LOSS DORSAL NECK
				77	7:17	P	HAIR LOSS VENTRAL NECK
				84	7:02	P	HAIR LOSS DORSAL NECK
				84	7:02	P	HAIR LOSS VENTRAL NECK
				89	6:46	P	HAIR LOSS VENTRAL NECK
12662	M	100 MG/KG/DAY	BODY/INTEG II	49	10:14	P	SCABBING VENTRAL NECK
				89	6:47	P	SCABBING VENTRAL NECK
12664	M	100 MG/KG/DAY	NORMAL	0	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12664	M	100 MG/KG/DAY	NORMAL	35	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12664	M	100 MG/KG/DAY	DISPOSITION	90	8:05	P	PRIMARY NECROPSY (WEEK 12)
12664	M	100 MG/KG/DAY	BODY/INTEGUMENT	63	7:11	P	HAIR LOSS VENTRAL NECK
				84	7:03	P	HAIR LOSS VENTRAL NECK
				90	6:47	P	HAIR LOSS VENTRAL NECK
				90	6:47	P	MOIST ALOPECIA RIGHT LATERAL NECK
12664	M	100 MG/KG/DAY	EYES/EARS/NOSE	7	7:16	P	DRIED RED MATERIAL AROUND NOSE
12664	M	100 MG/KG/DAY	BODY/INTEG II	84	7:03	P	SCABBING VENTRAL NECK
12670	M	100 MG/KG/DAY	NORMAL	0	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12670	M	100 MG/KG/DAY	DISPOSITION	90	8:05	P	PRIMARY NECROPSY (WEEK 12)
12670	M	100 MG/KG/DAY	BODY/INTEGUMENT	63	7:12	P	MOIST ALOPECIA VENTRAL NECK
				63	7:12	P	HAIR LOSS VENTRAL NECK
				84	7:04	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12682	M	100 MG/KG/DAY	NORMAL	0	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12682	M	100 MG/KG/DAY	DISPOSITION	90	8:05	P	PRIMARY NECROPSY (WEEK 12)
12682	M	100 MG/KG/DAY	BODY/INTEGUMENT	35	7:42	P	HAIR LOSS DORSAL NECK
				63	7:13	P	HAIR LOSS DORSAL NECK
				63	7:13	P	HAIR LOSS VENTRAL NECK
				70	7:25	P	HAIR LOSS DORSAL NECK
				77	7:19	P	HAIR LOSS VENTRAL NECK
				84	7:05	P	HAIR LOSS VENTRAL NECK
				90	6:48	P	HAIR LOSS VENTRAL NECK
				90	6:48	P	HAIR LOSS DORSAL NECK
12682	M	100 MG/KG/DAY	BODY/INTEG II	14	7:09	P	SCABBING DORSAL NECK
				21	7:24	P	SCABBING DORSAL NECK
				63	7:13	P	SCABBING VENTRAL NECK
12688	M	100 MG/KG/DAY	NORMAL	0	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 21

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12688	M	100 MG/KG/DAY	NORMAL	77	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12688	M	100 MG/KG/DAY	DISPOSITION	90	8:05	P	PRIMARY NECROPSY (WEEK 12)
12688	M	100 MG/KG/DAY	EYES/EARS/NOSE	90	6:48	P	DRIED RED MATERIAL AROUND NOSE
12695	M	100 MG/KG/DAY	NORMAL	0	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12695	M	100 MG/KG/DAY	DISPOSITION	90	8:05	P	PRIMARY NECROPSY (WEEK 12)
12695	M	100 MG/KG/DAY	BODY/INTEGUMENT	63	7:14	P	HAIR LOSS VENTRAL NECK
				77	7:21	P	HAIR LOSS VENTRAL NECK
				84	7:06	P	HAIR LOSS VENTRAL NECK
				90	6:48	P	HAIR LOSS VENTRAL NECK
12695	M	100 MG/KG/DAY	BODY/INTEG II	77	7:21	P	SCABBING LEFT LATERAL NECK
12645	M	450 MG/KG/DAY	NORMAL	0	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 22

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12645	M	450 MG/KG/DAY	NORMAL	89	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12645	M	450 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12645	M	450 MG/KG/DAY	BODY/INTEGUMENT	63	7:23	P	HAIR LOSS VENTRAL NECK
				70	7:35	P	HAIR LOSS DORSAL NECK
				84	7:15	P	HAIR LOSS DORSAL NECK
				84	7:15	P	HAIR LOSS VENTRAL NECK
12645	M	450 MG/KG/DAY	EXCRETA	21	7:34	P	SOFT FECES
12652	M	450 MG/KG/DAY	NORMAL	0	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12652	M	450 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12652	M	450 MG/KG/DAY	BODY/INTEGUMENT	56	7:18	P	HAIR LOSS VENTRAL NECK
				63	7:23	P	HAIR LOSS VENTRAL NECK
				70	7:36	P	HAIR LOSS DORSAL NECK
				77	7:30	P	HAIR LOSS VENTRAL NECK
				84	7:16	P	HAIR LOSS DORSAL NECK
				84	7:16	P	HAIR LOSS VENTRAL NECK
				89	6:49	P	HAIR LOSS VENTRAL NECK
12652	M	450 MG/KG/DAY	EYES/EARS/NOSE	89	6:49	P	DRIED RED MATERIAL AROUND NOSE
12669	M	450 MG/KG/DAY	NORMAL	0	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 23

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12669	M	450 MG/KG/DAY	NORMAL	42	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12669	M	450 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12669	M	450 MG/KG/DAY	BODY/INTEGUMENT	63	7:24	P	HAIR LOSS VENTRAL NECK
				77	7:30	P	HAIR LOSS VENTRAL NECK
				84	7:17	P	HAIR LOSS VENTRAL NECK
12669	M	450 MG/KG/DAY	EYES/EARS/NOSE	7	7:27	P	DRIED RED MATERIAL AROUND NOSE
12669	M	450 MG/KG/DAY	EXCRETA	89	6:49	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12671	M	450 MG/KG/DAY	NORMAL	0	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12671	M	450 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12671	M	450 MG/KG/DAY	BODY/INTEGUMENT	14	7:21	P	HAIR LOSS FACIAL AREA
				77	7:31	P	HAIR LOSS VENTRAL NECK
				89	6:49	P	HAIR LOSS FACIAL AREA
12671	M	450 MG/KG/DAY	EYES/EARS/NOSE	7	7:27	P	DRIED RED MATERIAL AROUND LEFT EYE
12671	M	450 MG/KG/DAY	BODY/INTEG II	84	7:17	P	SCABBING FACIAL AREA
12674	M	450 MG/KG/DAY	NORMAL	0	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 24

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12674	M	450 MG/KG/DAY	NORMAL	28	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12674	M	450 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12674	M	450 MG/KG/DAY	BODY/INTEGUMENT	70	7:38	P	HAIR LOSS DORSAL NECK
				77	7:32	P	HAIR LOSS DORSAL NECK
				77	7:32	P	HAIR LOSS VENTRAL NECK
				89	6:50	P	HAIR LOSS VENTRAL NECK
12674	M	450 MG/KG/DAY	BODY/INTEG II	70	7:38	P	SCABBING DORSAL NECK
12677	M	450 MG/KG/DAY	NORMAL	0	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12677	M	450 MG/KG/DAY	DISPOSITION	90	8:05	P	PRIMARY NECROPSY (WEEK 12)
12685	M	450 MG/KG/DAY	NORMAL	0	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 25

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12685	M	450 MG/KG/DAY	NORMAL	7	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12685	M	450 MG/KG/DAY	DISPOSITION	90	8:05	P	PRIMARY NECROPSY (WEEK 12)
12685	M	450 MG/KG/DAY	BODY/INTEGUMENT	63	7:27	P	HAIR LOSS VENTRAL NECK
				84	7:20	P	HAIR LOSS DORSAL NECK
				84	7:20	P	HAIR LOSS VENTRAL NECK
12685	M	450 MG/KG/DAY	EYES/EARS/NOSE	90	6:50	P	DRIED RED MATERIAL AROUND NOSE
12685	M	450 MG/KG/DAY	BODY/INTEG II	90	6:50	P	SCABBING VENTRAL NECK
12690	M	450 MG/KG/DAY	NORMAL	7	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12690	M	450 MG/KG/DAY	DISPOSITION	90	8:05	P	PRIMARY NECROPSY (WEEK 12)
12690	M	450 MG/KG/DAY	BODY/INTEGUMENT	56	7:22	P	HAIR LOSS VENTRAL NECK
				63	7:28	P	HAIR LOSS VENTRAL NECK
				77	7:34	P	HAIR LOSS FORELIMB(S)
				77	7:34	P	HAIR LOSS VENTRAL NECK
				84	7:21	P	HAIR LOSS VENTRAL NECK
				90	6:51	P	HAIR LOSS FORELIMB(S)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12690	M	450 MG/KG/DAY	BODY/INTEG II	0	7:31	P	SCABBING VENTRAL NECK
				14	7:24	P	SCABBING DORSAL NECK
				28	7:33	P	SCABBING DORSAL NECK
12692	M	450 MG/KG/DAY	NORMAL	0	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12692	M	450 MG/KG/DAY	DISPOSITION	90	8:05	P	PRIMARY NECROPSY (WEEK 12)
12692	M	450 MG/KG/DAY	BODY/INTEGUMENT	63	7:29	P	HAIR LOSS VENTRAL NECK
				77	7:35	P	HAIR LOSS DORSAL NECK
				77	7:35	P	HAIR LOSS VENTRAL NECK
				84	7:21	P	HAIR LOSS VENTRAL NECK
12699	M	450 MG/KG/DAY	NORMAL	28	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12699	M	450 MG/KG/DAY	DISPOSITION	69	7:59	P	FOUND DEAD
12699	M	450 MG/KG/DAY	BODY/INTEG II	0	7:33	P	SCABBING DORSAL HEAD
				7	7:30	P	SCABBING DORSAL HEAD
				14	7:25	P	SCABBING DORSAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 27

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12699	M	450 MG/KG/DAY	BODY/INTEG II	14	7:25	P	SCABBING DORSAL HEAD
				21	7:40	P	SCABBING DORSAL HEAD
12658	M	750 MG/KG/DAY	NORMAL	0	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12658	M	750 MG/KG/DAY	DISPOSITION	50	15:53	P	SENT TO NECROPSY TO BE EUTHANIZED IN EXTREMIS- PHYSICAL CONDITION
12658	M	750 MG/KG/DAY	BEHAVIOR/CNS	49	10:46	P	IMPAIRED USE OF LEFT HINDLIMB
				50	15:52	P	IMPAIRED USE OF LEFT HINDLIMB
12658	M	750 MG/KG/DAY	BODY/INTEGUMENT	35	8:10	P	HAIR LOSS DORSAL NECK
				50	15:53	P	HAIR LOSS VENTRAL NECK
12658	M	750 MG/KG/DAY	EYES/EARS/NOSE	50	15:51	P	DRIED RED MATERIAL AROUND NOSE
				50	15:51	P	DRIED RED MATERIAL AROUND RIGHT EYE
				50	15:51	P	DRIED RED MATERIAL AROUND LEFT EYE
12658	M	750 MG/KG/DAY	EXCRETA	50	15:53	P	WET YELLOW MATERIAL UROGENITAL AREA
12658	M	750 MG/KG/DAY	SPECIAL	50	15:52	P	SWOLLEN LEFT HINDLIMB
12666	M	750 MG/KG/DAY	NORMAL	0	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12666	M	750 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 28

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12666	M	750 MG/KG/DAY	BODY/INTEGUMENT	63	7:39	P	HAIR LOSS VENTRAL NECK
				70	7:50	P	HAIR LOSS DORSAL NECK
				84	7:31	P	HAIR LOSS DORSAL NECK
				84	7:31	P	HAIR LOSS VENTRAL NECK
				89	6:51	P	HAIR LOSS VENTRAL NECK
12666	M	750 MG/KG/DAY	EYES/EARS/NOSE	7	7:39	P	DRIED RED MATERIAL AROUND NOSE
				89	6:51	P	DRIED RED MATERIAL AROUND NOSE
12672	M	750 MG/KG/DAY	NORMAL	0	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12672	M	750 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12672	M	750 MG/KG/DAY	BODY/INTEGUMENT	56	7:35	P	HAIR LOSS DORSAL NECK
				56	7:35	P	HAIR LOSS VENTRAL NECK
				63	7:40	P	HAIR LOSS DORSAL NECK
				63	7:40	P	HAIR LOSS VENTRAL NECK
				70	7:50	P	HAIR LOSS DORSAL NECK
				70	7:50	P	HAIR LOSS VENTRAL NECK
				77	7:42	P	HAIR LOSS DORSAL NECK
				77	7:42	P	HAIR LOSS VENTRAL NECK
				89	6:52	P	HAIR LOSS VENTRAL NECK
				89	6:52	P	HAIR LOSS DORSAL NECK
12672	M	750 MG/KG/DAY	EYES/EARS/NOSE	89	6:52	P	DRIED RED MATERIAL AROUND NOSE
12672	M	750 MG/KG/DAY	EXCRETA	89	6:52	P	DRIED YELLOW MATERIAL UROGENITAL AREA

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 29

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12673	M	750 MG/KG/DAY	NORMAL	0	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12673	M	750 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12673	M	750 MG/KG/DAY	BODY/INTEGUMENT	21	7:51	P	HAIR LOSS VENTRAL NECK
				35	8:12	P	HAIR LOSS DORSAL NECK
				56	7:35	P	HAIR LOSS DORSAL NECK
				56	7:35	P	HAIR LOSS VENTRAL NECK
				63	7:41	P	HAIR LOSS DORSAL NECK
				63	7:41	P	HAIR LOSS VENTRAL NECK
				70	7:51	P	HAIR LOSS DORSAL NECK
				70	7:51	P	HAIR LOSS VENTRAL NECK
				77	7:43	P	HAIR LOSS DORSAL NECK
				77	7:43	P	HAIR LOSS VENTRAL NECK
				84	7:33	P	HAIR LOSS DORSAL NECK
				84	7:33	P	HAIR LOSS VENTRAL NECK
				89	6:53	P	HAIR LOSS DORSAL NECK
				89	6:53	P	HAIR LOSS VENTRAL NECK
12673	M	750 MG/KG/DAY	BODY/INTEG II	7	7:40	P	SCABBING DORSAL TRUNK
				14	7:37	P	SCABBING DORSAL NECK
				21	7:51	P	SCABBING DORSAL NECK
				56	7:35	P	SCABBING VENTRAL NECK
12680	M	750 MG/KG/DAY	NORMAL	0	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 30

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12680	M	750 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12680	M	750 MG/KG/DAY	BODY/INTEGUMENT	49	10:48	P	HAIR LOSS FORELIMB(S)
				56	7:36	P	HAIR LOSS DORSAL NECK
				63	7:42	P	HAIR LOSS DORSAL NECK
				63	7:42	P	HAIR LOSS VENTRAL NECK
				70	7:52	P	HAIR LOSS FORELIMB(S)
				70	7:52	P	HAIR LOSS DORSAL NECK
				77	7:44	P	HAIR LOSS VENTRAL NECK
				84	7:34	P	HAIR LOSS DORSAL NECK
				84	7:34	P	HAIR LOSS VENTRAL NECK
				89	6:53	P	HAIR LOSS DORSAL NECK
				89	6:53	P	HAIR LOSS VENTRAL NECK
12680	M	750 MG/KG/DAY	BODY/INTEG II	14	7:37	P	SCABBING DORSAL NECK
				77	7:44	P	SCABBING DORSAL NECK
				89	6:53	P	SCABBING BASE OF TAIL
				89	6:53	P	SCABBING UROGENITAL AREA
12681	M	750 MG/KG/DAY	NORMAL	0	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12681	M	750 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12681	M	750 MG/KG/DAY	BODY/INTEGUMENT	63	7:42	P	HAIR LOSS DORSAL NECK
				63	7:42	P	HAIR LOSS VENTRAL NECK
				70	7:53	P	HAIR LOSS DORSAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12681	M	750 MG/KG/DAY	BODY/INTEGUMENT	77	7:44	P	HAIR LOSS DORSAL NECK
				84	7:35	P	HAIR LOSS DORSAL NECK
				84	7:35	P	HAIR LOSS VENTRAL NECK
12681	M	750 MG/KG/DAY	EYES/EARS/NOSE	89	6:54	P	DRIED RED MATERIAL AROUND NOSE
12687	M	750 MG/KG/DAY	NORMAL	0	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12687	M	750 MG/KG/DAY	DISPOSITION	90	8:06	P	PRIMARY NECROPSY (WEEK 12)
12687	M	750 MG/KG/DAY	BODY/INTEGUMENT	49	10:50	P	HAIR LOSS FORELIMB(S)
				56	7:37	P	HAIR LOSS FORELIMB(S)
				56	7:37	P	HAIR LOSS VENTRAL NECK
				56	7:37	P	HAIR LOSS DORSAL NECK
				63	7:43	P	HAIR LOSS DORSAL NECK
				63	7:43	P	HAIR LOSS VENTRAL NECK
				70	7:53	P	HAIR LOSS FORELIMB(S)
				70	7:53	P	HAIR LOSS DORSAL NECK
				77	7:45	P	HAIR LOSS VENTRAL NECK
				77	7:45	P	HAIR LOSS FORELIMB(S)
				84	7:36	P	HAIR LOSS FORELIMB(S)
				84	7:36	P	HAIR LOSS VENTRAL NECK
				90	6:52	P	HAIR LOSS FORELIMB(S)
				90	6:52	P	HAIR LOSS DORSAL NECK
				90	6:52	P	HAIR LOSS VENTRAL NECK
12689	M	750 MG/KG/DAY	NORMAL	0	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12689	M	750 MG/KG/DAY	NORMAL	14	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12689	M	750 MG/KG/DAY	DISPOSITION	90	8:06	P	PRIMARY NECROPSY (WEEK 12)
12689	M	750 MG/KG/DAY	BODY/INTEGUMENT	49	10:50	P	HAIR LOSS FORELIMB(S)
				63	7:44	P	HAIR LOSS VENTRAL NECK
				70	7:54	P	HAIR LOSS VENTRAL NECK
				84	7:37	P	HAIR LOSS VENTRAL NECK
				90	6:53	P	HAIR LOSS VENTRAL NECK
12689	M	750 MG/KG/DAY	EXCRETA	28	7:49	P	SOFT FECES
12698	M	750 MG/KG/DAY	NORMAL	0	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12698	M	750 MG/KG/DAY	DISPOSITION	90	8:06	P	PRIMARY NECROPSY (WEEK 12)
12698	M	750 MG/KG/DAY	BODY/INTEGUMENT	42	8:14	P	HAIR LOSS DORSAL NECK
				56	7:39	P	HAIR LOSS DORSAL NECK
				56	7:39	P	HAIR LOSS VENTRAL NECK
				63	7:45	P	HAIR LOSS DORSAL NECK
				63	7:45	P	HAIR LOSS VENTRAL NECK
				70	7:55	P	HAIR LOSS DORSAL NECK
				77	7:47	P	HAIR LOSS DORSAL NECK
				77	7:47	P	HAIR LOSS VENTRAL NECK
				84	7:38	P	HAIR LOSS DORSAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12698	M	750 MG/KG/DAY	BODY/INTEGUMENT	84	7:38	P	HAIR LOSS VENTRAL NECK
				90	6:53	P	HAIR LOSS DORSAL NECK
				90	6:53	P	HAIR LOSS VENTRAL NECK
12698	M	750 MG/KG/DAY	EYES/EARS/NOSE	7	7:43	P	DRIED RED MATERIAL AROUND NOSE
12704	M	750 MG/KG/DAY	NORMAL	0	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12704	M	750 MG/KG/DAY	DISPOSITION	90	8:06	P	PRIMARY NECROPSY (WEEK 12)
12704	M	750 MG/KG/DAY	BODY/INTEGUMENT	63	7:45	P	HAIR LOSS DORSAL NECK
				63	7:45	P	HAIR LOSS VENTRAL NECK
				70	7:56	P	HAIR LOSS DORSAL NECK
				84	7:39	P	HAIR LOSS DORSAL NECK
				84	7:39	P	HAIR LOSS VENTRAL NECK
12705	F	UNTREATED	NORMAL	0	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12705	F	UNTREATED	DISPOSITION	89	8:50	P	PRIMARY NECROPSY (WEEK 12)
12705	F	UNTREATED	BODY/INTEGUMENT	14	6:36	P	HAIR LOSS DORSAL NECK
				28	6:41	P	HAIR LOSS DORSAL NECK
				28	6:41	P	HAIR LOSS VENTRAL NECK
				63	6:40	P	HAIR LOSS VENTRAL NECK
				70	6:58	P	HAIR LOSS DORSAL NECK
				84	6:35	P	HAIR LOSS VENTRAL NECK
				89	6:41	P	HAIR LOSS VENTRAL NECK
12712	F	UNTREATED	NORMAL	0	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12712	F	UNTREATED	DISPOSITION	89	8:50	P	PRIMARY NECROPSY (WEEK 12)
12712	F	UNTREATED	BODY/INTEGUMENT	14	6:37	P	HAIR LOSS FACIAL AREA
				63	6:41	P	HAIR LOSS VENTRAL NECK
12712	F	UNTREATED	BODY/INTEG II	14	6:37	P	SCABBING DORSAL NECK
12716	F	UNTREATED	NORMAL	0	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12716	F	UNTREATED	NORMAL	35	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12716	F	UNTREATED	DISPOSITION	89	8:51	P	PRIMARY NECROPSY (WEEK 12)
12716	F	UNTREATED	BODY//INTEGUMENT	63	6:42	P	HAIR LOSS VENTRAL NECK
				84	6:36	P	HAIR LOSS VENTRAL NECK
12724	F	UNTREATED	NORMAL	0	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12724	F	UNTREATED	DISPOSITION	89	8:51	P	PRIMARY NECROPSY (WEEK 12)
12724	F	UNTREATED	BODY//INTEGUMENT	14	6:39	P	HAIR LOSS DORSAL NECK
				21	6:53	P	HAIR LOSS VENTRAL NECK
				49	9:46	P	HAIR LOSS FORELIMB(S)
				49	9:46	P	HAIR LOSS VENTRAL NECK
				56	6:39	P	HAIR LOSS DORSAL NECK
				56	6:39	P	HAIR LOSS FORELIMB(S)
				63	6:43	P	HAIR LOSS DORSAL NECK
				63	6:43	P	HAIR LOSS VENTRAL NECK
				77	6:52	P	HAIR LOSS VENTRAL NECK
				84	6:37	P	HAIR LOSS VENTRAL NECK
				84	6:37	P	HAIR LOSS FORELIMB(S)
				89	6:41	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 36

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12724	F	UNTREATED	BODY/INTEG II	14	6:39	P	SCABBING DORSAL NECK
12730	F	UNTREATED	NORMAL	0	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12730	F	UNTREATED	DISPOSITION	89	8:51	P	PRIMARY NECROPSY (WEEK 12)
12730	F	UNTREATED	BODY/INTEGUMENT	14	6:39	P	HAIR LOSS DORSAL NECK
				56	6:40	P	HAIR LOSS DORSAL NECK
				56	6:40	P	HAIR LOSS VENTRAL NECK
				63	6:43	P	HAIR LOSS VENTRAL NECK
				84	6:38	P	HAIR LOSS VENTRAL NECK
12730	F	UNTREATED	BODY/INTEG II	21	6:54	P	SCABBING VENTRAL NECK
				63	6:44	P	SCABBING VENTRAL NECK
				84	6:38	P	SCABBING VENTRAL NECK
12733	F	UNTREATED	NORMAL	0	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12733	F	UNTREATED	DISPOSITION	90	8:04	P	PRIMARY NECROPSY (WEEK 12)
12733	F	UNTREATED	BODY/INTEGUMENT	21	6:55	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12733	F	UNTREATED	BODY/INTEGUMENT	56	6:41	P	HAIR LOSS VENTRAL NECK
				63	6:44	P	HAIR LOSS VENTRAL NECK
				77	6:54	P	HAIR LOSS VENTRAL NECK
				84	6:38	P	HAIR LOSS VENTRAL NECK
				90	6:42	P	HAIR LOSS VENTRAL NECK
12733	F	UNTREATED	EYES/EARS/NOSE	90	6:42	P	DRIED RED MATERIAL AROUND NOSE
12733	F	UNTREATED	BODY/INTEG II	21	6:55	P	SCABBING VENTRAL NECK
12734	F	UNTREATED	NORMAL	0	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12734	F	UNTREATED	DISPOSITION	90	8:04	P	PRIMARY NECROPSY (WEEK 12)
12734	F	UNTREATED	BODY/INTEGUMENT	49	9:48	P	HAIR LOSS FORELIMB(S)
				56	6:42	P	HAIR LOSS FORELIMB(S)
12736	F	UNTREATED	NORMAL	0	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 38

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12736	F	UNTREATED	DISPOSITION	90	8:04	P	PRIMARY NECROPSY (WEEK 12)
12736	F	UNTREATED	BODY/INTEGUMENT	14	6:41	P	HAIR LOSS FACIAL AREA
				14	6:41	P	HAIR LOSS DORSAL NECK
				28	6:46	P	HAIR LOSS DORSAL NECK
				35	7:06	P	HAIR LOSS DORSAL NECK
				63	6:46	P	HAIR LOSS DORSAL NECK
				63	6:46	P	HAIR LOSS VENTRAL NECK
				70	7:02	P	HAIR LOSS DORSAL NECK
				84	6:40	P	HAIR LOSS VENTRAL NECK
				90	6:43	P	HAIR LOSS VENTRAL NECK
12736	F	UNTREATED	BODY/INTEG II	14	6:42	P	SCABBING DORSAL NECK
12737	F	UNTREATED	NORMAL	0	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12737	F	UNTREATED	DISPOSITION	90	8:04	P	PRIMARY NECROPSY (WEEK 12)
12737	F	UNTREATED	BODY/INTEGUMENT	14	6:42	P	HAIR LOSS DORSAL NECK
				35	7:07	P	HAIR LOSS DORSAL NECK
				49	9:49	P	HAIR LOSS VENTRAL NECK
				56	6:43	P	HAIR LOSS DORSAL NECK
				56	6:43	P	HAIR LOSS VENTRAL NECK
				63	6:46	P	HAIR LOSS DORSAL NECK
				63	6:47	P	HAIR LOSS VENTRAL NECK
				70	7:03	P	HAIR LOSS DORSAL NECK
				70	7:03	P	HAIR LOSS VENTRAL NECK
				77	6:56	P	HAIR LOSS DORSAL NECK
				77	6:56	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 39

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12737	F	UNTREATED	BODY/INTEGUMENT	84	6:40	P	HAIR LOSS VENTRAL NECK
12748	F	UNTREATED	NORMAL	0	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	6:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12748	F	UNTREATED	DISPOSITION	90	8:04	P	PRIMARY NECROPSY (WEEK 12)
12706	F	0 MG/KG/DAY	NORMAL	0	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12706	F	0 MG/KG/DAY	DISPOSITION	89	8:51	P	PRIMARY NECROPSY (WEEK 12)
12706	F	0 MG/KG/DAY	BODY/INTEGUMENT	63	6:57	P	HAIR LOSS DORSAL NECK
12708	F	0 MG/KG/DAY	NORMAL	0	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12708	F	0 MG/KG/DAY	DISPOSITION	89	8:51	P	PRIMARY NECROPSY (WEEK 12)
12708	F	0 MG/KG/DAY	BODY/INTEGUMENT	21	7:09	P	HAIR LOSS VENTRAL NECK
				28	6:58	P	HAIR LOSS VENTRAL NECK
				63	6:58	P	HAIR LOSS VENTRAL NECK
				84	6:51	P	HAIR LOSS VENTRAL NECK
				89	6:44	P	HAIR LOSS VENTRAL NECK
12708	F	0 MG/KG/DAY	BODY/INTEG II	14	6:54	P	SCABBING DORSAL NECK
				21	7:09	P	SCABBING DORSAL NECK
12711	F	0 MG/KG/DAY	NORMAL	0	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 41

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12711	F	0 MG/KG/DAY	NORMAL	89	6:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12711	F	0 MG/KG/DAY	DISPOSITION	89	8:51	P	PRIMARY NECROPSY (WEEK 12)
12711	F	0 MG/KG/DAY	BODY/INTEGUMENT	63	6:59	P	HAIR LOSS VENTRAL NECK
12711	F	0 MG/KG/DAY	BODY/INTEG II	56	6:55	P	SCABBING VENTRAL NECK
				63	6:59	P	SCABBING DORSAL NECK
				63	6:59	P	SCABBING VENTRAL NECK
12714	F	0 MG/KG/DAY	NORMAL	0	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12714	F	0 MG/KG/DAY	DISPOSITION	89	8:51	P	PRIMARY NECROPSY (WEEK 12)
12714	F	0 MG/KG/DAY	BODY/INTEGUMENT	42	7:21	P	HAIR LOSS DORSAL NECK
				63	7:00	P	HAIR LOSS DORSAL NECK
				63	7:00	P	HAIR LOSS VENTRAL NECK
				70	7:15	P	HAIR LOSS DORSAL NECK
				77	7:08	P	HAIR LOSS DORSAL NECK
				84	6:53	P	HAIR LOSS VENTRAL NECK
				89	6:44	P	HAIR LOSS DORSAL NECK
				89	6:44	P	HAIR LOSS VENTRAL NECK
12714	F	0 MG/KG/DAY	EYES/EARS/NOSE	89	6:45	P	DRIED RED MATERIAL AROUND NOSE
12714	F	0 MG/KG/DAY	BODY/INTEG II	63	7:00	P	SCABBING VENTRAL NECK
12718	F	0 MG/KG/DAY	NORMAL	0	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12718	F	0 MG/KG/DAY	NORMAL	35	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12718	F	0 MG/KG/DAY	DISPOSITION	89	8:51	P	PRIMARY NECROPSY (WEEK 12)
12718	F	0 MG/KG/DAY	BODY/INTEGUMENT	63	7:00	P	HAIR LOSS FORELIMB(S)
12718	F	0 MG/KG/DAY	EYES/EARS/NOSE	49	10:03	P	DRIED RED MATERIAL AROUND NOSE
12718	F	0 MG/KG/DAY	BODY/INTEG II	14	6:56	P	SCABBING DORSAL NECK
12721	F	0 MG/KG/DAY	NORMAL	0	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12721	F	0 MG/KG/DAY	DISPOSITION	90	8:04	P	PRIMARY NECROPSY (WEEK 12)
12721	F	0 MG/KG/DAY	EYES/EARS/NOSE	90	6:45	P	DRIED RED MATERIAL AROUND NOSE
12744	F	0 MG/KG/DAY	NORMAL	0	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 43

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12744	F	0 MG/KG/DAY	NORMAL	21	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12744	F	0 MG/KG/DAY	DISPOSITION	90	8:04	P	PRIMARY NECROPSY (WEEK 12)
12744	F	0 MG/KG/DAY	BODY/INTEGUMENT	63	7:02	P	HAIR LOSS VENTRAL NECK
12744	F	0 MG/KG/DAY	BODY/INTEG II	28	7:02	P	SCABBING DORSAL NECK
				63	7:02	P	SCABBING VENTRAL NECK
12752	F	0 MG/KG/DAY	NORMAL	0	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12752	F	0 MG/KG/DAY	DISPOSITION	90	8:04	P	PRIMARY NECROPSY (WEEK 12)
12752	F	0 MG/KG/DAY	BODY/INTEGUMENT	14	6:59	P	HAIR LOSS DORSAL NECK
				14	6:59	P	HAIR LOSS FACIAL AREA
				21	7:14	P	HAIR LOSS DORSAL TRUNK
				63	7:03	P	HAIR LOSS DORSAL NECK
				63	7:03	P	HAIR LOSS VENTRAL NECK
				70	7:17	P	HAIR LOSS DORSAL NECK
				84	6:55	P	HAIR LOSS DORSAL NECK
				84	6:55	P	HAIR LOSS VENTRAL NECK
12752	F	0 MG/KG/DAY	BODY/INTEG II	28	7:03	P	SCABBING DORSAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12752	F	0 MG/KG/DAY	BODY/INTEG II	49	10:05	P	SCABBING VENTRAL NECK
				49	10:05	P	SCABBING DORSAL TRUNK
				56	6:59	P	SCABBING VENTRAL NECK
12757	F	0 MG/KG/DAY	NORMAL	0	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12757	F	0 MG/KG/DAY	DISPOSITION	90	8:04	P	PRIMARY NECROPSY (WEEK 12)
12757	F	0 MG/KG/DAY	BODY/INTEGUMENT	7	7:11	P	HAIR LOSS FORELIMB(S)
				14	7:00	P	HAIR LOSS DORSAL NECK
				14	7:00	P	HAIR LOSS FORELIMB(S)
				21	7:15	P	HAIR LOSS FORELIMB(S)
				21	7:15	P	HAIR LOSS VENTRAL NECK
				21	7:15	P	HAIR LOSS HINDLIMB(S)
				28	7:04	P	HAIR LOSS FORELIMB(S)
				28	7:04	P	HAIR LOSS HINDLIMB(S)
				28	7:04	P	HAIR LOSS VENTRAL NECK
				35	7:32	P	HAIR LOSS FORELIMB(S)
				35	7:32	P	HAIR LOSS HINDLIMB(S)
				49	10:06	P	HAIR LOSS FORELIMB(S)
				56	7:00	P	HAIR LOSS FORELIMB(S)
				56	7:00	P	HAIR LOSS HINDLIMB(S)
				56	7:00	P	HAIR LOSS VENTRAL NECK
				63	7:04	P	HAIR LOSS FORELIMB(S)
				63	7:04	P	HAIR LOSS VENTRAL NECK
				70	7:18	P	HAIR LOSS FORELIMB(S)
				77	7:12	P	HAIR LOSS FORELIMB(S)
				77	7:12	P	HAIR LOSS VENTRAL NECK
				84	6:56	P	HAIR LOSS VENTRAL NECK
				84	6:56	P	HAIR LOSS FORELIMB(S)
				90	6:46	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12757	F	0 MG/KG/DAY	BODY/INTEGUMENT	90	6:46	P	HAIR LOSS FORELIMB(S)
				90	6:46	P	HAIR LOSS HINDLIMB(S)
12757	F	0 MG/KG/DAY	BODY/INTEG II	14	6:59	P	SCABBING DORSAL NECK
				63	7:04	P	SCABBING VENTRAL NECK
12758	F	0 MG/KG/DAY	NORMAL	0	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12758	F	0 MG/KG/DAY	DISPOSITION	90	8:04	P	PRIMARY NECROPSY (WEEK 12)
12758	F	0 MG/KG/DAY	BODY/INTEGUMENT	21	7:16	P	HAIR LOSS FORELIMB(S)
				28	7:05	P	HAIR LOSS FORELIMB(S)
				28	7:05	P	HAIR LOSS VENTRAL NECK
				49	10:07	P	HAIR LOSS FORELIMB(S)
				56	7:01	P	HAIR LOSS DORSAL NECK
				56	7:01	P	HAIR LOSS VENTRAL NECK
				56	7:01	P	HAIR LOSS FORELIMB(S)
				63	7:04	P	HAIR LOSS FORELIMB(S)
				63	7:04	P	HAIR LOSS VENTRAL NECK
				70	7:19	P	HAIR LOSS FORELIMB(S)
				77	7:13	P	HAIR LOSS FORELIMB(S)
				84	6:57	P	HAIR LOSS FORELIMB(S)
				84	6:57	P	HAIR LOSS VENTRAL NECK
				90	6:46	P	HAIR LOSS FORELIMB(S)
12758	F	0 MG/KG/DAY	EYES/EARS/NOSE	90	6:46	P	DRIED RED MATERIAL AROUND NOSE
12758	F	0 MG/KG/DAY	BODY/INTEG II	21	7:16	P	SCABBING FORELIMB(S)
				28	7:05	P	SCABBING DORSAL NECK
				56	7:01	P	SCABBING DORSAL NECK
				56	7:01	P	SCABBING VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12707	F	100 MG/KG/DAY	NORMAL	0	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12707	F	100 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12707	F	100 MG/KG/DAY	BODY/INTEGUMENT	14	7:11	P	HAIR LOSS FACIAL AREA
				63	7:15	P	HAIR LOSS VENTRAL NECK
12707	F	100 MG/KG/DAY	EYES/EARS/NOSE	89	6:47	P	DRIED RED MATERIAL AROUND NOSE
12715	F	100 MG/KG/DAY	NORMAL	0	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12715	F	100 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 47

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12715	F	100 MG/KG/DAY	BODY/INTEGUMENT	63	7:16	P	HAIR LOSS VENTRAL NECK
12722	F	100 MG/KG/DAY	NORMAL	0	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12722	F	100 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12722	F	100 MG/KG/DAY	BODY/INTEGUMENT	63	7:17	P	HAIR LOSS DORSAL NECK
				63	7:17	P	HAIR LOSS VENTRAL NECK
12722	F	100 MG/KG/DAY	EYES/EARS/NOSE	7	7:21	P	DRIED RED MATERIAL AROUND NOSE
				14	7:13	P	DRIED RED MATERIAL AROUND NOSE
12738	F	100 MG/KG/DAY	NORMAL	0	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12738	F	100 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 48

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12738	F	100 MG/KG/DAY	BODY/INTEGUMENT	56	7:12	P	HAIR LOSS FORELIMB(S)
				63	7:17	P	HAIR LOSS DORSAL NECK
				63	7:17	P	HAIR LOSS VENTRAL NECK
12738	F	100 MG/KG/DAY	EYES/EARS/NOSE	7	7:21	P	DRIED RED MATERIAL AROUND NOSE
12740	F	100 MG/KG/DAY	NORMAL	0	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12740	F	100 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12740	F	100 MG/KG/DAY	BODY/INTEGUMENT	84	7:10	P	HAIR LOSS FORELIMB(S)
12743	F	100 MG/KG/DAY	NORMAL	0	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12743	F	100 MG/KG/DAY	NORMAL	70	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12743	F	100 MG/KG/DAY	DISPOSITION	90	8:05	P	PRIMARY NECROPSY (WEEK 12)
12743	F	100 MG/KG/DAY	EYES/EARS/NOSE	90	6:49	P	DRIED RED MATERIAL AROUND NOSE
12746	F	100 MG/KG/DAY	NORMAL	0	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12746	F	100 MG/KG/DAY	DISPOSITION	90	8:05	P	PRIMARY NECROPSY (WEEK 12)
12753	F	100 MG/KG/DAY	NORMAL	0	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12753	F	100 MG/KG/DAY	NORMAL	63	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12753	F	100 MG/KG/DAY	DISPOSITION	90	8:05	P	PRIMARY NECROPSY (WEEK 12)
12753	F	100 MG/KG/DAY	BODY/INTEG II	84	7:12	P	SCABBING VENTRAL NECK
12754	F	100 MG/KG/DAY	NORMAL	0	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12754	F	100 MG/KG/DAY	DISPOSITION	90	8:05	P	PRIMARY NECROPSY (WEEK 12)
12754	F	100 MG/KG/DAY	BODY/INTEGUMENT	7	7:24	P	HAIR LOSS FORELIMB(S)
				28	7:25	P	HAIR LOSS FORELIMB(S)
				35	7:51	P	HAIR LOSS FORELIMB(S)
				49	10:24	P	HAIR LOSS FORELIMB(S)
				56	7:15	P	HAIR LOSS FORELIMB(S)
				63	7:21	P	HAIR LOSS FORELIMB(S)
				70	7:34	P	HAIR LOSS FORELIMB(S)
				77	7:27	P	HAIR LOSS FORELIMB(S)
				84	7:13	P	HAIR LOSS FORELIMB(S)
				84	7:13	P	HAIR LOSS VENTRAL NECK
				90	6:49	P	HAIR LOSS FORELIMB(S)
12759	F	100 MG/KG/DAY	NORMAL	0	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12759	F	100 MG/KG/DAY	NORMAL	56	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12759	F	100 MG/KG/DAY	DISPOSITION	90	8:05	P	PRIMARY NECROPSY (WEEK 12)
12759	F	100 MG/KG/DAY	BODY/INTEGUMENT	28	7:26	P	HAIR LOSS DORSAL NECK
				63	7:22	P	HAIR LOSS DORSAL NECK
				63	7:22	P	HAIR LOSS VENTRAL NECK
				84	7:14	P	HAIR LOSS DORSAL NECK
				84	7:14	P	HAIR LOSS VENTRAL NECK
12709	F	450 MG/KG/DAY	NORMAL	0	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12709	F	450 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12709	F	450 MG/KG/DAY	BODY/INTEGUMENT	56	7:25	P	HAIR LOSS FORELIMB(S)
12719	F	450 MG/KG/DAY	NORMAL	0	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12719	F	450 MG/KG/DAY	NORMAL	28	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12719	F	450 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12719	F	450 MG/KG/DAY	BODY/INTEGUMENT	63	7:31	P	HAIR LOSS VENTRAL NECK
12719	F	450 MG/KG/DAY	BODY/INTEG II	56	7:26	P	SCABBING LEFT EAR
				56	7:26	P	SCABBING RIGHT EAR
12726	F	450 MG/KG/DAY	NORMAL	0	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12726	F	450 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12726	F	450 MG/KG/DAY	BODY/INTEGUMENT	7	7:34	P	HAIR LOSS FACIAL AREA
				63	7:32	P	HAIR LOSS DORSAL NECK
				63	7:32	P	HAIR LOSS VENTRAL NECK
12727	F	450 MG/KG/DAY	NORMAL	0	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12727	F	450 MG/KG/DAY	NORMAL	14	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12727	F	450 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12727	F	450 MG/KG/DAY	EYES/EARS/NOSE	7	7:35	P	DRIED RED MATERIAL AROUND NOSE
				89	6:51	P	DRIED RED MATERIAL AROUND NOSE
12728	F	450 MG/KG/DAY	NORMAL	0	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12728	F	450 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12728	F	450 MG/KG/DAY	BODY/INTEGUMENT	63	7:34	P	HAIR LOSS DORSAL NECK
				63	7:34	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12728	F	450 MG/KG/DAY	BODY/INTEGUMENT	70	7:45	P	HAIR LOSS DORSAL NECK
12732	F	450 MG/KG/DAY	NORMAL	0	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12732	F	450 MG/KG/DAY	DISPOSITION	90	8:06	P	PRIMARY NECROPSY (WEEK 12)
12732	F	450 MG/KG/DAY	BODY/INTEGUMENT	14	7:31	P	HAIR LOSS FACIAL AREA
				63	7:35	P	HAIR LOSS FACIAL AREA
				84	7:27	P	HAIR LOSS FACIAL AREA
12732	F	450 MG/KG/DAY	BODY/INTEG II	28	7:39	P	SCABBING FACIAL AREA
12735	F	450 MG/KG/DAY	NORMAL	0	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12735	F	450 MG/KG/DAY	DISPOSITION	90	8:06	P	PRIMARY NECROPSY (WEEK 12)
12735	F	450 MG/KG/DAY	EYES/EARS/NOSE	7	7:36	P	DRIED RED MATERIAL AROUND NOSE
12747	F	450 MG/KG/DAY	NORMAL	0	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12747	F	450 MG/KG/DAY	DISPOSITION	90	8:06	P	PRIMARY NECROPSY (WEEK 12)
12747	F	450 MG/KG/DAY	BODY/INTEGUMENT	63	7:36	P	HAIR LOSS DORSAL NECK
				63	7:36	P	HAIR LOSS VENTRAL NECK
				70	7:47	P	HAIR LOSS DORSAL NECK
				84	7:29	P	HAIR LOSS VENTRAL NECK
12747	F	450 MG/KG/DAY	EYES/EARS/NOSE	35	8:07	P	DRIED RED MATERIAL AROUND NOSE
				90	6:52	P	DRIED RED MATERIAL AROUND NOSE
12760	F	450 MG/KG/DAY	NORMAL	0	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12760	F	450 MG/KG/DAY	DISPOSITION	90	8:06	P	PRIMARY NECROPSY (WEEK 12)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12760	F	450 MG/KG/DAY	BODY/INTEGUMENT	49	10:40	P	HAIR LOSS FORELIMB(S)
				63	7:37	P	HAIR LOSS VENTRAL NECK
12760	F	450 MG/KG/DAY	EYES/EARS/NOSE	90	6:52	P	DRIED RED MATERIAL AROUND NOSE
12760	F	450 MG/KG/DAY	BODY/INTEG II	7	7:37	P	SCABBING DORSAL TRUNK
12763	F	450 MG/KG/DAY	NORMAL	0	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12763	F	450 MG/KG/DAY	DISPOSITION	90	8:06	P	PRIMARY NECROPSY (WEEK 12)
12763	F	450 MG/KG/DAY	BODY/INTEGUMENT	70	7:48	P	HAIR LOSS DORSAL NECK
				84	7:30	P	HAIR LOSS VENTRAL NECK
				90	6:52	P	HAIR LOSS DORSAL NECK
				90	6:52	P	HAIR LOSS VENTRAL NECK
12720	F	750 MG/KG/DAY	NORMAL	0	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:54	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12720	F	750 MG/KG/DAY	NORMAL	70	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12720	F	750 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12720	F	750 MG/KG/DAY	BODY/INTEGUMENT	63	7:46	P	HAIR LOSS VENTRAL NECK
				84	7:40	P	HAIR LOSS DORSAL NECK
				84	7:40	P	HAIR LOSS VENTRAL NECK
				89	6:54	P	HAIR LOSS VENTRAL NECK
12723	F	750 MG/KG/DAY	NORMAL	0	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12723	F	750 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12731	F	750 MG/KG/DAY	NORMAL	0	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12731	F	750 MG/KG/DAY	NORMAL	63	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12731	F	750 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12731	F	750 MG/KG/DAY	EYES/EARS/NOSE	89	6:55	P	DRIED RED MATERIAL AROUND NOSE
12731	F	750 MG/KG/DAY	EXCRETA	42	8:18	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12731	F	750 MG/KG/DAY	ORAL/DENTAL	56	7:41	P	UPPER INCISOR(S) BROKEN
12739	F	750 MG/KG/DAY	NORMAL	0	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12739	F	750 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12739	F	750 MG/KG/DAY	BODY/INTEGUMENT	14	7:44	P	HAIR LOSS DORSAL NECK
				28	7:54	P	HAIR LOSS VENTRAL NECK
				63	7:49	P	HAIR LOSS DORSAL NECK
				63	7:49	P	HAIR LOSS VENTRAL NECK
				70	8:00	P	HAIR LOSS DORSAL NECK
				84	7:42	P	HAIR LOSS DORSAL NECK
				84	7:42	P	HAIR LOSS VENTRAL NECK
				89	6:55	P	HAIR LOSS VENTRAL NECK
12739	F	750 MG/KG/DAY	EYES/EARS/NOSE	7	7:46	P	DRIED RED MATERIAL AROUND RIGHT EYE
12742	F	750 MG/KG/DAY	NORMAL	0	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12742	F	750 MG/KG/DAY	NORMAL	28	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12742	F	750 MG/KG/DAY	DISPOSITION	89	8:52	P	PRIMARY NECROPSY (WEEK 12)
12742	F	750 MG/KG/DAY	BODY/INTEGUMENT	63	7:49	P	HAIR LOSS VENTRAL NECK
				70	8:00	P	HAIR LOSS DORSAL NECK
				84	7:42	P	HAIR LOSS VENTRAL NECK
				84	7:43	P	HAIR LOSS FORELIMB(S)
				89	6:55	P	HAIR LOSS DORSAL NECK
				89	6:55	P	HAIR LOSS VENTRAL NECK
12749	F	750 MG/KG/DAY	NORMAL	0	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12749	F	750 MG/KG/DAY	DISPOSITION	90	8:06	P	PRIMARY NECROPSY (WEEK 12)
12749	F	750 MG/KG/DAY	BODY/INTEGUMENT	49	10:57	P	HAIR LOSS FORELIMB(S)
				63	7:50	P	HAIR LOSS DORSAL NECK
				63	7:50	P	HAIR LOSS VENTRAL NECK
				70	8:01	P	HAIR LOSS FORELIMB(S)
				77	7:52	P	HAIR LOSS FORELIMB(S)
				77	7:52	P	HAIR LOSS VENTRAL NECK
				84	7:43	P	HAIR LOSS FORELIMB(S)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12749	F	750 MG/KG/DAY	BODY/INTEGUMENT	84	7:43	P	HAIR LOSS DORSAL NECK
				84	7:43	P	HAIR LOSS VENTRAL NECK
				90	6:54	P	HAIR LOSS FORELIMB(S)
12750	F	750 MG/KG/DAY	NORMAL	0	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12750	F	750 MG/KG/DAY	DISPOSITION	90	8:06	P	PRIMARY NECROPSY (WEEK 12)
12750	F	750 MG/KG/DAY	BODY/INTEGUMENT	14	7:46	P	HAIR LOSS FACIAL AREA
				63	7:51	P	HAIR LOSS DORSAL NECK
				63	7:51	P	HAIR LOSS VENTRAL NECK
				70	8:02	P	HAIR LOSS DORSAL NECK
				84	7:44	P	HAIR LOSS VENTRAL NECK
12755	F	750 MG/KG/DAY	NORMAL	0	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12755	F	750 MG/KG/DAY	DISPOSITION	90	8:06	P	PRIMARY NECROPSY (WEEK 12)
12755	F	750 MG/KG/DAY	BODY/INTEGUMENT	49	10:58	P	HAIR LOSS FORELIMB(S)
				63	7:52	P	HAIR LOSS DORSAL NECK
				63	7:52	P	HAIR LOSS VENTRAL NECK

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12755	F	750 MG/KG/DAY	BODY/INTEGUMENT	70	8:02	P	HAIR LOSS FORELIMB(S)
				70	8:02	P	HAIR LOSS DORSAL NECK
				84	7:45	P	HAIR LOSS FORELIMB(S)
				84	7:45	P	HAIR LOSS DORSAL NECK
				84	7:45	P	HAIR LOSS VENTRAL NECK
				90	6:54	P	HAIR LOSS FORELIMB(S)
				90	6:54	P	HAIR LOSS DORSAL NECK
				90	6:54	P	HAIR LOSS VENTRAL NECK
12755	F	750 MG/KG/DAY	EYES/EARS/NOSE	7	7:50	P	DRIED RED MATERIAL AROUND NOSE
				90	6:55	P	DRIED RED MATERIAL AROUND RIGHT EYE
12755	F	750 MG/KG/DAY	EXCRETA	84	7:46	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12755	F	750 MG/KG/DAY	BODY/INTEG II	56	7:45	P	SCABBING DORSAL RUMP
				56	7:45	P	SCABBING LEFT EAR
				56	7:45	P	SCABBING RIGHT EAR
				63	7:52	P	SCABBING BASE OF TAIL
				77	7:53	P	SCABBING LEFT EAR
				77	7:57	P	SCABBING HINDLIMB(S)
				77	7:57	P	SCABBING BASE OF TAIL
				84	7:45	P	SCABBING DORSAL NECK
				84	7:45	P	SCABBING FORELIMB(S)
				84	7:46	P	SCABBING HINDLIMB(S)
				84	7:46	P	SCABBING BASE OF TAIL
				90	6:54	P	SCABBING FORELIMB(S)
				90	6:55	P	SCABBING LEFT EAR
				90	6:55	P	SCABBING RIGHT EAR
				90	6:55	P	SCABBING BASE OF TAIL
				90	6:55	P	SCABBING HINDLIMB(S)
12761	F	750 MG/KG/DAY	NORMAL	0	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12761	F	750 MG/KG/DAY	NORMAL	14	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12761	F	750 MG/KG/DAY	DISPOSITION	90	8:06	P	PRIMARY NECROPSY (WEEK 12)
12761	F	750 MG/KG/DAY	BODY/INTEGUMENT	49	10:59	P	HAIR LOSS FORELIMB(S)
				63	7:53	P	HAIR LOSS VENTRAL NECK
				70	8:03	P	HAIR LOSS DORSAL NECK
				90	6:55	P	HAIR LOSS VENTRAL NECK
12764	F	750 MG/KG/DAY	NORMAL	0	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12764	F	750 MG/KG/DAY	DISPOSITION	90	8:07	P	PRIMARY NECROPSY (WEEK 12)
12764	F	750 MG/KG/DAY	BODY/INTEGUMENT	21	8:02	P	HAIR LOSS FORELIMB(S)
				42	8:23	P	HAIR LOSS VENTRAL NECK
				49	10:59	P	HAIR LOSS FORELIMB(S)
				49	10:59	P	HAIR LOSS VENTRAL TRUNK
				56	7:47	P	HAIR LOSS FORELIMB(S)
				56	7:47	P	HAIR LOSS DORSAL NECK
				56	7:47	P	HAIR LOSS VENTRAL NECK
				63	7:54	P	HAIR LOSS DORSAL NECK
				63	7:54	P	HAIR LOSS VENTRAL NECK
				63	7:54	P	HAIR LOSS FORELIMB(S)
				70	8:04	P	HAIR LOSS FORELIMB(S)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A2 (DETAILED PHYSICAL EXAMINATIONS/DISPOSITIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12764	F	750 MG/KG/DAY	BODY/INTEGUMENT	70	8:04	P	HAIR LOSS DORSAL NECK
				77	7:55	P	HAIR LOSS DORSAL NECK
				77	7:55	P	HAIR LOSS VENTRAL NECK
				77	7:56	P	HAIR LOSS FORELIMB(S)
				84	7:47	P	HAIR LOSS FORELIMB(S)
				84	7:47	P	HAIR LOSS DORSAL NECK
				84	7:47	P	HAIR LOSS VENTRAL NECK
				90	6:55	P	HAIR LOSS FORELIMB(S)
				90	6:55	P	HAIR LOSS DORSAL NECK
				90	6:55	P	HAIR LOSS VENTRAL NECK
				90	6:56	P	MOIST ALOPECIA BASE OF TAIL
12764	F	750 MG/KG/DAY	EYES/EARS/NOSE	7	7:51	P	DRIED RED MATERIAL AROUND NOSE
12764	F	750 MG/KG/DAY	EXCRETA	63	7:54	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				84	7:48	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12764	F	750 MG/KG/DAY	BODY/INTEG II	70	8:04	P	SCABBING DORSAL NECK
				77	7:56	P	SCABBING DORSAL RUMP
				77	7:56	P	SCABBING LEFT EAR
				84	7:48	P	SCABBING DORSAL NECK
				84	7:48	P	SCABBING FORELIMB(S)

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 1

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12649	M	UNTREATED	NORMAL	0	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 2

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12649	M	UNTREATED	NORMAL	18	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 3

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12649	M	UNTREATED	NORMAL	39	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12649	M	UNTREATED	NORMAL	59	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12649	M	UNTREATED	NORMAL	80	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12654	M	UNTREATED	NORMAL	0	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12654	M	UNTREATED	NORMAL	9	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12654	M	UNTREATED	NORMAL	30	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12654	M	UNTREATED	NORMAL	50	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12654	M	UNTREATED	NORMAL	71	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12660	M	UNTREATED	NORMAL	0	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12660	M	UNTREATED	NORMAL	0	12:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12660	M	UNTREATED	NORMAL	21	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12660	M	UNTREATED	NORMAL	39	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12660	M	UNTREATED	NORMAL	60	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12660	M	UNTREATED	NORMAL	80	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12668	M	UNTREATED	NORMAL	0	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12668	M	UNTREATED	NORMAL	10	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12668	M	UNTREATED	NORMAL	30	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12668	M	UNTREATED	NORMAL	51	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12668	M	UNTREATED	NORMAL	71	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12684	M	UNTREATED	NORMAL	0	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:27	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)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12684	M	UNTREATED	NORMAL	1	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 20

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12684	M	UNTREATED	NORMAL	21	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 21

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12684	M	UNTREATED	NORMAL	42	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12684	M	UNTREATED	NORMAL	60	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 23

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12684	M	UNTREATED	NORMAL	81	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12686	M	UNTREATED	NORMAL	0	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

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PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 24

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12686	M	UNTREATED	NORMAL	10	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 25

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12686	M	UNTREATED	NORMAL	31	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 26

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12686	M	UNTREATED	NORMAL	51	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
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TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 27

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12686	M	UNTREATED	NORMAL	72	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12691	M	UNTREATED	NORMAL	0	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
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TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12691	M	UNTREATED	NORMAL	1	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
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TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 29

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12691	M	UNTREATED	NORMAL	22	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12691	M	UNTREATED	NORMAL	42	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12691	M	UNTREATED	NORMAL	63	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12691	M	UNTREATED	NORMAL	81	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12694	M	UNTREATED	NORMAL	0	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12694	M	UNTREATED	NORMAL	11	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12694	M	UNTREATED	NORMAL	31	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12694	M	UNTREATED	NORMAL	52	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12694	M	UNTREATED	NORMAL	72	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12701	M	UNTREATED	NORMAL	0	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12701	M	UNTREATED	NORMAL	2	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12701	M	UNTREATED	NORMAL	22	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12701	M	UNTREATED	NORMAL	43	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12701	M	UNTREATED	NORMAL	63	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12701	M	UNTREATED	NORMAL	85	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12703	M	UNTREATED	NORMAL	0	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12703	M	UNTREATED	NORMAL	11	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12703	M	UNTREATED	NORMAL	32	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12703	M	UNTREATED	NORMAL	52	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12703	M	UNTREATED	NORMAL	73	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12648	M	0 MG/KG/DAY	NORMAL	0	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12648	M	0 MG/KG/DAY	NORMAL	2	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12648	M	0 MG/KG/DAY	NORMAL	23	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12648	M	0 MG/KG/DAY	NORMAL	43	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12648	M	0 MG/KG/DAY	NORMAL	64	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12648	M	0 MG/KG/DAY	NORMAL	84	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12650	M	0 MG/KG/DAY	NORMAL	0	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12650	M	0 MG/KG/DAY	NORMAL	14	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12650	M	0 MG/KG/DAY	NORMAL	32	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12650	M	0 MG/KG/DAY	NORMAL	53	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12650	M	0 MG/KG/DAY	NORMAL	73	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12661	M	0 MG/KG/DAY	NORMAL	0	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12661	M	0 MG/KG/DAY	NORMAL	3	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12661	M	0 MG/KG/DAY	NORMAL	23	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12661	M	0 MG/KG/DAY	NORMAL	44	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12661	M	0 MG/KG/DAY	NORMAL	64	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12661	M	0 MG/KG/DAY	NORMAL	85	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12675	M	0 MG/KG/DAY	NORMAL	0	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12675	M	0 MG/KG/DAY	NORMAL	14	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12675	M	0 MG/KG/DAY	NORMAL	35	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12675	M	0 MG/KG/DAY	NORMAL	53	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12675	M	0 MG/KG/DAY	NORMAL	74	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12676	M	0 MG/KG/DAY	NORMAL	0	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12676	M	0 MG/KG/DAY	NORMAL	3	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12676	M	0 MG/KG/DAY	NORMAL	24	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12676	M	0 MG/KG/DAY	NORMAL	44	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12676	M	0 MG/KG/DAY	NORMAL	65	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12676	M	0 MG/KG/DAY	NORMAL	85	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12679	M	0 MG/KG/DAY	NORMAL	0	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12679	M	0 MG/KG/DAY	NORMAL	15	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12679	M	0 MG/KG/DAY	NORMAL	35	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12679	M	0 MG/KG/DAY	NORMAL	56	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12679	M	0 MG/KG/DAY	NORMAL	74	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12683	M	0 MG/KG/DAY	NORMAL	0	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12683	M	0 MG/KG/DAY	NORMAL	4	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12683	M	0 MG/KG/DAY	NORMAL	24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12683	M	0 MG/KG/DAY	NORMAL	45	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12683	M	0 MG/KG/DAY	NORMAL	65	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12683	M	0 MG/KG/DAY	NORMAL	87	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12693	M	0 MG/KG/DAY	NORMAL	0	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 78

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12693	M	0 MG/KG/DAY	NORMAL	15	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12693	M	0 MG/KG/DAY	NORMAL	36	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12693	M	0 MG/KG/DAY	NORMAL	56	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12693	M	0 MG/KG/DAY	NORMAL	77	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12697	M	0 MG/KG/DAY	NORMAL	0	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12697	M	0 MG/KG/DAY	NORMAL	4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12697	M	0 MG/KG/DAY	NORMAL	25	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12697	M	0 MG/KG/DAY	NORMAL	45	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12697	M	0 MG/KG/DAY	NORMAL	66	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12697	M	0 MG/KG/DAY	NORMAL	87	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12700	M	0 MG/KG/DAY	NORMAL	0	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 87

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12700	M	0 MG/KG/DAY	NORMAL	16	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12700	M	0 MG/KG/DAY	NORMAL	37	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12700	M	0 MG/KG/DAY	NORMAL	57	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12700	M	0 MG/KG/DAY	NORMAL	78	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12700	M	0 MG/KG/DAY	SPECIAL	8	10:44	P	SWOLLEN FACIAL AREA
12646	M	100 MG/KG/DAY	NORMAL	0	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12646	M	100 MG/KG/DAY	NORMAL	7	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12646	M	100 MG/KG/DAY	NORMAL	25	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12646	M	100 MG/KG/DAY	NORMAL	46	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12646	M	100 MG/KG/DAY	NORMAL	66	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12646	M	100 MG/KG/DAY	NORMAL	87	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12655	M	100 MG/KG/DAY	NORMAL	0	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12655	M	100 MG/KG/DAY	NORMAL	17	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12655	M	100 MG/KG/DAY	NORMAL	37	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12655	M	100 MG/KG/DAY	NORMAL	58	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12655	M	100 MG/KG/DAY	NORMAL	78	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12655	M	100 MG/KG/DAY	SPECIAL	8	8:37	P	SWOLLEN FACIAL AREA
12656	M	100 MG/KG/DAY	NORMAL	0	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12656	M	100 MG/KG/DAY	NORMAL	7	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:28	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12656	M	100 MG/KG/DAY	NORMAL	28	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12656	M	100 MG/KG/DAY	NORMAL	46	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12656	M	100 MG/KG/DAY	NORMAL	67	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
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TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12656	M	100 MG/KG/DAY	NORMAL	87	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12659	M	100 MG/KG/DAY	NORMAL	0	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12659	M	100 MG/KG/DAY	NORMAL	18	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12659	M	100 MG/KG/DAY	NORMAL	38	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12659	M	100 MG/KG/DAY	NORMAL	59	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12659	M	100 MG/KG/DAY	NORMAL	80	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12659	M	100 MG/KG/DAY	SPECIAL	8	8:38	P	SWOLLEN FACIAL AREA
				8	10:46	P	SWOLLEN FACIAL AREA
				79	8:22	P	SWOLLEN FACIAL AREA
12662	M	100 MG/KG/DAY	NORMAL	0	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12662	M	100 MG/KG/DAY	NORMAL	8	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12662	M	100 MG/KG/DAY	NORMAL	28	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12662	M	100 MG/KG/DAY	NORMAL	49	13:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12662	M	100 MG/KG/DAY	NORMAL	67	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:29	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12662	M	100 MG/KG/DAY	NORMAL	88	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12664	M	100 MG/KG/DAY	NORMAL	0	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12664	M	100 MG/KG/DAY	NORMAL	18	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12664	M	100 MG/KG/DAY	NORMAL	38	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12664	M	100 MG/KG/DAY	NORMAL	59	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12664	M	100 MG/KG/DAY	NORMAL	79	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12664	M	100 MG/KG/DAY	EYES/EARS/NOSE	7	10:17	P	DRIED RED MATERIAL AROUND NOSE
12670	M	100 MG/KG/DAY	NORMAL	0	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12670	M	100 MG/KG/DAY	NORMAL	8	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 119

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12670	M	100 MG/KG/DAY	NORMAL	29	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12670	M	100 MG/KG/DAY	NORMAL	49	16:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:27	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 121

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12670	M	100 MG/KG/DAY	NORMAL	70	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 122

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12670	M	100 MG/KG/DAY	NORMAL	89	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12682	M	100 MG/KG/DAY	NORMAL	0	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12682	M	100 MG/KG/DAY	NORMAL	18	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12682	M	100 MG/KG/DAY	NORMAL	38	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12682	M	100 MG/KG/DAY	NORMAL	59	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12682	M	100 MG/KG/DAY	NORMAL	79	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12688	M	100 MG/KG/DAY	NORMAL	0	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12688	M	100 MG/KG/DAY	NORMAL	9	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12688	M	100 MG/KG/DAY	NORMAL	29	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12688	M	100 MG/KG/DAY	NORMAL	50	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 130

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12688	M	100 MG/KG/DAY	NORMAL	70	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12695	M	100 MG/KG/DAY	NORMAL	0	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 132

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12695	M	100 MG/KG/DAY	NORMAL	18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12695	M	100 MG/KG/DAY	NORMAL	39	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:01	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 134

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12695	M	100 MG/KG/DAY	NORMAL	59	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 135

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12695	M	100 MG/KG/DAY	NORMAL	80	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12645	M	450 MG/KG/DAY	NORMAL	0	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12645	M	450 MG/KG/DAY	NORMAL	9	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12645	M	450 MG/KG/DAY	NORMAL	31	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 138

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12645	M	450 MG/KG/DAY	NORMAL	51	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:48	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12645	M	450 MG/KG/DAY	NORMAL	72	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12645	M	450 MG/KG/DAY	BEHAVIOR/CNS	22	14:26	P	PARTIAL CLOSURE RIGHT EYE
12645	M	450 MG/KG/DAY	SPECIAL	22	14:25	P	SWOLLEN FACIAL AREA
				22	14:25	P	REDDENED LEFT EAR

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12645	M	450 MG/KG/DAY	SPECIAL	22	14:25	P	REDDENED RIGHT EAR
				22	14:25	P	REDDENED FACIAL AREA
				23	7:43	P	REDDENED LEFT FORELIMB
				23	7:43	P	REDDENED FACIAL AREA
				23	7:43	P	REDDENED RIGHT FORELIMB
				23	7:43	P	REDDENED LEFT EAR
				23	7:43	P	REDDENED RIGHT EAR
				23	7:44	P	REDDENED LEFT HINDLIMB
				23	7:44	P	REDDENED RIGHT HINDLIMB
				23	9:40	P	REDDENED LEFT EAR
				23	9:40	P	REDDENED RIGHT EAR
				23	9:40	P	REDDENED FACIAL AREA
				23	9:40	P	REDDENED LEFT FORELIMB
				23	9:40	P	REDDENED RIGHT FORELIMB
				23	9:40	P	REDDENED LEFT HINDLIMB
				23	9:40	P	REDDENED RIGHT HINDLIMB
12652	M	450 MG/KG/DAY	NORMAL	0	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12652	M	450 MG/KG/DAY	NORMAL	8	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12652	M	450 MG/KG/DAY	NORMAL	29	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12652	M	450 MG/KG/DAY	NORMAL	49	16:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12652	M	450 MG/KG/DAY	NORMAL	70	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12652	M	450 MG/KG/DAY	NORMAL	88	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12669	M	450 MG/KG/DAY	NORMAL	0	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12669	M	450 MG/KG/DAY	NORMAL	18	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12669	M	450 MG/KG/DAY	NORMAL	39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12669	M	450 MG/KG/DAY	NORMAL	59	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12669	M	450 MG/KG/DAY	NORMAL	80	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12669	M	450 MG/KG/DAY	EYES/EARS/NOSE	7	10:20	P	DRIED RED MATERIAL AROUND NOSE
12671	M	450 MG/KG/DAY	NORMAL	0	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 150

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12671	M	450 MG/KG/DAY	NORMAL	9	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12671	M	450 MG/KG/DAY	NORMAL	29	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12671	M	450 MG/KG/DAY	NORMAL	50	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 153

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12671	M	450 MG/KG/DAY	NORMAL	70	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 154

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12674	M	450 MG/KG/DAY	NORMAL	0	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 155

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12674	M	450 MG/KG/DAY	NORMAL	18	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12674	M	450 MG/KG/DAY	NORMAL	39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12674	M	450 MG/KG/DAY	NORMAL	59	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12674	M	450 MG/KG/DAY	NORMAL	80	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12677	M	450 MG/KG/DAY	NORMAL	0	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 159

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12677	M	450 MG/KG/DAY	NORMAL	9	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 160

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12677	M	450 MG/KG/DAY	NORMAL	30	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 161

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12677	M	450 MG/KG/DAY	NORMAL	50	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12677	M	450 MG/KG/DAY	NORMAL	71	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12685	M	450 MG/KG/DAY	NORMAL	0	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12685	M	450 MG/KG/DAY	NORMAL	0	13:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12685	M	450 MG/KG/DAY	NORMAL	21	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12685	M	450 MG/KG/DAY	NORMAL	39	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

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TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12685	M	450 MG/KG/DAY	NORMAL	60	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12685	M	450 MG/KG/DAY	NORMAL	80	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12690	M	450 MG/KG/DAY	NORMAL	0	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12690	M	450 MG/KG/DAY	NORMAL	10	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:21	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)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12690	M	450 MG/KG/DAY	NORMAL	30	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
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TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12690	M	450 MG/KG/DAY	NORMAL	51	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12690	M	450 MG/KG/DAY	NORMAL	71	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12692	M	450 MG/KG/DAY	NORMAL	0	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12692	M	450 MG/KG/DAY	NORMAL	1	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12692	M	450 MG/KG/DAY	NORMAL	21	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12692	M	450 MG/KG/DAY	NORMAL	42	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12692	M	450 MG/KG/DAY	NORMAL	60	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12692	M	450 MG/KG/DAY	NORMAL	81	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12699	M	450 MG/KG/DAY	NORMAL	0	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12699	M	450 MG/KG/DAY	NORMAL	10	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12699	M	450 MG/KG/DAY	NORMAL	31	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12699	M	450 MG/KG/DAY	NORMAL	51	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12658	M	750 MG/KG/DAY	NORMAL	0	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12658	M	750 MG/KG/DAY	NORMAL	2	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12658	M	750 MG/KG/DAY	NORMAL	22	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12658	M	750 MG/KG/DAY	NORMAL	43	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12658	M	750 MG/KG/DAY	BEHAVIOR/CNS	49	14:03	P	IMPAIRED USE OF LEFT HINDLIMB
				49	16:43	P	IMPAIRED USE OF LEFT HINDLIMB
				50	7:51	P	IMPAIRED USE OF LEFT HINDLIMB
				50	9:43	P	IMPAIRED USE OF LEFT HINDLIMB
12666	M	750 MG/KG/DAY	NORMAL	0	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12666	M	750 MG/KG/DAY	NORMAL	11	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12666	M	750 MG/KG/DAY	NORMAL	31	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 185

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12666	M	750 MG/KG/DAY	NORMAL	52	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12666	M	750 MG/KG/DAY	NORMAL	72	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12666	M	750 MG/KG/DAY	EYES/EARS/NOSE	7	10:22	P	DRIED RED MATERIAL AROUND NOSE
12672	M	750 MG/KG/DAY	NORMAL	0	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 187

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12672	M	750 MG/KG/DAY	NORMAL	1	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:33	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12672	M	750 MG/KG/DAY	NORMAL	22	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12672	M	750 MG/KG/DAY	NORMAL	42	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12672	M	750 MG/KG/DAY	NORMAL	63	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12672	M	750 MG/KG/DAY	NORMAL	81	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12673	M	750 MG/KG/DAY	NORMAL	0	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12673	M	750 MG/KG/DAY	NORMAL	11	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12673	M	750 MG/KG/DAY	NORMAL	31	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12673	M	750 MG/KG/DAY	NORMAL	52	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12673	M	750 MG/KG/DAY	NORMAL	72	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12680	M	750 MG/KG/DAY	NORMAL	0	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12680	M	750 MG/KG/DAY	NORMAL	2	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12680	M	750 MG/KG/DAY	NORMAL	22	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12680	M	750 MG/KG/DAY	NORMAL	43	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12680	M	750 MG/KG/DAY	NORMAL	63	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 200

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12680	M	750 MG/KG/DAY	NORMAL	84	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12680	M	750 MG/KG/DAY	SPECIAL	79	8:29	P	SWOLLEN FACIAL AREA
				79	8:29	P	REDDENED LEFT EAR
				79	8:29	P	REDDENED RIGHT EAR
12681	M	750 MG/KG/DAY	NORMAL	0	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12681	M	750 MG/KG/DAY	NORMAL	10	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12681	M	750 MG/KG/DAY	NORMAL	31	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 203

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12681	M	750 MG/KG/DAY	NORMAL	51	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 204

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12681	M	750 MG/KG/DAY	NORMAL	72	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12687	M	750 MG/KG/DAY	NORMAL	0	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 205

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12687	M	750 MG/KG/DAY	NORMAL	1	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:34	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 206

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12687	M	750 MG/KG/DAY	NORMAL	22	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12687	M	750 MG/KG/DAY	NORMAL	42	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12687	M	750 MG/KG/DAY	NORMAL	63	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12687	M	750 MG/KG/DAY	NORMAL	81	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12689	M	750 MG/KG/DAY	NORMAL	0	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12689	M	750 MG/KG/DAY	NORMAL	11	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12689	M	750 MG/KG/DAY	NORMAL	31	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12689	M	750 MG/KG/DAY	NORMAL	52	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12689	M	750 MG/KG/DAY	NORMAL	72	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12698	M	750 MG/KG/DAY	NORMAL	0	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12698	M	750 MG/KG/DAY	NORMAL	2	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12698	M	750 MG/KG/DAY	NORMAL	22	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12698	M	750 MG/KG/DAY	NORMAL	43	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12698	M	750 MG/KG/DAY	NORMAL	63	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12698	M	750 MG/KG/DAY	NORMAL	85	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12704	M	750 MG/KG/DAY	NORMAL	0	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12704	M	750 MG/KG/DAY	NORMAL	11	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12704	M	750 MG/KG/DAY	NORMAL	32	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12704	M	750 MG/KG/DAY	NORMAL	52	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12704	M	750 MG/KG/DAY	NORMAL	73	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12705	F	UNTREATED	NORMAL	0	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12705	F	UNTREATED	NORMAL	2	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12705	F	UNTREATED	NORMAL	23	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12705	F	UNTREATED	NORMAL	43	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12705	F	UNTREATED	NORMAL	64	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12705	F	UNTREATED	NORMAL	84	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12712	F	UNTREATED	NORMAL	0	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12712	F	UNTREATED	NORMAL	14	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12712	F	UNTREATED	NORMAL	32	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12712	F	UNTREATED	NORMAL	53	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12712	F	UNTREATED	NORMAL	73	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12716	F	UNTREATED	NORMAL	0	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12716	F	UNTREATED	NORMAL	3	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 233

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12716	F	UNTREATED	NORMAL	23	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 234

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12716	F	UNTREATED	NORMAL	44	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:00	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 235

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12716	F	UNTREATED	NORMAL	64	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12716	F	UNTREATED	NORMAL	85	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12724	F	UNTREATED	NORMAL	0	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12724	F	UNTREATED	NORMAL	14	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12724	F	UNTREATED	NORMAL	35	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12724	F	UNTREATED	NORMAL	53	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12724	F	UNTREATED	NORMAL	74	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12730	F	UNTREATED	NORMAL	0	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12730	F	UNTREATED	NORMAL	3	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12730	F	UNTREATED	NORMAL	24	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12730	F	UNTREATED	NORMAL	44	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12730	F	UNTREATED	NORMAL	65	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12730	F	UNTREATED	NORMAL	85	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12733	F	UNTREATED	NORMAL	0	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

FINAL REPORT



Contents: Volume 3 of 4
Appendix K [continued]

Study Title: A 90-Day Repeat-Dose Dermal Toxicity
Study Utilizing Distillates (Petroleum),
Light Catalytic Cracked in Sprague Dawley Rats

Laboratory Project ID: WIL-402024

Author: Angela S. Burke, PhD, DABT

Test Guideline: OPPTS Guideline 870.3250
40 CFR 798.2250
OECD Guideline 411

Study Completion Date: 8 August 2012

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

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

Total Number of Pages: 1295

APPENDIX K

Individual Animal Data (continued)

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12733	F	UNTREATED	NORMAL	15	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12733	F	UNTREATED	NORMAL	35	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12733	F	UNTREATED	NORMAL	56	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12733	F	UNTREATED	NORMAL	74	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12734	F	UNTREATED	NORMAL	0	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12734	F	UNTREATED	NORMAL	4	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12734	F	UNTREATED	NORMAL	24	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12734	F	UNTREATED	NORMAL	45	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 253

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12734	F	UNTREATED	NORMAL	65	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12734	F	UNTREATED	NORMAL	87	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12736	F	UNTREATED	NORMAL	0	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12736	F	UNTREATED	NORMAL	15	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12736	F	UNTREATED	NORMAL	36	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12736	F	UNTREATED	NORMAL	56	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12736	F	UNTREATED	NORMAL	77	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12737	F	UNTREATED	NORMAL	0	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12737	F	UNTREATED	NORMAL	4	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 260

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12737	F	UNTREATED	NORMAL	25	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 261

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12737	F	UNTREATED	NORMAL	45	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12737	F	UNTREATED	NORMAL	66	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12737	F	UNTREATED	NORMAL	87	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12748	F	UNTREATED	NORMAL	0	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12748	F	UNTREATED	NORMAL	16	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12748	F	UNTREATED	NORMAL	36	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12748	F	UNTREATED	NORMAL	57	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12748	F	UNTREATED	NORMAL	77	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12706	F	0 MG/KG/DAY	NORMAL	0	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 268

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12706	F	0 MG/KG/DAY	NORMAL	7	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12706	F	0 MG/KG/DAY	NORMAL	25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12706	F	0 MG/KG/DAY	NORMAL	46	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12706	F	0 MG/KG/DAY	NORMAL	66	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12706	F	0 MG/KG/DAY	NORMAL	87	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12708	F	0 MG/KG/DAY	NORMAL	0	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12708	F	0 MG/KG/DAY	NORMAL	16	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 274

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12708	F	0 MG/KG/DAY	NORMAL	37	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 275

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12708	F	0 MG/KG/DAY	NORMAL	57	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 276

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12708	F	0 MG/KG/DAY	NORMAL	78	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12711	F	0 MG/KG/DAY	NORMAL	0	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12711	F	0 MG/KG/DAY	NORMAL	7	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12711	F	0 MG/KG/DAY	NORMAL	28	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 279

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12711	F	0 MG/KG/DAY	NORMAL	46	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 280

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12711	F	0 MG/KG/DAY	NORMAL	67	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12711	F	0 MG/KG/DAY	NORMAL	87	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12714	F	0 MG/KG/DAY	NORMAL	0	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12714	F	0 MG/KG/DAY	NORMAL	17	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12714	F	0 MG/KG/DAY	NORMAL	37	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12714	F	0 MG/KG/DAY	NORMAL	58	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12714	F	0 MG/KG/DAY	NORMAL	78	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12718	F	0 MG/KG/DAY	NORMAL	0	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12718	F	0 MG/KG/DAY	NORMAL	8	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12718	F	0 MG/KG/DAY	NORMAL	28	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12718	F	0 MG/KG/DAY	NORMAL	49	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12718	F	0 MG/KG/DAY	NORMAL	67	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 290

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12718	F	0 MG/KG/DAY	NORMAL	88	12:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12721	F	0 MG/KG/DAY	NORMAL	0	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 291

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12721	F	0 MG/KG/DAY	NORMAL	18	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 292

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12721	F	0 MG/KG/DAY	NORMAL	38	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12721	F	0 MG/KG/DAY	NORMAL	59	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12721	F	0 MG/KG/DAY	NORMAL	79	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12721	F	0 MG/KG/DAY	EYES/EARS/NOSE	7	10:16	P	DRIED RED MATERIAL AROUND NOSE
12744	F	0 MG/KG/DAY	NORMAL	0	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12744	F	0 MG/KG/DAY	NORMAL	8	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12744	F	0 MG/KG/DAY	NORMAL	29	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12744	F	0 MG/KG/DAY	NORMAL	49	16:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12744	F	0 MG/KG/DAY	NORMAL	70	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12744	F	0 MG/KG/DAY	NORMAL	89	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12752	F	0 MG/KG/DAY	NORMAL	0	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 300

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12752	F	0 MG/KG/DAY	NORMAL	18	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12752	F	0 MG/KG/DAY	NORMAL	38	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 302

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12752	F	0 MG/KG/DAY	NORMAL	59	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 303

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12752	F	0 MG/KG/DAY	NORMAL	79	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12757	F	0 MG/KG/DAY	NORMAL	0	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 304

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12757	F	0 MG/KG/DAY	NORMAL	9	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:45	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 305

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12757	F	0 MG/KG/DAY	NORMAL	29	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 306

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12757	F	0 MG/KG/DAY	NORMAL	50	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 307

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12757	F	0 MG/KG/DAY	NORMAL	70	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 308

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12758	F	0 MG/KG/DAY	NORMAL	0	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 309

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12758	F	0 MG/KG/DAY	NORMAL	18	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

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PROJECT NO.:WIL-402024
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TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 310

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12758	F	0 MG/KG/DAY	NORMAL	39	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 311

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12758	F	0 MG/KG/DAY	NORMAL	59	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12758	F	0 MG/KG/DAY	NORMAL	80	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12707	F	100 MG/KG/DAY	NORMAL	0	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12707	F	100 MG/KG/DAY	NORMAL	9	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12707	F	100 MG/KG/DAY	NORMAL	30	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12707	F	100 MG/KG/DAY	NORMAL	50	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12707	F	100 MG/KG/DAY	NORMAL	71	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12715	F	100 MG/KG/DAY	NORMAL	0	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12715	F	100 MG/KG/DAY	NORMAL	0	13:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12715	F	100 MG/KG/DAY	NORMAL	21	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 319

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12715	F	100 MG/KG/DAY	NORMAL	39	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12715	F	100 MG/KG/DAY	NORMAL	60	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12715	F	100 MG/KG/DAY	NORMAL	80	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12722	F	100 MG/KG/DAY	NORMAL	0	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 322

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12722	F	100 MG/KG/DAY	NORMAL	10	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12722	F	100 MG/KG/DAY	NORMAL	31	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12722	F	100 MG/KG/DAY	NORMAL	51	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12722	F	100 MG/KG/DAY	NORMAL	72	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12722	F	100 MG/KG/DAY	EYES/EARS/NOSE	7	10:18	P	DRIED RED MATERIAL AROUND NOSE
12738	F	100 MG/KG/DAY	NORMAL	0	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 326

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12738	F	100 MG/KG/DAY	NORMAL	1	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 327

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12738	F	100 MG/KG/DAY	NORMAL	22	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 328

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12738	F	100 MG/KG/DAY	NORMAL	42	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12738	F	100 MG/KG/DAY	NORMAL	63	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12738	F	100 MG/KG/DAY	NORMAL	81	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12738	F	100 MG/KG/DAY	EYES/EARS/NOSE	7	10:18	P	DRIED RED MATERIAL AROUND NOSE
12740	F	100 MG/KG/DAY	NORMAL	0	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 331

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12740	F	100 MG/KG/DAY	NORMAL	10	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 332

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12740	F	100 MG/KG/DAY	NORMAL	31	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12740	F	100 MG/KG/DAY	NORMAL	51	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12740	F	100 MG/KG/DAY	NORMAL	72	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12743	F	100 MG/KG/DAY	NORMAL	0	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12743	F	100 MG/KG/DAY	NORMAL	1	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12743	F	100 MG/KG/DAY	NORMAL	22	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12743	F	100 MG/KG/DAY	NORMAL	42	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
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TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12743	F	100 MG/KG/DAY	NORMAL	63	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12743	F	100 MG/KG/DAY	NORMAL	81	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12746	F	100 MG/KG/DAY	NORMAL	0	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12746	F	100 MG/KG/DAY	NORMAL	11	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12746	F	100 MG/KG/DAY	NORMAL	31	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12746	F	100 MG/KG/DAY	NORMAL	52	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12746	F	100 MG/KG/DAY	NORMAL	72	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12753	F	100 MG/KG/DAY	NORMAL	0	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12753	F	100 MG/KG/DAY	NORMAL	2	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 345

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12753	F	100 MG/KG/DAY	NORMAL	22	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12753	F	100 MG/KG/DAY	NORMAL	43	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 347

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12753	F	100 MG/KG/DAY	NORMAL	63	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12753	F	100 MG/KG/DAY	NORMAL	85	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12754	F	100 MG/KG/DAY	NORMAL	0	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 349

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12754	F	100 MG/KG/DAY	NORMAL	11	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 350

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12754	F	100 MG/KG/DAY	NORMAL	32	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 351

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12754	F	100 MG/KG/DAY	NORMAL	52	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12754	F	100 MG/KG/DAY	NORMAL	73	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12759	F	100 MG/KG/DAY	NORMAL	0	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 353

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12759	F	100 MG/KG/DAY	NORMAL	2	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 354

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12759	F	100 MG/KG/DAY	NORMAL	23	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 355

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12759	F	100 MG/KG/DAY	NORMAL	43	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 356

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12759	F	100 MG/KG/DAY	NORMAL	64	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 357

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12759	F	100 MG/KG/DAY	NORMAL	85	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12709	F	450 MG/KG/DAY	NORMAL	0	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12709	F	450 MG/KG/DAY	NORMAL	14	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12709	F	450 MG/KG/DAY	NORMAL	32	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 360

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12709	F	450 MG/KG/DAY	NORMAL	53	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12709	F	450 MG/KG/DAY	NORMAL	73	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12719	F	450 MG/KG/DAY	NORMAL	0	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12719	F	450 MG/KG/DAY	NORMAL	3	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12719	F	450 MG/KG/DAY	NORMAL	23	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12719	F	450 MG/KG/DAY	NORMAL	44	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 365

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12719	F	450 MG/KG/DAY	NORMAL	64	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 366

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12719	F	450 MG/KG/DAY	NORMAL	85	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12726	F	450 MG/KG/DAY	NORMAL	0	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12726	F	450 MG/KG/DAY	NORMAL	14	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12726	F	450 MG/KG/DAY	NORMAL	35	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 369

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12726	F	450 MG/KG/DAY	NORMAL	53	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 370

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12726	F	450 MG/KG/DAY	NORMAL	74	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12727	F	450 MG/KG/DAY	NORMAL	0	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12727	F	450 MG/KG/DAY	NORMAL	3	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12727	F	450 MG/KG/DAY	NORMAL	24	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12727	F	450 MG/KG/DAY	NORMAL	44	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 374

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12727	F	450 MG/KG/DAY	NORMAL	65	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 375

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12727	F	450 MG/KG/DAY	NORMAL	85	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12728	F	450 MG/KG/DAY	NORMAL	0	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12728	F	450 MG/KG/DAY	NORMAL	15	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12728	F	450 MG/KG/DAY	NORMAL	35	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12728	F	450 MG/KG/DAY	NORMAL	56	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 379

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12728	F	450 MG/KG/DAY	NORMAL	74	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12732	F	450 MG/KG/DAY	NORMAL	0	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12732	F	450 MG/KG/DAY	NORMAL	4	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12732	F	450 MG/KG/DAY	NORMAL	24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12732	F	450 MG/KG/DAY	NORMAL	45	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:43	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12732	F	450 MG/KG/DAY	NORMAL	65	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12732	F	450 MG/KG/DAY	NORMAL	87	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12735	F	450 MG/KG/DAY	NORMAL	0	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12735	F	450 MG/KG/DAY	NORMAL	16	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12735	F	450 MG/KG/DAY	NORMAL	36	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12735	F	450 MG/KG/DAY	NORMAL	57	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 388

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12735	F	450 MG/KG/DAY	NORMAL	77	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12735	F	450 MG/KG/DAY	EYES/EARS/NOSE	7	10:22	P	DRIED RED MATERIAL AROUND NOSE
12747	F	450 MG/KG/DAY	NORMAL	0	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12747	F	450 MG/KG/DAY	NORMAL	4	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12747	F	450 MG/KG/DAY	NORMAL	25	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12747	F	450 MG/KG/DAY	NORMAL	45	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12747	F	450 MG/KG/DAY	NORMAL	66	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12747	F	450 MG/KG/DAY	NORMAL	87	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12760	F	450 MG/KG/DAY	NORMAL	0	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12760	F	450 MG/KG/DAY	NORMAL	16	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12760	F	450 MG/KG/DAY	NORMAL	36	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 396

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12760	F	450 MG/KG/DAY	NORMAL	57	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 397

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12760	F	450 MG/KG/DAY	NORMAL	77	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12763	F	450 MG/KG/DAY	NORMAL	0	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:25	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12763	F	450 MG/KG/DAY	NORMAL	7	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12763	F	450 MG/KG/DAY	NORMAL	25	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 400

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12763	F	450 MG/KG/DAY	NORMAL	46	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 401

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12763	F	450 MG/KG/DAY	NORMAL	66	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12763	F	450 MG/KG/DAY	NORMAL	88	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12720	F	750 MG/KG/DAY	NORMAL	0	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 403

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12720	F	750 MG/KG/DAY	NORMAL	16	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12720	F	750 MG/KG/DAY	NORMAL	37	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12720	F	750 MG/KG/DAY	NORMAL	57	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12720	F	750 MG/KG/DAY	NORMAL	78	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12723	F	750 MG/KG/DAY	NORMAL	0	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 407

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12723	F	750 MG/KG/DAY	NORMAL	7	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12723	F	750 MG/KG/DAY	NORMAL	28	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 409

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12723	F	750 MG/KG/DAY	NORMAL	46	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12723	F	750 MG/KG/DAY	NORMAL	67	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12723	F	750 MG/KG/DAY	NORMAL	87	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12731	F	750 MG/KG/DAY	NORMAL	0	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 412

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12731	F	750 MG/KG/DAY	NORMAL	17	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 413

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12731	F	750 MG/KG/DAY	NORMAL	37	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12731	F	750 MG/KG/DAY	NORMAL	58	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12731	F	750 MG/KG/DAY	NORMAL	78	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12739	F	750 MG/KG/DAY	NORMAL	0	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12739	F	750 MG/KG/DAY	NORMAL	8	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12739	F	750 MG/KG/DAY	NORMAL	28	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12739	F	750 MG/KG/DAY	NORMAL	49	14:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12739	F	750 MG/KG/DAY	NORMAL	67	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 420

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12739	F	750 MG/KG/DAY	NORMAL	88	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12742	F	750 MG/KG/DAY	NORMAL	0	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12742	F	750 MG/KG/DAY	NORMAL	17	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12742	F	750 MG/KG/DAY	NORMAL	38	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12742	F	750 MG/KG/DAY	NORMAL	58	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12742	F	750 MG/KG/DAY	NORMAL	79	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12749	F	750 MG/KG/DAY	NORMAL	0	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12749	F	750 MG/KG/DAY	NORMAL	8	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12749	F	750 MG/KG/DAY	NORMAL	29	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12749	F	750 MG/KG/DAY	NORMAL	49	16:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12749	F	750 MG/KG/DAY	NORMAL	70	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12749	F	750 MG/KG/DAY	EXCRETA	53	9:47	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12750	F	750 MG/KG/DAY	NORMAL	0	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12750	F	750 MG/KG/DAY	NORMAL	18	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12750	F	750 MG/KG/DAY	NORMAL	38	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12750	F	750 MG/KG/DAY	NORMAL	59	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12750	F	750 MG/KG/DAY	NORMAL	80	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12750	F	750 MG/KG/DAY	EXCRETA	53	9:48	P	WET YELLOW MATERIAL UROGENITAL AREA
12755	F	750 MG/KG/DAY	NORMAL	0	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12755	F	750 MG/KG/DAY	NORMAL	9	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 435

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12755	F	750 MG/KG/DAY	NORMAL	29	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12755	F	750 MG/KG/DAY	NORMAL	50	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12755	F	750 MG/KG/DAY	NORMAL	72	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12755	F	750 MG/KG/DAY	SPECIAL	66	10:03	P	REDDENED LEFT EAR
				66	10:03	P	REDDENED RIGHT EAR
				71	8:55	P	REDDENED LEFT EAR
				71	8:55	P	REDDENED RIGHT EAR
				71	10:44	P	REDDENED LEFT EAR
				71	10:44	P	REDDENED RIGHT EAR

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12755	F	750 MG/KG/DAY	SPECIAL	79	10:03	P	REDDENED LEFT EAR
				79	10:03	P	REDDENED RIGHT EAR
				86	7:36	P	REDDENED LEFT EAR
				86	7:36	P	REDDENED RIGHT EAR
				87	7:40	P	REDDENED LEFT EAR
				87	7:40	P	REDDENED RIGHT EAR
12761	F	750 MG/KG/DAY	NORMAL	0	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12761	F	750 MG/KG/DAY	NORMAL	15	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12761	F	750 MG/KG/DAY	NORMAL	36	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12761	F	750 MG/KG/DAY	NORMAL	56	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				64	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				65	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				71	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				72	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12761	F	750 MG/KG/DAY	NORMAL	77	9:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				77	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12764	F	750 MG/KG/DAY	NORMAL	0	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				0	13:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	8:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				1	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				2	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				3	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				4	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12764	F	750 MG/KG/DAY	NORMAL	4	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				7	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				8	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				9	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				10	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				11	9:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	8:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				14	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				15	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				16	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				17	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	7:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				18	9:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				21	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				22	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				23	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				24	9:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 444

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12764	F	750 MG/KG/DAY	NORMAL	25	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				25	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	8:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				28	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				29	9:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				30	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				31	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				32	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				35	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				36	9:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				37	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				38	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				39	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	9:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				42	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				43	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				44	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				45	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 445

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12764	F	750 MG/KG/DAY	NORMAL	45	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				46	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	14:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				49	16:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				50	9:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				51	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				52	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				53	9:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				56	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				57	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				58	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				59	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	7:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				60	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				63	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				66	7:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				67	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				70	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 446

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12764	F	750 MG/KG/DAY	NORMAL	73	8:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				73	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				74	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				78	7:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				79	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				80	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				81	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	7:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				85	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				86	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	7:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				87	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				88	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12764	F	750 MG/KG/DAY	EXCRETA	63	8:19	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12764	F	750 MG/KG/DAY	SPECIAL	64	8:49	P	REDDENED LEFT EAR
				64	8:49	P	REDDENED RIGHT EAR
				64	8:49	P	SWOLLEN LEFT EAR
				64	8:49	P	SWOLLEN RIGHT EAR
				64	10:46	P	REDDENED LEFT EAR
				64	10:46	P	REDDENED RIGHT EAR
				64	10:46	P	SWOLLEN LEFT EAR

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A3 (DOSING DAY OBSERVATIONS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12764	F	750 MG/KG/DAY	SPECIAL	64	10:46	P	SWOLLEN RIGHT EAR
				65	8:46	P	REDDENED LEFT EAR
				65	8:46	P	REDDENED RIGHT EAR
				65	8:46	P	SWOLLEN LEFT EAR
				65	8:46	P	SWOLLEN RIGHT EAR
				65	10:58	P	REDDENED LEFT EAR
				65	10:58	P	REDDENED RIGHT EAR
				65	10:58	P	SWOLLEN LEFT EAR
				65	10:58	P	SWOLLEN RIGHT EAR
				66	10:03	P	REDDENED LEFT EAR
				66	10:03	P	REDDENED RIGHT EAR
				66	10:03	P	SWOLLEN LEFT EAR
				66	10:03	P	SWOLLEN RIGHT EAR
				71	8:56	P	REDDENED LEFT EAR
				71	8:56	P	REDDENED RIGHT EAR
				71	8:56	P	SWOLLEN LEFT EAR
				71	8:56	P	SWOLLEN RIGHT EAR
				71	10:44	P	REDDENED LEFT EAR
				71	10:44	P	REDDENED RIGHT EAR
				71	10:44	P	SWOLLEN LEFT EAR
				71	10:44	P	SWOLLEN RIGHT EAR
				72	8:38	P	REDDENED LEFT EAR
				72	8:38	P	REDDENED RIGHT EAR
				72	10:30	P	REDDENED LEFT EAR
				72	10:30	P	REDDENED RIGHT EAR
				77	9:28	P	REDDENED LEFT EAR
				77	9:28	P	REDDENED RIGHT EAR
				77	11:21	P	REDDENED LEFT EAR
				77	11:21	P	REDDENED RIGHT EAR

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

STUDY DAYS: 0 THROUGH 89

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12764	F	750 MG/KG/DAY	SPECIAL	78	9:54	P	REDDENED LEFT EAR
				78	9:54	P	REDDENED RIGHT EAR

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 1

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12649	M	UNTREATED	NORMAL	5	10:38	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	12:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:11	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:25	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:24	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	8:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:46	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	12:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:42	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:39	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:15	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:27	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:15	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:23	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:50	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	12:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:56	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12654	M	UNTREATED	NORMAL	5	10:38	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	12:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:11	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 2

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12654	M	UNTREATED	NORMAL	19	11:25	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:24	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	8:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:46	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	12:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:42	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:39	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:15	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:27	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:24	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:50	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:00	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:56	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12660	M	UNTREATED	NORMAL	5	10:39	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	12:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:11	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:26	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:25	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	8:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 3

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12660	M	UNTREATED	NORMAL	33	12:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:42	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:39	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:17	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:15	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:25	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:50	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:00	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:56	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12668	M	UNTREATED	NORMAL	5	10:39	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	12:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:26	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:26	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	8:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	12:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:11	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:39	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 4

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12668	M	UNTREATED	NORMAL	48	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12668	M	UNTREATED	EYES/EARS/NOSE	13	8:12	P	DRIED RED MATERIAL AROUND LEFT EYE
				13	8:12	P	DRIED RED MATERIAL AROUND RIGHT EYE
12684	M	UNTREATED	NORMAL	5	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	12:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	12:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 5

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12684	M	UNTREATED	NORMAL	55	7:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:25	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:50	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:00	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:56	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12686	M	UNTREATED	NORMAL	5	10:39	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:00	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:26	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:27	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:48	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	12:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:11	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:40	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:17	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:26	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12686	M	UNTREATED	NORMAL	75	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12686	M	UNTREATED	EYES/EARS/NOSE	26	9:00	P	DRIED RED MATERIAL AROUND RIGHT EYE
12691	M	UNTREATED	NORMAL	5	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12691	M	UNTREATED	NORMAL	90	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12691	M	UNTREATED	BEHAVIOR/CNS	68	11:17	P	VOCALIZATION DURING HANDLING
12691	M	UNTREATED	EYES/EARS/NOSE	12	9:09	P	DRIED RED MATERIAL AROUND NOSE
				54	8:58	P	DRIED RED MATERIAL AROUND NOSE
12694	M	UNTREATED	NORMAL	5	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12694	M	UNTREATED	EYES/EARS/NOSE	12	9:09	P	DRIED RED MATERIAL AROUND NOSE

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12694	M	UNTREATED	EYES/EARS/NOSE	90	6:57	P	DRIED RED MATERIAL AROUND NOSE
12701	M	UNTREATED	NORMAL	5	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12701	M	UNTREATED	EYES/EARS/NOSE	12	9:09	P	DRIED RED MATERIAL AROUND NOSE
				90	6:57	P	DRIED RED MATERIAL AROUND NOSE
12703	M	UNTREATED	NORMAL	5	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12703	M	UNTREATED	NORMAL	12	9:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:13	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:26	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:00	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:49	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:00	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:44	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:44	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:41	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:19	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:17	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:27	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:51	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:13	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:00	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:32	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12648	M	0 MG/KG/DAY	NORMAL	5	11:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:11	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12648	M	0 MG/KG/DAY	NORMAL	20	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12650	M	0 MG/KG/DAY	NORMAL	5	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12650	M	0 MG/KG/DAY	NORMAL	34	13:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12661	M	0 MG/KG/DAY	NORMAL	5	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12661	M	0 MG/KG/DAY	NORMAL	48	13:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12675	M	0 MG/KG/DAY	NORMAL	5	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12675	M	0 MG/KG/DAY	NORMAL	62	12:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:21	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:52	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:23	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:57	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12676	M	0 MG/KG/DAY	NORMAL	5	11:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:05	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:18	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:36	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:57	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:46	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:25	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:00	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:19	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:30	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:21	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:52	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:23	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12676	M	0 MG/KG/DAY	NORMAL	82	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12676	M	0 MG/KG/DAY	EYES/EARS/NOSE	41	13:46	P	DRIED RED MATERIAL AROUND NOSE
12679	M	0 MG/KG/DAY	NORMAL	5	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12679	M	0 MG/KG/DAY	NORMAL	90	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12683	M	0 MG/KG/DAY	NORMAL	5	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12683	M	0 MG/KG/DAY	SPECIAL	68	11:22	P	REDDENED LEFT FORELIMB
				68	11:22	P	REDDENED RIGHT FORELIMB
12693	M	0 MG/KG/DAY	NORMAL	5	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12693	M	0 MG/KG/DAY	NORMAL	6	13:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:19	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:37	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:17	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:46	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:46	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:44	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:26	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:19	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:30	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:22	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:35	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:53	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:25	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12697	M	0 MG/KG/DAY	NORMAL	5	11:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:07	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:19	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 17

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12697	M	0 MG/KG/DAY	NORMAL	19	11:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:38	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:17	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:46	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:46	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:44	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:26	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:19	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:22	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:35	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:53	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:25	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12700	M	0 MG/KG/DAY	NORMAL	5	11:05	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:07	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:19	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:38	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12700	M	0 MG/KG/DAY	NORMAL	27	8:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:17	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:46	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:46	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:44	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:27	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:20	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:22	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:35	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:53	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:26	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12646	M	100 MG/KG/DAY	NORMAL	5	11:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:14	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:22	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:44	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:05	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:05	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:21	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:48	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12646	M	100 MG/KG/DAY	NORMAL	41	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12646	M	100 MG/KG/DAY	EYES/EARS/NOSE	12	9:14	P	DRIED RED MATERIAL AROUND NOSE
12655	M	100 MG/KG/DAY	NORMAL	5	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12655	M	100 MG/KG/DAY	NORMAL	61	13:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12655	M	100 MG/KG/DAY	EYES/EARS/NOSE	12	9:14	P	DRIED RED MATERIAL AROUND NOSE
				54	9:02	P	DRIED RED MATERIAL AROUND NOSE
				89	6:59	P	DRIED RED MATERIAL AROUND NOSE
12656	M	100 MG/KG/DAY	NORMAL	5	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12656	M	100 MG/KG/DAY	NORMAL	68	11:25	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:41	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:54	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:35	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:35	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12659	M	100 MG/KG/DAY	NORMAL	5	11:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:15	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:15	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:22	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:45	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:21	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:48	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:48	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:23	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:20	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:25	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:41	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:55	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:36	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12659	M	100 MG/KG/DAY	NORMAL	82	13:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12662	M	100 MG/KG/DAY	NORMAL	5	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12662	M	100 MG/KG/DAY	EYES/EARS/NOSE	12	9:15	P	DRIED RED MATERIAL AROUND RIGHT EYE
12664	M	100 MG/KG/DAY	NORMAL	5	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12664	M	100 MG/KG/DAY	NORMAL	6	13:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12664	M	100 MG/KG/DAY	EYES/EARS/NOSE	12	9:15	P	DRIED RED MATERIAL AROUND NOSE
12670	M	100 MG/KG/DAY	NORMAL	5	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 24

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12670	M	100 MG/KG/DAY	NORMAL	19	11:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:46	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:07	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:05	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:22	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:49	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:49	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:48	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:34	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:24	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:20	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:26	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:55	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:37	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:05	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:35	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:11	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:00	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12682	M	100 MG/KG/DAY	NORMAL	5	11:14	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:17	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:15	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:23	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:32	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12682	M	100 MG/KG/DAY	NORMAL	27	9:07	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:05	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:22	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:49	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:49	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:48	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:34	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:24	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:20	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:26	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:55	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:38	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:05	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:35	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:11	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:00	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12688	M	100 MG/KG/DAY	NORMAL	5	11:15	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:17	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:15	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:23	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:32	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:07	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:05	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:22	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12688	M	100 MG/KG/DAY	NORMAL	40	14:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12688	M	100 MG/KG/DAY	EYES/EARS/NOSE	54	9:03	P	DRIED RED MATERIAL AROUND NOSE
				61	13:33	P	DRIED RED MATERIAL AROUND NOSE
				90	7:00	P	DRIED RED MATERIAL AROUND NOSE
12695	M	100 MG/KG/DAY	NORMAL	5	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12695	M	100 MG/KG/DAY	NORMAL	54	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12695	M	100 MG/KG/DAY	EYES/EARS/NOSE	12	9:16	P	DRIED RED MATERIAL AROUND NOSE
12645	M	450 MG/KG/DAY	NORMAL	5	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12645	M	450 MG/KG/DAY	NORMAL	62	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12645	M	450 MG/KG/DAY	EYES/EARS/NOSE	12	9:17	P	DRIED RED MATERIAL AROUND NOSE
12652	M	450 MG/KG/DAY	NORMAL	5	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12652	M	450 MG/KG/DAY	NORMAL	83	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12652	M	450 MG/KG/DAY	EYES/EARS/NOSE	12	9:17	P	DRIED RED MATERIAL AROUND NOSE
				41	13:51	P	DRIED RED MATERIAL AROUND NOSE
				89	7:01	P	DRIED RED MATERIAL AROUND NOSE
12652	M	450 MG/KG/DAY	BODY/INTEG III	82	13:07	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				89	7:01	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12669	M	450 MG/KG/DAY	NORMAL	5	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12669	M	450 MG/KG/DAY	EYES/EARS/NOSE	6	13:22	P	DRIED RED MATERIAL AROUND NOSE
				12	9:18	P	DRIED RED MATERIAL AROUND NOSE

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12669	M	450 MG/KG/DAY	BODY/INTEG III	82	13:07	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				89	7:01	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12671	M	450 MG/KG/DAY	NORMAL	5	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12671	M	450 MG/KG/DAY	EYES/EARS/NOSE	55	7:26	P	DRIED RED MATERIAL AROUND NOSE
				82	13:07	P	DRIED RED MATERIAL AROUND NOSE
12674	M	450 MG/KG/DAY	NORMAL	5	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12674	M	450 MG/KG/DAY	NORMAL	13	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12674	M	450 MG/KG/DAY	EYES/EARS/NOSE	12	9:18	P	DRIED RED MATERIAL AROUND NOSE
				54	9:04	P	DRIED RED MATERIAL AROUND NOSE
12677	M	450 MG/KG/DAY	NORMAL	5	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12677	M	450 MG/KG/DAY	NORMAL	27	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12677	M	450 MG/KG/DAY	EYES/EARS/NOSE	82	13:08	P	DRIED RED MATERIAL AROUND LEFT EYE
				82	13:08	P	DRIED RED MATERIAL AROUND NOSE
12677	M	450 MG/KG/DAY	BODY/INTEG III	12	9:18	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12685	M	450 MG/KG/DAY	NORMAL	5	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 33

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12685	M	450 MG/KG/DAY	NORMAL	33	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12685	M	450 MG/KG/DAY	EYES/EARS/NOSE	90	7:01	P	DRIED RED MATERIAL AROUND NOSE
12685	M	450 MG/KG/DAY	BODY/INTEG III	68	11:32	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12690	M	450 MG/KG/DAY	NORMAL	5	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 34

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12690	M	450 MG/KG/DAY	NORMAL	41	13:52	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:52	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:40	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:05	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:27	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:35	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:52	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:57	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:49	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:37	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12692	M	450 MG/KG/DAY	NORMAL	5	11:22	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:24	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:27	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:34	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:55	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:14	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:07	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:27	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:52	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:52	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:52	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:41	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:05	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 35

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12692	M	450 MG/KG/DAY	NORMAL	55	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12692	M	450 MG/KG/DAY	EYES/EARS/NOSE	12	9:19	P	DRIED RED MATERIAL AROUND NOSE
12692	M	450 MG/KG/DAY	BODY/INTEG III	68	11:33	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12699	M	450 MG/KG/DAY	NORMAL	6	13:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 36

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12699	M	450 MG/KG/DAY	EYES/EARS/NOSE	12	9:19	P	DRIED RED MATERIAL AROUND NOSE
12699	M	450 MG/KG/DAY	BODY/INTEG III	5	11:23	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12658	M	750 MG/KG/DAY	NORMAL	5	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12666	M	750 MG/KG/DAY	NORMAL	5	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 37

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12666	M	750 MG/KG/DAY	NORMAL	55	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12666	M	750 MG/KG/DAY	EYES/EARS/NOSE	12	9:21	P	DRIED RED MATERIAL AROUND NOSE
				89	7:02	P	DRIED RED MATERIAL AROUND NOSE
12666	M	750 MG/KG/DAY	BODY/INTEG III	47	12:56	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				68	11:40	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12672	M	750 MG/KG/DAY	NORMAL	6	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 38

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12672	M	750 MG/KG/DAY	NORMAL	76	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12672	M	750 MG/KG/DAY	EYES/EARS/NOSE	12	9:21	P	DRIED RED MATERIAL AROUND NOSE
				89	7:03	P	DRIED RED MATERIAL AROUND NOSE
12672	M	750 MG/KG/DAY	BODY/INTEG III	5	11:28	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				61	13:40	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				68	11:41	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				89	7:03	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12673	M	750 MG/KG/DAY	NORMAL	5	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 39

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12673	M	750 MG/KG/DAY	NORMAL	76	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12673	M	750 MG/KG/DAY	BODY/INTEG III	68	11:41	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12680	M	750 MG/KG/DAY	NORMAL	5	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 40

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12680	M	750 MG/KG/DAY	NORMAL	89	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12681	M	750 MG/KG/DAY	NORMAL	6	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12681	M	750 MG/KG/DAY	EYES/EARS/NOSE	89	7:04	P	DRIED RED MATERIAL AROUND NOSE
12681	M	750 MG/KG/DAY	BODY/INTEG III	5	11:29	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				68	11:42	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12687	M	750 MG/KG/DAY	NORMAL	5	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12687	M	750 MG/KG/DAY	NORMAL	19	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12687	M	750 MG/KG/DAY	BODY/INTEG III	12	9:22	P	WET YELLOW MATERIAL UROGENITAL AREA
				68	11:42	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12689	M	750 MG/KG/DAY	NORMAL	5	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12689	M	750 MG/KG/DAY	NORMAL	27	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12689	M	750 MG/KG/DAY	EYES/EARS/NOSE	12	9:22	P	DRIED RED MATERIAL AROUND NOSE
12698	M	750 MG/KG/DAY	NORMAL	5	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12698	M	750 MG/KG/DAY	NORMAL	40	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12698	M	750 MG/KG/DAY	EYES/EARS/NOSE	12	9:22	P	DRIED RED MATERIAL AROUND NOSE
12704	M	750 MG/KG/DAY	NORMAL	6	13:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12704	M	750 MG/KG/DAY	NORMAL	48	13:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12704	M	750 MG/KG/DAY	BODY/INTEG III	5	11:30	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				68	11:43	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12705	F	UNTREATED	NORMAL	5	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12705	F	UNTREATED	NORMAL	61	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12705	F	UNTREATED	EYES/EARS/NOSE	12	9:10	P	DRIED RED MATERIAL AROUND NOSE
12712	F	UNTREATED	NORMAL	5	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12712	F	UNTREATED	NORMAL	69	8:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:51	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:13	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:00	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:32	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:57	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12716	F	UNTREATED	NORMAL	5	10:41	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:14	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:27	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:30	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:50	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:00	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:13	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:44	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:45	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:41	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:20	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:17	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:18	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:51	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:14	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12716	F	UNTREATED	NORMAL	83	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12724	F	UNTREATED	NORMAL	5	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12730	F	UNTREATED	NORMAL	5	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12730	F	UNTREATED	NORMAL	13	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12730	F	UNTREATED	EYES/EARS/NOSE	12	9:10	P	DRIED RED MATERIAL AROUND NOSE
				54	8:59	P	DRIED RED MATERIAL AROUND NOSE
12733	F	UNTREATED	NORMAL	5	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12733	F	UNTREATED	NORMAL	26	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12733	F	UNTREATED	EYES/EARS/NOSE	90	6:58	P	DRIED RED MATERIAL AROUND NOSE
12734	F	UNTREATED	NORMAL	5	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12734	F	UNTREATED	NORMAL	34	13:14	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:44	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:45	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:42	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:21	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:18	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:19	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:30	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:51	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:17	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:32	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12736	F	UNTREATED	NORMAL	5	10:42	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:11	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:15	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:27	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:32	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:52	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:14	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:45	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:45	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12736	F	UNTREATED	NORMAL	47	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12736	F	UNTREATED	EYES/EARS/NOSE	90	6:58	P	DRIED RED MATERIAL AROUND NOSE
12737	F	UNTREATED	NORMAL	5	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12737	F	UNTREATED	NORMAL	55	7:18	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:11	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:19	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:51	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:18	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:32	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12748	F	UNTREATED	NORMAL	5	10:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:11	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:27	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:53	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:14	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:45	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:45	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:42	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:21	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	8:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:18	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:11	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12748	F	UNTREATED	NORMAL	68	11:19	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:52	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:19	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12706	F	0 MG/KG/DAY	NORMAL	5	11:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:07	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:13	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:19	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:39	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:18	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:46	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:45	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:27	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:20	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:22	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:36	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:53	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12706	F	0 MG/KG/DAY	NORMAL	76	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12708	F	0 MG/KG/DAY	NORMAL	5	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	8:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12711	F	0 MG/KG/DAY	NORMAL	5	11:07	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:13	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:20	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:39	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:00	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:18	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:45	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:20	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:23	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:36	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:53	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:27	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:34	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12714	F	0 MG/KG/DAY	NORMAL	5	11:07	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:13	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:20	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12714	F	0 MG/KG/DAY	NORMAL	19	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12714	F	0 MG/KG/DAY	EYES/EARS/NOSE	89	6:58	P	DRIED RED MATERIAL AROUND NOSE
12718	F	0 MG/KG/DAY	NORMAL	5	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12718	F	0 MG/KG/DAY	NORMAL	33	13:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:18	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:45	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:20	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:23	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:37	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:53	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:34	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12721	F	0 MG/KG/DAY	NORMAL	5	11:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:13	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:21	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:40	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:19	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12721	F	0 MG/KG/DAY	NORMAL	47	12:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12721	F	0 MG/KG/DAY	EYES/EARS/NOSE	90	6:59	P	DRIED RED MATERIAL AROUND NOSE
12744	F	0 MG/KG/DAY	NORMAL	5	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12744	F	0 MG/KG/DAY	NORMAL	55	7:21	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:23	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:38	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:54	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:34	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12752	F	0 MG/KG/DAY	NORMAL	5	11:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:14	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:21	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:30	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:41	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:19	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:46	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:21	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12752	F	0 MG/KG/DAY	NORMAL	68	11:23	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:38	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:54	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:34	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12757	F	0 MG/KG/DAY	NORMAL	5	11:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:14	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:21	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:30	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:41	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:19	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:46	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:30	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:21	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:24	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:38	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:54	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12757	F	0 MG/KG/DAY	NORMAL	76	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12758	F	0 MG/KG/DAY	NORMAL	5	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12758	F	0 MG/KG/DAY	EYES/EARS/NOSE	55	7:21	P	DRIED RED MATERIAL AROUND RIGHT EYE
				90	7:00	P	DRIED RED MATERIAL AROUND NOSE
12707	F	100 MG/KG/DAY	NORMAL	5	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12707	F	100 MG/KG/DAY	EYES/EARS/NOSE	89	6:59	P	DRIED RED MATERIAL AROUND NOSE
12715	F	100 MG/KG/DAY	NORMAL	5	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12715	F	100 MG/KG/DAY	NORMAL	12	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12715	F	100 MG/KG/DAY	EYES/EARS/NOSE	82	13:05	P	DRIED RED MATERIAL AROUND NOSE
12722	F	100 MG/KG/DAY	NORMAL	5	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12722	F	100 MG/KG/DAY	NORMAL	27	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12722	F	100 MG/KG/DAY	EYES/EARS/NOSE	12	9:16	P	DRIED RED MATERIAL AROUND NOSE
				89	7:00	P	DRIED RED MATERIAL AROUND NOSE
12738	F	100 MG/KG/DAY	NORMAL	5	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12738	F	100 MG/KG/DAY	NORMAL	40	14:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12738	F	100 MG/KG/DAY	EYES/EARS/NOSE	54	9:04	P	DRIED RED MATERIAL AROUND NOSE
12740	F	100 MG/KG/DAY	NORMAL	5	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12740	F	100 MG/KG/DAY	NORMAL	54	9:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:25	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:34	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:24	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:46	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:56	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:41	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:36	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:00	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12743	F	100 MG/KG/DAY	NORMAL	5	11:18	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:20	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:24	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:50	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:07	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:24	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:50	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:50	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:50	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:36	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:25	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:34	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:24	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12743	F	100 MG/KG/DAY	NORMAL	69	8:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12743	F	100 MG/KG/DAY	EYES/EARS/NOSE	54	9:04	P	DRIED RED MATERIAL AROUND NOSE
12746	F	100 MG/KG/DAY	NORMAL	5	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12746	F	100 MG/KG/DAY	NORMAL	76	11:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:36	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:11	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12753	F	100 MG/KG/DAY	NORMAL	5	11:18	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:20	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:17	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:25	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:51	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:07	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:24	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:50	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:50	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:50	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:37	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:04	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:26	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:34	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:24	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:30	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:47	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:56	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:36	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12753	F	100 MG/KG/DAY	NORMAL	84	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12754	F	100 MG/KG/DAY	NORMAL	5	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12759	F	100 MG/KG/DAY	NORMAL	5	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 70

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12759	F	100 MG/KG/DAY	NORMAL	6	13:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12709	F	450 MG/KG/DAY	NORMAL	5	11:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12709	F	450 MG/KG/DAY	NORMAL	19	11:35	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:57	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:15	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:52	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:53	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:53	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:42	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:36	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:34	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:34	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:53	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:50	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:37	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12719	F	450 MG/KG/DAY	NORMAL	5	11:24	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:26	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:35	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:57	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:15	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12719	F	450 MG/KG/DAY	NORMAL	34	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12719	F	450 MG/KG/DAY	EYES/EARS/NOSE	12	9:19	P	DRIED RED MATERIAL AROUND NOSE
12719	F	450 MG/KG/DAY	SPECIAL	55	7:28	P	SWOLLEN LEFT EAR
				55	7:28	P	SWOLLEN RIGHT EAR
12726	F	450 MG/KG/DAY	NORMAL	5	11:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12726	F	450 MG/KG/DAY	NORMAL	41	13:53	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:54	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:42	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:36	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:34	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:34	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:55	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:51	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:37	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12727	F	450 MG/KG/DAY	NORMAL	5	11:25	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:26	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:35	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:16	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:52	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:53	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:54	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12727	F	450 MG/KG/DAY	NORMAL	61	13:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12727	F	450 MG/KG/DAY	EYES/EARS/NOSE	12	9:20	P	DRIED RED MATERIAL AROUND NOSE
				89	7:02	P	DRIED RED MATERIAL AROUND NOSE
12728	F	450 MG/KG/DAY	NORMAL	5	11:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12728	F	450 MG/KG/DAY	NORMAL	69	8:55	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:52	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:37	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12732	F	450 MG/KG/DAY	NORMAL	5	11:25	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:27	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:28	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:35	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:17	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:52	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:53	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:54	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:44	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:29	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:37	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:34	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:35	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:56	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:52	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:37	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12732	F	450 MG/KG/DAY	NORMAL	84	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12732	F	450 MG/KG/DAY	EYES/EARS/NOSE	12	9:20	P	DRIED RED MATERIAL AROUND NOSE
12735	F	450 MG/KG/DAY	NORMAL	5	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12735	F	450 MG/KG/DAY	EYES/EARS/NOSE	12	9:20	P	DRIED RED MATERIAL AROUND NOSE
				61	13:37	P	DRIED RED MATERIAL AROUND NOSE

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12747	F	450 MG/KG/DAY	NORMAL	5	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12747	F	450 MG/KG/DAY	EYES/EARS/NOSE	12	9:20	P	DRIED RED MATERIAL AROUND NOSE
				90	7:02	P	DRIED RED MATERIAL AROUND NOSE
12760	F	450 MG/KG/DAY	NORMAL	5	11:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12760	F	450 MG/KG/DAY	NORMAL	13	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12760	F	450 MG/KG/DAY	EYES/EARS/NOSE	90	7:02	P	DRIED RED MATERIAL AROUND NOSE
12760	F	450 MG/KG/DAY	SPECIAL	68	11:35	P	REDDENED LEFT EAR
				68	11:35	P	REDDENED RIGHT EAR
12763	F	450 MG/KG/DAY	NORMAL	5	11:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12763	F	450 MG/KG/DAY	NORMAL	20	11:00	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:18	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:30	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:53	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:54	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:55	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:45	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:06	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:30	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:37	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:34	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:36	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	8:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	11:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	11:54	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:09	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:38	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12720	F	750 MG/KG/DAY	NORMAL	5	11:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:22	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:31	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:37	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:05	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:21	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12720	F	750 MG/KG/DAY	NORMAL	33	13:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12720	F	750 MG/KG/DAY	BODY/INTEG III	68	11:43	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				69	9:03	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12723	F	750 MG/KG/DAY	NORMAL	5	11:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12723	F	750 MG/KG/DAY	NORMAL	48	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	12:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12723	F	750 MG/KG/DAY	EYES/EARS/NOSE	12	9:22	P	DRIED RED MATERIAL AROUND NOSE
				61	13:41	P	DRIED RED MATERIAL AROUND NOSE
12731	F	750 MG/KG/DAY	NORMAL	6	13:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	12:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12731	F	750 MG/KG/DAY	NORMAL	83	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12731	F	750 MG/KG/DAY	EYES/EARS/NOSE	12	9:23	P	DRIED RED MATERIAL AROUND NOSE
				89	7:05	P	DRIED RED MATERIAL AROUND NOSE
12731	F	750 MG/KG/DAY	BODY/INTEG III	5	11:31	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				5	11:32	P	DRIED YELLOW MATERIAL ANOGENITAL AREA
				5	11:32	P	DRIED YELLOW MATERIAL VENTRAL TRUNK
				33	13:10	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				34	13:33	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				61	13:42	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				68	11:43	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				68	11:43	P	DRIED YELLOW MATERIAL ANOGENITAL AREA
				68	11:44	P	DRIED YELLOW MATERIAL HINDLIMB(S)
				82	13:11	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12739	F	750 MG/KG/DAY	NORMAL	5	11:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12739	F	750 MG/KG/DAY	NORMAL	61	13:42	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:44	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	9:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	12:01	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:39	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:05	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12742	F	750 MG/KG/DAY	NORMAL	5	11:32	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:32	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:23	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:32	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:37	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:07	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:23	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:54	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:55	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:58	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:50	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:35	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:42	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:44	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	9:11	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12742	F	750 MG/KG/DAY	NORMAL	75	12:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	12:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:39	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				89	7:05	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
12749	F	750 MG/KG/DAY	NORMAL	6	13:32	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:23	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:32	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:37	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:23	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:10	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:33	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:55	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:55	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:59	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:50	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:08	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:35	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:42	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:43	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				69	9:11	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				76	12:02	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:12	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:39	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:13	P NO	SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:03	P NO	SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12749	F	750 MG/KG/DAY	EYES/EARS/NOSE	68	11:44	P	DRIED RED MATERIAL AROUND NOSE
12749	F	750 MG/KG/DAY	BODY/INTEG III	5	11:33	P	DRIED YELLOW MATERIAL UROGENITAL AREA
				68	11:44	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12750	F	750 MG/KG/DAY	NORMAL	5	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	12:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12750	F	750 MG/KG/DAY	EYES/EARS/NOSE	12	9:23	P	DRIED RED MATERIAL AROUND NOSE
				62	12:43	P	DRIED RED MATERIAL AROUND LEFT EYE
				62	12:43	P	DRIED RED MATERIAL AROUND RIGHT EYE

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12750	F	750 MG/KG/DAY	EYES/EARS/NOSE	62	12:43	P	DRIED RED MATERIAL AROUND NOSE
				90	7:03	P	DRIED RED MATERIAL AROUND NOSE
12755	F	750 MG/KG/DAY	NORMAL	5	11:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12755	F	750 MG/KG/DAY	EYES/EARS/NOSE	12	9:23	P	DRIED RED MATERIAL AROUND NOSE
				90	7:04	P	DRIED RED MATERIAL AROUND RIGHT EYE
12755	F	750 MG/KG/DAY	BODY/INTEG III	84	8:13	P	DRIED YELLOW MATERIAL UROGENITAL AREA
12761	F	750 MG/KG/DAY	NORMAL	5	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

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STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12761	F	750 MG/KG/DAY	NORMAL	6	13:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				19	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	12:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				61	13:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				69	9:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				84	8:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12761	F	750 MG/KG/DAY	EYES/EARS/NOSE	12	9:23	P	DRIED RED MATERIAL AROUND NOSE
12764	F	750 MG/KG/DAY	NORMAL	5	11:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				6	13:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				13	8:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PROJECT NO.:WIL-402024U
SPONSOR:AMERICAN PETROLEUM

TABLE A4 (DAILY OBSERVATIONS - NONDOSING DAYS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CLINICAL OBSERVATIONS

PAGE 88

STUDY DAYS: 5 THROUGH 90

ANIMAL	SEX	GROUP	CATEGORY	STUDY DAY	TIME	GRADE	OBSERVATIONS
12764	F	750 MG/KG/DAY	NORMAL	19	11:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				20	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				26	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				27	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				33	13:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				34	13:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				40	14:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				41	13:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				47	13:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				48	13:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				54	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				55	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				62	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				68	11:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				75	12:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				76	12:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				82	13:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				83	9:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				90	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
12764	F	750 MG/KG/DAY	EYES/EARS/NOSE	61	13:42	P	DRIED RED MATERIAL AROUND NOSE
12764	F	750 MG/KG/DAY	SPECIAL	69	9:14	P	REDDENED LEFT EAR
				69	9:14	P	REDDENED RIGHT EAR
12764	F	750 MG/KG/DAY	BODY/INTEG III	84	8:13	P	DRIED YELLOW MATERIAL UROGENITAL AREA

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

PCRDv4.18
11/15/2011

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A5
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 1

GROUP : UNTREATED		ANIMAL NO. / SEX								
	12649/M	12654/M	12660/M	12668/M	12684/M	12686/M	12691/M	12694/M	12701/M	12703/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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A5
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 2

GROUP : 0 MG/KG/DAY		ANIMAL NO. / SEX								
	12648/M	12650/M	12661/M	12675/M	12676/M	12679/M	12683/M	12693/M	12697/M	12700/M
STUDY DAY	ERYTHEMA+/EDEMA+/OTHER FINDINGS									
4	1/0	SNR	SNR	SNR	SNR	1/0	SNR	SNR	SNR	SNR
11	1/0	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	0/0/d	SNR	SNR	SNR	SNR
74	SNR	SNR	SNR	SNR	SNR	0/0/d	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A5
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 3

GROUP : 100 MG/KG/DAY		ANIMAL NO. / SEX								
	12646/M	12655/M	12656/M	12659/M	12662/M	12664/M	12670/M	12682/M	12688/M	12695/M
STUDY DAY	ERYTHEMA+/EDEMA+/OTHER FINDINGS									
4	SNR	SNR	1/0	2/0	SNR	SNR	SNR	1/0	SNR	2/1
11	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
18	SNR	SNR	SNR	SNR	0/0/h	SNR	SNR	0/0/h	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	0/0/h	SNR	SNR	SNR	SNR	SNR
53	SNR	SNR	SNR	0/0/d	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	0/0/h	0/0/h	SNR	0/0/h	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
h = RESIDUAL TEST SUBSTANCE WITHIN DOSE SITE
NA = NOT APPLICABLE

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A5
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 4

GROUP : 450 MG/KG/DAY		ANIMAL NO. / SEX								
	12645/M	12652/M	12669/M	12671/M	12674/M	12677/M	12685/M	12690/M	12692/M	12699/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	0/0/d
53	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
60	SNR	SNR	SNR	SNR	SNR	0/0/d	SNR	SNR	SNR	SNR
67	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
74	SNR	SNR	SNR	SNR	0/0/d	0/0/d	SNR	0/0/i	SNR	DEAD
81	SNR	SNR	SNR	0/0/d	0/0/h	0/0/h	SNR	SNR	SNR	
88	SNR	SNR	SNR	0/0/d	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

d = DESQUAMATION, SNR = SCORED, NOT REMARKABLE

h = RESIDUAL TEST SUBSTANCE WITHIN DOSE SITE , i = SCABBING WITHIN DOSE SITE

NA = NOT APPLICABLE

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A5
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 5

GROUP : 750 MG/KG/DAY										
ANIMAL NO. / SEX										
12658/M	12666/M	12672/M	12673/M	12680/M	12681/M	12687/M	12689/M	12698/M	12704/M	
STUDY DAY	ERYTHEMA+/EDEMA+/OTHER FINDINGS									
4	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
11	SNR	SNR	SNR	1/0/d	SNR	SNR	SNR	SNR	SNR	SNR
18	SNR	SNR	SNR	SNR	SNR	1/0	SNR	SNR	SNR	SNR
25	0/0/d	SNR	SNR	SNR	0/0/d	0/0/d	0/0/d	0/0/d	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	0/0/d	SNR	SNR	0/0/d	SNR	SNR	SNR	SNR	SNR
50	SNR	NA	NA	NA	NA	NA	NA	NA	NA	NA
53	DEAD	SNR	SNR	SNR	0/0/d	0/0/d	SNR	SNR	0/0/d	SNR
60		SNR	SNR	SNR	0/0/d	SNR	SNR	SNR	SNR	SNR
67		SNR	SNR	SNR	0/0/d	SNR	SNR	SNR	SNR	SNR
74		SNR	SNR	0/0/i	0/0/di	SNR	SNR	0/0/d	SNR	SNR
81		SNR	SNR	0/0/j	SNR	0/0/j	SNR	SNR	SNR	SNR
88		0/0/d	0/0/d	0/0/d	0/0/d	0/0/d	NA	NA	NA	NA
89		DEAD	DEAD	DEAD	DEAD	DEAD	SNR	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
i = SCABBING WITHIN DOSE SITE , j = PINPOINT SCABBING
NA = NOT APPLICABLE

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A5
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 6

GROUP :		UNTREATED									ANIMAL NO. / SEX	
		12705/F	12712/F	12716/F	12724/F	12730/F	12733/F	12734/F	12736/F	12737/F	12748/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	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	0/0/d	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	
60	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	0/0/d	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

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PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A5
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL DERMAL OBSERVATIONS

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GROUP : 0 MG/KG/DAY		ANIMAL NO. / SEX								
	12706/F	12708/F	12711/F	12714/F	12718/F	12721/F	12744/F	12752/F	12757/F	12758/F
STUDY DAY	ERYTHEMA+/EDEMA+/OTHER FINDINGS									
4	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
11	SNR	SNR	1/0	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	1/0	SNR	SNR
39	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
46	SNR	SNR	0/0/d	SNR	SNR	SNR	SNR	1/0/i	SNR	SNR
53	SNR	SNR	0/0/d	SNR	SNR	SNR	SNR	2/0	SNR	SNR
60	SNR	SNR	SNR	SNR	SNR	SNR	SNR	1/0	SNR	SNR
67	SNR	SNR	SNR	SNR	SNR	SNR	SNR	0/0/i	SNR	SNR
74	SNR	SNR	0/0/d	SNR	SNR	SNR	0/0/d	1/0/d	SNR	SNR
81	SNR	SNR	SNR	1/0	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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NA = NOT APPLICABLE

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A5
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 8

GROUP : 100 MG/KG/DAY		ANIMAL NO. / SEX									
		12707/F	12715/F	12722/F	12738/F	12740/F	12743/F	12746/F	12753/F	12754/F	12759/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	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	0/0/d	SNR	0/0/d	SNR	SNR	SNR	SNR
81	0/0/h	SNR	0/0/h	SNR	SNR	0/0/h	SNR	SNR	SNR	SNR	SNR
88	0/0/d	0/0/d	0/0/d	SNR	0/0/d	NA	NA	NA	NA	NA	NA
89	DEAD	DEAD	DEAD	DEAD	DEAD	SNR	SNR	SNR	0/0/d		SNR

+ = REFER TO DRAIZE SCALE FOR DERMAL SCORING CRITERIA
SEX CODE: M = MALE F = FEMALE
d = DESQUAMATION, SNR = SCORED, NOT REMARKABLE
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NA = NOT APPLICABLE

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A5
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL DERMAL OBSERVATIONS

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GROUP : 450 MG/KG/DAY		ANIMAL NO. / SEX								
	12709/F	12719/F	12726/F	12727/F	12728/F	12732/F	12735/F	12747/F	12760/F	12763/F
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	1/0	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	0/0/d	SNR	0/0/d	SNR	SNR	SNR	SNR	SNR	SNR
53	SNR	SNR	0/0/d	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	0/0/d	0/0/d	0/0/d	SNR	SNR	0/0/d	SNR	0/0/d
81	0/0/h	SNR	SNR	SNR	SNR	0/0/h	0/0/h	0/0/h	0/0/h	0/0/h
88	0/0/d	0/0/d	0/0/d	0/0/d	0/0/d	NA	NA	NA	NA	NA
89	DEAD	DEAD	DEAD	DEAD	DEAD	SNR	SNR	SNR	0/0/d	SNR

+ = 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

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A5
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL DERMAL OBSERVATIONS

PAGE 10

GROUP : 750 MG/KG/DAY		ANIMAL NO. / SEX								
	12720/F	12723/F	12731/F	12739/F	12742/F	12749/F	12750/F	12755/F	12761/F	12764/F
STUDY DAY	ERYTHEMA+/EDEMA+/OTHER FINDINGS									
4	SNR	SNR	SNR	SNR	SNR	0/0/d	0/0/d	SNR	SNR	SNR
11	SNR	SNR	SNR	SNR	SNR	SNR	0/0/d	SNR	SNR	SNR
18	SNR	SNR	SNR	SNR	SNR	0/0/d	0/0/d	SNR	SNR	0/0/d
25	0/0/d	0/0/d	SNR	SNR	0/0/d	SNR	0/0/d	SNR	SNR	0/0/d
32	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR	SNR
39	SNR	SNR	SNR	SNR	SNR	SNR	0/0/d	SNR	SNR	SNR
46	SNR	0/0/d	SNR	0/0/d	SNR	SNR	0/0/d	0/0/j	0/0/d	SNR
53	SNR	0/0/d	SNR	SNR	0/0/d	SNR	0/0/d	0/0/i	0/0/d	0/0/d
60	0/0/d	SNR	SNR	SNR	SNR	SNR	0/0/d	0/0/di	SNR	SNR
67	SNR	SNR	SNR	SNR	SNR	SNR	SNR	0/0/j	SNR	0/0/j
74	0/0/d	0/0/d	SNR	SNR	SNR	0/0/d	0/0/d	0/0/j	SNR	0/0/di
81	0/0/d	SNR	0/0/d	0/0/d	SNR	0/0/d	0/0/d	0/0/j	SNR	0/0/i
88	0/0/d	0/0/d	0/0/d	0/0/d	0/0/d	NA	NA	NA	NA	NA
89	DEAD	DEAD	DEAD	DEAD	DEAD	0/0/d	0/0/d	0/0/jd	0/0/d	0/0/d

+ = REFER TO DRAIZE SCALE FOR DERMAL SCORING CRITERIA
SEX CODE: M = MALE F = FEMALE
d = DESQUAMATION, SNR = SCORED, NOT REMARKABLE
i = SCABBING WITHIN DOSE SITE , j = PINPOINT SCABBING
NA = NOT APPLICABLE

PIDerv3.13
10/13/2011
R:10/14/2011

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 1

WEEK	-2	-1	0	1	MALE GROUP: 2	UNTREATED 3	4	5
ANIMAL								
12649	182.	225.	273.	320.	352.	387.	420.	444.
12654	195.	246.	292.	333.	357.	379.	407.	428.
12660	174.	208.	257.	280.	307.	327.	350.	373.
12668	174.	212.	260.	281.	314.	344.	365.	391.
12684	192.	233.	293.	324.	367.	402.	433.	454.
12686	177.	221.	268.	307.	352.	393.	426.	454.
12691	182.	217.	260.	277.	292.	308.	327.	344.
12694	195.	226.	277.	304.	338.	362.	386.	414.
12701	187.	227.	283.	312.	340.	377.	407.	435.
12703	173.	209.	253.	287.	334.	360.	381.	404.
MEAN	183.	222.	272.	303.	335.	364.	390.	414.
S.D.	8.7	11.7	14.4	20.2	24.0	30.1	34.8	36.4
S.E.	2.8	3.7	4.6	6.4	7.6	9.5	11.0	11.5
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 2

WEEK	-2	-1	0	1	MALE GROUP: 0 MG/KG/DAY	2	3	4	5
ANIMAL									
12648	184.	227.	272.	294.	323.	355.	387.	403.	
12650	189.	220.	279.	309.	339.	363.	372.	385.	
12661	175.	212.	261.	288.	321.	351.	375.	388.	
12675	182.	234.	282.	312.	334.	371.	401.	428.	
12676	178.	203.	257.	282.	328.	360.	385.	402.	
12679	186.	235.	280.	315.	354.	393.	425.	457.	
12683	186.	222.	277.	299.	335.	366.	395.	427.	
12693	168.	209.	249.	263.	292.	304.	321.	343.	
12697	178.	222.	273.	277.	320.	337.	361.	387.	
12700	190.	229.	283.	320.	347.	380.	403.	430.	
MEAN	182.	221.	271.	296.	329.	358.	383.	405.	
S.D.	6.9	10.6	11.7	18.5	17.2	24.5	28.2	32.0	
S.E.	2.2	3.4	3.7	5.9	5.4	7.7	8.9	10.1	
N	10	10	10	10	10	10	10	10	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 3

WEEK	-2	-1	0	1	2	3	4	5
ANIMAL								
12646	180.	212.	269.	301.	332.	363.	378.	394.
12655	175.	209.	260.	275.	307.	324.	355.	371.
12656	174.	207.	252.	291.	329.	358.	377.	402.
12659	185.	226.	278.	303.	354.	385.	419.	445.
12662	189.	230.	281.	317.	351.	380.	406.	425.
12664	185.	235.	281.	310.	352.	378.	408.	434.
12670	188.	234.	282.	304.	345.	376.	403.	427.
12682	185.	221.	269.	298.	346.	382.	397.	423.
12688	173.	217.	253.	255.	292.	299.	321.	335.
12695	189.	227.	274.	308.	346.	377.	412.	436.
MEAN	182.	222.	270.	296.	335.	362.	388.	409.
S.D.	6.3	10.2	11.5	18.5	20.9	28.6	30.5	34.4
S.E.	2.0	3.2	3.6	5.8	6.6	9.0	9.6	10.9
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 4

WEEK	-2	-1	0	1	2	3	4	5
MALE GROUP: 450 MG/KG/DAY								
ANIMAL								
12645	166.	199.	245.	271.	308.	329.	342.	364.
12652	194.	235.	290.	340.	387.	428.	453.	480.
12669	186.	218.	260.	293.	313.	328.	348.	363.
12671	177.	220.	261.	299.	327.	352.	382.	397.
12674	178.	209.	249.	275.	300.	322.	343.	367.
12677	182.	229.	275.	301.	351.	384.	409.	446.
12685	192.	243.	294.	327.	363.	391.	414.	439.
12690	186.	212.	272.	305.	350.	381.	405.	437.
12692	180.	226.	271.	288.	322.	344.	365.	388.
12699	186.	224.	277.	316.	353.	388.	418.	441.
MEAN	183.	222.	269.	302.	337.	365.	388.	412.
S.D.	8.1	12.9	16.0	21.7	27.7	34.8	37.8	41.5
S.E.	2.6	4.1	5.1	6.9	8.8	11.0	11.9	13.1
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 5

WEEK	-2	-1	0	1	2	3	4	5
MALE GROUP: 750 MG/KG/DAY								
ANIMAL								
12658	185.	220.	263.	293.	333.	359.	381.	401.
12666	171.	207.	248.	278.	299.	306.	318.	339.
12672	181.	232.	280.	295.	320.	332.	348.	358.
12673	193.	232.	277.	296.	338.	363.	394.	410.
12680	178.	227.	266.	277.	330.	354.	374.	389.
12681	195.	243.	282.	311.	335.	362.	383.	387.
12687	190.	223.	273.	293.	326.	342.	354.	360.
12689	184.	219.	266.	295.	329.	353.	366.	383.
12698	177.	208.	253.	269.	296.	305.	315.	327.
12704	171.	210.	246.	260.	294.	311.	327.	338.
MEAN	183.	222.	265.	287.	320.	339.	356.	369.
S.D.	8.5	11.8	13.0	15.2	17.1	23.6	28.4	28.8
S.E.	2.7	3.7	4.1	4.8	5.4	7.5	9.0	9.1
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 6

WEEK	6	7	8	9	MALE GROUP: 10	UNTREATED 11	12	12'
ANIMAL								
12649	484.	502.	531.	525.	537.	543.	556.	551.
12654	451.	451.	483.	475.	499.	511.	517.	513.
12660	386.	397.	416.	421.	430.	427.	431.	426.
12668	404.	418.	434.	422.	451.	457.	465.	469.
12684	480.	499.	516.	503.	539.	545.	553.	551.
12686	484.	503.	530.	555.	575.	591.	605.	598.
12691	365.	372.	387.	398.	408.	423.	438.	426.
12694	440.	441.	465.	443.	474.	495.	498.	498.
12701	461.	478.	517.	525.	529.	555.	557.	562.
12703	423.	445.	456.	468.	476.	490.	482.	499.
MEAN	438.	451.	474.	474.	492.	504.	510.	509.
S.D.	42.3	45.6	50.6	52.6	53.4	56.2	57.4	57.6
S.E.	13.4	14.4	16.0	16.6	16.9	17.8	18.1	18.2
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
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TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 7

WEEK	6	7	8	9	MALE GROUP: 0 MG/KG/DAY 10	11	12	12'
ANIMAL								
12648	414.	427.	449.	457.	467.	479.	489.	489.
12650	413.	425.	439.	450.	453.	467.	467.	464.
12661	408.	406.	427.	436.	455.	456.	469.	461.
12675	458.	475.	500.	512.	525.	545.	540.	549.
12676	429.	449.	458.	467.	476.	481.	483.	485.
12679	493.	512.	532.	553.	567.	578.	583.	516.
12683	450.	476.	507.	511.	525.	515.	567.	553.
12693	363.	375.	389.	386.	408.	403.	433.	425.
12697	410.	420.	443.	455.	471.	481.	496.	480.
12700	432.	453.	469.	488.	510.	520.	532.	528.
MEAN	427.	442.	461.	472.	486.	493.	506.	495.
S.D.	34.9	39.6	42.2	46.7	45.9	49.2	47.9	41.1
S.E.	11.0	12.5	13.4	14.8	14.5	15.6	15.1	13.0
N	10	10	10	10	10	10	10	10

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SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 8

WEEK	6	7	8	9	MALE GROUP: 100 MG/KG/DAY 10	11	12	12'
ANIMAL								
12646	420.	430.	444.	451.	462.	473.	487.	482.
12655	395.	411.	428.	439.	448.	458.	465.	477.
12656	421.	436.	450.	454.	467.	466.	475.	476.
12659	478.	493.	503.	524.	542.	557.	546.	557.
12662	435.	446.	474.	481.	489.	504.	507.	514.
12664	465.	479.	494.	500.	512.	532.	528.	534.
12670	451.	469.	490.	503.	528.	548.	547.	549.
12682	446.	463.	482.	493.	498.	504.	506.	506.
12688	347.	353.	368.	375.	386.	392.	392.	384.
12695	463.	467.	493.	500.	511.	513.	509.	516.
MEAN	432.	445.	463.	472.	484.	495.	496.	500.
S.D.	38.9	40.5	41.4	43.5	45.6	49.2	45.7	49.6
S.E.	12.3	12.8	13.1	13.8	14.4	15.6	14.5	15.7
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 9

WEEK	6	7	8	9	MALE GROUP: 450 MG/KG/DAY 10	11	12	12'
ANIMAL								
12645	384.	394.	405.	424.	433.	439.	431.	419.
12652	506.	517.	530.	535.	543.	523.	556.	542.
12669	372.	382.	406.	413.	427.	431.	422.	431.
12671	417.	424.	406.	443.	448.	459.	465.	461.
12674	385.	380.	413.	435.	447.	462.	471.	461.
12677	464.	482.	491.	505.	520.	528.	526.	518.
12685	455.	466.	483.	488.	495.	495.	495.	482.
12690	460.	476.	494.	506.	522.	529.	532.	533.
12692	412.	419.	436.	446.	453.	452.	469.	465.
12699	465.	469.	499.	506.				
MEAN	432.	441.	456.	470.	476.	480.	485.	479.
S.D.	44.3	47.5	47.8	42.5	43.7	39.4	45.8	43.5
S.E.	14.0	15.0	15.1	13.4	14.6	13.1	15.3	14.5
N	10	10	10	10	9	9	9	9

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 10

WEEK	6	7	8	9	MALE GROUP: 750 MG/KG/DAY 10	11	12	12'
ANIMAL								
12658	412.	427.						
12666	355.	359.	374.	375.	386.	387.	386.	378.
12672	384.	384.	403.	408.	415.	416.	408.	419.
12673	425.	430.	460.	459.	474.	479.	487.	473.
12680	403.	410.	422.	429.	434.	432.	437.	441.
12681	408.	413.	426.	427.	428.	440.	438.	419.
12687	369.	366.	381.	394.	397.	396.	387.	399.
12689	394.	391.	407.	424.	428.	435.	425.	416.
12698	339.	321.	342.	350.	357.	356.	356.	322.
12704	360.	367.	383.	390.	395.	385.	398.	397.
MEAN	385.	387.	400.	406.	413.	414.	414.	407.
S.D.	28.2	34.4	34.5	32.8	33.7	37.0	38.3	42.0
S.E.	8.9	10.9	11.5	10.9	11.2	12.3	12.8	14.0
N	10	10	9	9	9	9	9	9

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 11

WEEK	-2	-1	0	1	FEMALE GROUP: 2	UNTREATED 3	4	5
ANIMAL								
12705	147.	178.	202.	232.	258.	261.	281.	286.
12712	148.	168.	192.	223.	241.	258.	269.	286.
12716	142.	148.	180.	197.	215.	227.	244.	255.
12724	149.	173.	197.	228.	243.	265.	278.	288.
12730	161.	189.	214.	241.	247.	278.	299.	314.
12733	143.	171.	206.	218.	251.	249.	272.	269.
12734	145.	166.	196.	209.	227.	236.	245.	252.
12736	145.	166.	190.	196.	219.	235.	244.	254.
12737	145.	159.	188.	207.	227.	243.	249.	266.
12748	139.	158.	187.	193.	204.	217.	230.	237.
MEAN	146.	168.	195.	214.	233.	247.	261.	271.
S.D.	5.9	11.4	10.0	16.6	17.5	18.8	21.7	22.8
S.E.	1.9	3.6	3.2	5.2	5.5	6.0	6.9	7.2
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 12

WEEK	-2	-1	0	1	2	3	4	5
FEMALE GROUP: 0 MG/KG/DAY								
ANIMAL								
12706	140.	167.	197.	215.	229.	251.	266.	276.
12708	167.	175.	216.	212.	231.	242.	249.	269.
12711	148.	173.	198.	215.	226.	231.	243.	245.
12714	142.	163.	178.	189.	219.	233.	242.	253.
12718	144.	164.	190.	220.	235.	250.	260.	266.
12721	143.	154.	185.	202.	221.	242.	255.	266.
12744	149.	174.	205.	225.	244.	260.	267.	267.
12752	143.	158.	196.	214.	231.	249.	258.	278.
12757	147.	168.	189.	190.	225.	235.	250.	262.
12758	152.	180.	205.	216.	237.	243.	254.	272.
MEAN	148.	168.	196.	210.	230.	244.	254.	265.
S.D.	7.8	8.1	11.0	12.2	7.6	9.1	8.6	10.1
S.E.	2.5	2.6	3.5	3.9	2.4	2.9	2.7	3.2
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 13

FEMALE GROUP: 100 MG/KG/DAY								
WEEK	-2	-1	0	1	2	3	4	5
ANIMAL								
12707	150.	165.	195.	206.	223.	231.	239.	246.
12715	154.	168.	206.	210.	241.	261.	265.	278.
12722	147.	161.	191.	216.	236.	246.	261.	269.
12738	139.	167.	200.	221.	235.	257.	275.	289.
12740	153.	176.	202.	205.	237.	230.	254.	261.
12743	164.	190.	215.	234.	267.	283.	288.	295.
12746	143.	172.	196.	216.	232.	253.	261.	272.
12753	142.	157.	192.	204.	222.	236.	254.	260.
12754	136.	148.	173.	190.	199.	222.	234.	242.
12759	139.	173.	204.	208.	237.	246.	256.	269.
MEAN	147.	168.	197.	211.	233.	247.	259.	268.
S.D.	8.6	11.4	11.2	11.7	17.1	18.0	15.7	16.9
S.E.	2.7	3.6	3.5	3.7	5.4	5.7	5.0	5.3
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 14

FEMALE GROUP: 450 MG/KG/DAY								
WEEK	-2	-1	0	1	2	3	4	5
ANIMAL								
12709	147.	169.	201.	215.	233.	255.	267.	273.
12719	160.	182.	209.	211.	230.	244.	250.	255.
12726	143.	158.	175.	186.	194.	211.	212.	220.
12727	146.	163.	197.	216.	241.	246.	265.	263.
12728	152.	174.	201.	211.	245.	264.	276.	286.
12732	140.	160.	190.	195.	211.	224.	232.	243.
12735	148.	154.	183.	187.	202.	211.	219.	230.
12747	150.	172.	199.	217.	236.	252.	263.	272.
12760	144.	177.	193.	213.	231.	243.	262.	274.
12763	152.	167.	201.	215.	218.	236.	246.	248.
MEAN	148.	168.	195.	207.	224.	239.	249.	256.
S.D.	5.7	8.9	10.0	12.3	17.1	18.1	21.7	21.1
S.E.	1.8	2.8	3.2	3.9	5.4	5.7	6.9	6.7
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 15

FEMALE GROUP: 750 MG/KG/DAY								
WEEK	-2	-1	0	1	2	3	4	5
ANIMAL								
12720	148.	173.	201.	216.	241.	240.	255.	259.
12723	148.	172.	194.	205.	205.	223.	225.	227.
12731	149.	167.	197.	201.	208.	207.	213.	221.
12739	140.	149.	177.	197.	223.	232.	247.	251.
12742	154.	169.	202.	219.	222.	234.	239.	239.
12749	139.	155.	175.	189.	193.	203.	211.	216.
12750	149.	165.	193.	216.	239.	252.	271.	275.
12755	148.	158.	182.	193.	206.	217.	224.	236.
12761	159.	176.	199.	219.	248.	257.	271.	279.
12764	164.	184.	217.	238.	267.	281.	303.	297.
MEAN	150.	167.	194.	209.	225.	235.	246.	250.
S.D.	7.7	10.5	12.8	15.0	23.2	24.0	29.6	27.1
S.E.	2.4	3.3	4.0	4.7	7.3	7.6	9.4	8.6
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 16

WEEK	6	7	8	9	FEMALE GROUP: 10	UNTREATED 11	12	12'
ANIMAL								
12705	297.	302.	284.	299.	314.	314.	315.	319.
12712	297.	288.	294.	316.	311.	313.	329.	320.
12716	266.	272.	283.	287.	285.	297.	296.	295.
12724	286.	307.	317.	313.	311.	319.	326.	331.
12730	317.	329.	337.	348.	352.	354.	355.	355.
12733	297.	305.	317.	304.	319.	306.	323.	319.
12734	259.	258.	269.	263.	275.	267.	274.	261.
12736	268.	283.	288.	296.	305.	306.	314.	316.
12737	266.	277.	289.	285.	287.	298.	296.	285.
12748	244.	251.	253.	266.	267.	269.	274.	262.
MEAN	280.	287.	293.	298.	303.	304.	310.	306.
S.D.	22.5	24.0	24.7	25.0	24.9	24.9	25.5	30.2
S.E.	7.1	7.6	7.8	7.9	7.9	7.9	8.1	9.5
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 17

	FEMALE GROUP: 0 MG/KG/DAY							
WEEK	6	7	8	9	10	11	12	12'
ANIMAL								
12706	279.	284.	292.	303.	295.	298.	304.	294.
12708	278.	288.	286.	292.	296.	293.	299.	292.
12711	256.	259.	265.	266.	270.	263.	265.	257.
12714	262.	264.	264.	274.	283.	286.	284.	286.
12718	273.	281.	292.	294.	303.	298.	290.	287.
12721	279.	288.	304.	313.	307.	317.	319.	329.
12744	285.	284.	294.	297.	302.	306.	299.	311.
12752	292.	289.	300.	312.	315.	317.	317.	304.
12757	267.	277.	275.	283.	288.	286.	289.	286.
12758	274.	285.	291.	292.	297.	305.	296.	300.
MEAN	275.	280.	286.	293.	296.	297.	296.	295.
S.D.	10.7	10.4	13.8	15.2	12.8	16.2	15.8	18.8
S.E.	3.4	3.3	4.4	4.8	4.1	5.1	5.0	6.0
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 18

	FEMALE GROUP: 100 MG/KG/DAY							
WEEK	6	7	8	9	10	11	12	12'
ANIMAL								
12707	257.	262.	266.	271.	271.	274.	269.	270.
12715	275.	284.	297.	294.	288.	311.	299.	298.
12722	277.	278.	295.	294.	289.	298.	290.	300.
12738	285.	296.	307.	318.	309.	316.	308.	329.
12740	269.	267.	277.	277.	280.	282.	284.	282.
12743	298.	313.	319.	316.	320.	317.	329.	330.
12746	269.	285.	293.	290.	288.	296.	299.	300.
12753	269.	281.	287.	280.	286.	289.	292.	297.
12754	247.	253.	263.	270.	267.	268.	270.	274.
12759	287.	285.	297.	301.	298.	300.	310.	311.
MEAN	273.	280.	290.	291.	290.	295.	295.	299.
S.D.	14.8	17.1	17.5	17.1	16.1	17.0	18.4	20.5
S.E.	4.7	5.4	5.5	5.4	5.1	5.4	5.8	6.5
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 19

	FEMALE GROUP: 450 MG/KG/DAY							
WEEK	6	7	8	9	10	11	12	12'
ANIMAL								
12709	277.	277.	290.	289.	285.	286.	281.	285.
12719	261.	265.	270.	269.	278.	286.	282.	284.
12726	232.	235.	235.	243.	248.	243.	246.	251.
12727	277.	273.	279.	294.	297.	295.	300.	285.
12728	297.	301.	301.	314.	313.	314.	313.	329.
12732	248.	252.	267.	262.	277.	268.	273.	273.
12735	245.	248.	257.	260.	263.	263.	269.	267.
12747	276.	277.	282.	284.	281.	288.	289.	286.
12760	276.	276.	280.	289.	290.	286.	300.	296.
12763	254.	256.	262.	266.	266.	267.	269.	276.
MEAN	264.	266.	272.	277.	280.	280.	282.	283.
S.D.	19.6	18.9	18.6	20.7	18.3	19.8	19.4	20.4
S.E.	6.2	6.0	5.9	6.5	5.8	6.3	6.1	6.4
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A6
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHTS [G]

PAGE 20

	FEMALE GROUP: 750 MG/KG/DAY							
WEEK	6	7	8	9	10	11	12	12'
ANIMAL								
12720	284.	283.	287.	298.	298.	295.	283.	296.
12723	230.	236.	242.	241.	239.	238.	242.	230.
12731	222.	222.	224.	232.	229.	237.	238.	226.
12739	261.	259.	268.	268.	274.	276.	272.	267.
12742	254.	255.	263.	260.	271.	274.	270.	267.
12749	220.	222.	236.	237.	237.	240.	246.	229.
12750	291.	288.	298.	300.	303.	317.	333.	308.
12755	240.	243.	255.	257.	264.	266.	263.	247.
12761	289.	283.	292.	301.	301.	294.	289.	287.
12764	315.	310.	317.	319.	320.	317.	315.	313.
MEAN	261.	260.	268.	271.	274.	275.	275.	267.
S.D.	33.0	30.0	29.9	31.0	31.6	30.6	31.1	33.2
S.E.	10.4	9.5	9.5	9.8	10.0	9.7	9.8	10.5
N	10	10	10	10	10	10	10	10

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PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 1

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																
12649	43.		48.		47.		32.		35.		33.		24.		40.	
12654	51.		46.		41.		24.		22.		28.		21.		23.	
12660	34.		49.		23.		27.		20.		23.		23.		13.	
12668	38.		48.		21.		33.		30.		21.		26.		13.	
12684	41.		60.		31.		43.		35.		31.		21.		26.	
12686	44.		47.		39.		45.		41.		33.		28.		30.	
12691	35.		43.		17.		15.		16.		19.		17.		21.	
12694	31.		51.		27.		34.		24.		24.		28.		26.	
12701	40.		56.		29.		28.		37.		30.		28.		26.	
12703	36.		44.		34.		47.		26.		21.		23.		19.	
MEAN	39.		49.		31.		33.		29.		26.		24.		24.	
S.D.	5.8		5.3		9.5		10.0		8.2		5.3		3.7		8.0	
S.E.	1.8		1.7		3.0		3.2		2.6		1.7		1.2		2.5	
N	10		10		10		10		10		10		10		10	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
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															
12648	43.		45.		22.		29.		32.		32.		16.		11.
12650	31.		59.		30.		30.		24.		9.		13.		28.
12661	37.		49.		27.		33.		30.		24.		13.		20.
12675	52.		48.		30.		22.		37.		30.		27.		30.
12676	25.		54.		25.		46.		32.		25.		17.		27.
12679	49.		45.		35.		39.		39.		32.		32.		36.
12683	36.		55.		22.		36.		31.		29.		32.		23.
12693	41.		40.		14.		29.		12.		17.		22.		20.
12697	44.		51.		4.		43.		17.		24.		26.		23.
12700	39.		54.		37.		27.		33.		23.		27.		2.
MEAN	40.		50.		25.		33.		29.		25.		23.		22.
S.D.	8.0		5.7		9.9		7.5		8.6		7.2		7.4		9.7
S.E.	2.5		1.8		3.1		2.4		2.7		2.3		2.3		3.1
N	10		10		10		10		10		10		10		10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 3

MALE GROUP: 100 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															
12646	32.		57.		32.		31.		31.		15.		16.		26.
12655	34.		51.		15.		32.		17.		31.		16.		24.
12656	33.		45.		39.		38.		29.		19.		25.		19.
12659	41.		52.		25.		51.		31.		34.		26.		33.
12662	41.		51.		36.		34.		29.		26.		19.		10.
12664	50.		46.		29.		42.		26.		30.		26.		31.
12670	46.		48.		22.		41.		31.		27.		24.		24.
12682	36.		48.		29.		48.		36.		15.		26.		23.
12688	44.		36.		2.		37.		7.		22.		14.		12.
12695	38.		47.		34.		38.		31.		35.		24.		27.
MEAN	40.		48.		26.		39.		27.		25.		22.		23.
S.D.	6.0		5.5		11.1		6.5		8.5		7.4		4.8		7.4
S.E.	1.9		1.7		3.5		2.1		2.7		2.3		1.5		2.3
N	10		10		10		10		10		10		10		10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 4

MALE GROUP: 450 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															
12645	33.		46.		26.		37.		21.		13.		22.		20.
12652	41.		55.		50.		47.		41.		25.		27.		26.
12669	32.		42.		33.		20.		15.		20.		15.		9.
12671	43.		41.		38.		28.		25.		30.		15.		20.
12674	31.		40.		26.		25.		22.		21.		24.		18.
12677	47.		46.		26.		50.		33.		25.		37.		18.
12685	51.		51.		33.		36.		28.		23.		25.		16.
12690	26.		60.		33.		45.		31.		24.		32.		23.
12692	46.		45.		17.		34.		22.		21.		23.		24.
12699	38.		53.		39.		37.		35.		30.		23.		24.
MEAN	39.		48.		32.		36.		27.		23.		24.		20.
S.D.	8.1		6.6		9.1		9.7		7.8		5.0		6.8		5.0
S.E.	2.6		2.1		2.9		3.1		2.5		1.6		2.1		1.6
N	10		10		10		10		10		10		10		10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 5

MALE GROUP: 750 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															
12658	35.		43.		30.		40.		26.		22.		20.		11.
12666	36.		41.		30.		21.		7.		12.		21.		16.
12672	51.		48.		15.		25.		12.		16.		10.		26.
12673	39.		45.		19.		42.		25.		31.		16.		15.
12680	49.		39.		11.		53.		24.		20.		15.		14.
12681	48.		39.		29.		24.		27.		21.		4.		21.
12687	33.		50.		20.		33.		16.		12.		6.		9.
12689	35.		47.		29.		34.		24.		13.		17.		11.
12698	31.		45.		16.		27.		9.		10.		12.		12.
12704	39.		36.		14.		34.		17.		16.		11.		22.
MEAN	40.		43.		21.		33.		19.		17.		13.		16.
S.D.	7.2		4.5		7.5		9.8		7.5		6.3		5.6		5.6
S.E.	2.3		1.4		2.4		3.1		2.4		2.0		1.8		1.8
N	10		10		10		10		10		10		10		10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 6

WEEK	MALE GROUP: UNTREATED									
	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 12'			
ANIMAL										
12649	18.	29.	-6.	12.	6.	13.	-5.			
12654	0.	32.	-8.	24.	12.	6.	-4.			
12660	11.	19.	5.	9.	-3.	4.	-5.			
12668	14.	16.	-12.	29.	6.	8.	4.			
12684	19.	17.	-13.	36.	6.	8.	-2.			
12686	19.	27.	25.	20.	16.	14.	-7.			
12691	7.	15.	11.	10.	15.	15.	-12.			
12694	1.	24.	-22.	31.	21.	3.	0.			
12701	17.	39.	8.	4.	26.	2.	5.			
12703	22.	11.	12.	8.	14.	-8.	17.			
MEAN	13.	23.	0.	18.	12.	7.	-1.			
S.D.	7.8	8.8	14.4	11.2	8.4	6.9	8.1			
S.E.	2.5	2.8	4.6	3.5	2.7	2.2	2.5			
N	10	10	10	10	10	10	10			

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 7

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											
12648	13.	22.	8.	10.	12.	10.	0.				
12650	12.	14.	11.	3.	14.	0.	-3.				
12661	-2.	21.	9.	19.	1.	13.	-8.				
12675	17.	25.	12.	13.	20.	-5.	9.				
12676	20.	9.	9.	9.	5.	2.	2.				
12679	19.	20.	21.	14.	11.	5.	-67.				
12683	26.	31.	4.	14.	-10.	52.	-14.				
12693	12.	14.	-3.	22.	-5.	30.	-8.				
12697	10.	23.	12.	16.	10.	15.	-16.				
12700	21.	16.	19.	22.	10.	12.	-4.				
MEAN	15.	20.	10.	14.	7.	13.	-11.				
S.D.	7.7	6.4	6.8	6.0	9.1	16.7	21.1				
S.E.	2.4	2.0	2.2	1.9	2.9	5.3	6.7				
N	10	10	10	10	10	10	10				

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 8

MALE GROUP: 100 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														
12646	10.		14.		7.		11.		11.		14.		-5.	
12655	16.		17.		11.		9.		10.		7.		12.	
12656	15.		14.		4.		13.		-1.		9.		1.	
12659	15.		10.		21.		18.		15.		-11.		11.	
12662	11.		28.		7.		8.		15.		3.		7.	
12664	14.		15.		6.		12.		20.		-4.		6.	
12670	18.		21.		13.		25.		20.		-1.		2.	
12682	17.		19.		11.		5.		6.		2.		0.	
12688	6.		15.		7.		11.		6.		0.		-8.	
12695	4.		26.		7.		11.		2.		-4.		7.	
MEAN	13.		18.		9.		12.		10.		2.		3.	
S.D.	4.7		5.7		4.9		5.6		7.2		7.2		6.5	
S.E.	1.5		1.8		1.6		1.8		2.3		2.3		2.1	
N	10		10		10		10		10		10		10	

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SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 9

MALE GROUP: 450 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														
12645	10.		11.		19.		9.		6.		-8.		-12.	
12652	11.		13.		5.		8.		-20.		33.		-14.	
12669	10.		24.		7.		14.		4.		-9.		9.	
12671	7.		-18.		37.		5.		11.		6.		-4.	
12674	-5.		33.		22.		12.		15.		9.		-10.	
12677	18.		9.		14.		15.		8.		-2.		-8.	
12685	11.		17.		5.		7.		0.		0.		-13.	
12690	16.		18.		12.		16.		7.		3.		1.	
12692	7.		17.		10.		7.		-1.		17.		-4.	
12699	4.		30.		7.									
MEAN	9.		15.		14.		10.		3.		5.		-6.	
S.D.	6.4		14.1		10.0		4.0		10.1		13.2		7.5	
S.E.	2.0		4.5		3.2		1.3		3.4		4.4		2.5	
N	10		10		10		9		9		9		9	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 10

MALE GROUP: 750 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														
12658	15.													
12666	4.			15.		1.		11.		1.		-1.		-8.
12672	0.			19.		5.		7.		1.		-8.		11.
12673	5.			30.		-1.		15.		5.		8.		-14.
12680	7.			12.		7.		5.		-2.		5.		4.
12681	5.			13.		1.		1.		12.		-2.		-19.
12687	-3.			15.		13.		3.		-1.		-9.		12.
12689	-3.			16.		17.		4.		7.		-10.		-9.
12698	-18.			21.		8.		7.		-1.		0.		-34.
12704	7.			16.		7.		5.		-10.		13.		-1.
MEAN	2.			17.		6.		6.		1.		0.		-6.
S.D.	8.8			5.5		5.9		4.3		6.2		8.0		14.9
S.E.	2.8			1.8		2.0		1.4		2.1		2.7		5.0
N	10			9		9		9		9		9		9

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SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 11

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																
12705	31.			24.		30.		26.		3.		20.		5.		11.
12712	20.			24.		31.		18.		17.		11.		17.		11.
12716	6.			32.		17.		18.		12.		17.		11.		11.
12724	24.			24.		31.		15.		22.		13.		10.		-2.
12730	28.			25.		27.		6.		31.		21.		15.		3.
12733	28.			35.		12.		33.		-2.		23.		-3.		28.
12734	21.			30.		13.		18.		9.		9.		7.		7.
12736	21.			24.		6.		23.		16.		9.		10.		14.
12737	14.			29.		19.		20.		16.		6.		17.		0.
12748	19.			29.		6.		11.		13.		13.		7.		7.
MEAN		21.		28.		19.		19.		14.		14.		10.		9.
S.D.		7.3		4.0		10.0		7.6		9.3		5.8		6.1		8.5
S.E.		2.3		1.3		3.2		2.4		2.9		1.8		1.9		2.7
N		10		10		10		10		10		10		10		10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 12

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															
12706	27.		30.		18.		14.	22.		15.		10.		3.	
12708	8.		41.		-4.		19.	11.		7.		20.		9.	
12711	25.		25.		17.		11.	5.		12.		2.		11.	
12714	21.		15.		11.		30.	14.		9.		11.		9.	
12718	20.		26.		30.		15.	15.		10.		6.		7.	
12721	11.		31.		17.		19.	21.		13.		11.		13.	
12744	25.		31.		20.		19.	16.		7.		0.		18.	
12752	15.		38.		18.		17.	18.		9.		20.		14.	
12757	21.		21.		1.		35.	10.		15.		12.		5.	
12758	28.		25.		11.		21.	6.		11.		18.		2.	
MEAN	20.		28.		14.		20.	14.		11.		11.		9.	
S.D.	6.8		7.7		9.7		7.3	5.8		2.9		7.0		5.1	
S.E.	2.1		2.4		3.1		2.3	1.8		0.9		2.2		1.6	
N	10		10		10		10	10		10		10		10	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 13

FEMALE GROUP: 100 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																
12707	15.			30.		11.		17.		8.		8.		7.		11.
12715	14.			38.		4.		31.		20.		4.		13.		-3.
12722	14.			30.		25.		20.		10.		15.		8.		8.
12738	28.			33.		21.		14.		22.		18.		14.		-4.
12740	23.			26.		3.		32.		-7.		24.		7.		8.
12743	26.			25.		19.		33.		16.		5.		7.		3.
12746	29.			24.		20.		16.		21.		8.		11.		-3.
12753	15.			35.		12.		18.		14.		18.		6.		9.
12754	12.			25.		17.		9.		23.		12.		8.		5.
12759	34.			31.		4.		29.		9.		10.		13.		18.
MEAN		21.		30.		14.		22.		14.		12.		9.		5.
S.D.		7.9		4.7		8.0		8.6		9.1		6.4		3.0		7.1
S.E.		2.5		1.5		2.5		2.7		2.9		2.0		1.0		2.2
N		10		10		10		10		10		10		10		10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 14

FEMALE GROUP: 450 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															
12709	22.		32.		14.		18.	22.		12.		6.		4.	
12719	22.		27.		2.		19.	14.		6.		5.		6.	
12726	15.		17.		11.		8.	17.		1.		8.		12.	
12727	17.		34.		19.		25.	5.		19.		-2.		14.	
12728	22.		27.		10.		34.	19.		12.		10.		11.	
12732	20.		30.		5.		16.	13.		8.		11.		5.	
12735	6.		29.		4.		15.	9.		8.		11.		15.	
12747	22.		27.		18.		19.	16.		11.		9.		4.	
12760	33.		16.		20.		18.	12.		19.		12.		2.	
12763	15.		34.		14.		3.	18.		10.		2.		6.	
MEAN	19.		27.		12.		18.	15.		11.		7.		8.	
S.D.	7.0		6.3		6.4		8.4	5.0		5.5		4.5		4.7	
S.E.	2.2		2.0		2.0		2.7	1.6		1.7		1.4		1.5	
N	10		10		10		10	10		10		10		10	

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TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 15

FEMALE GROUP: 750 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																
12720	25.			28.		15.		25.		-1.		15.		4.		25.
12723	24.			22.		11.		0.		18.		2.		2.		3.
12731	18.			30.		4.		7.		-1.		6.		8.		1.
12739	9.			28.		20.		26.		9.		15.		4.		10.
12742	15.			33.		17.		3.		12.		5.		0.		15.
12749	16.			20.		14.		4.		10.		8.		5.		4.
12750	16.			28.		23.		23.		13.		19.		4.		16.
12755	10.			24.		11.		13.		11.		7.		12.		4.
12761	17.			23.		20.		29.		9.		14.		8.		10.
12764	20.			33.		21.		29.		14.		22.		-6.		18.
MEAN		17.		27.		16.		16.		9.		11.		4.		11.
S.D.		5.2		4.5		5.8		11.7		6.1		6.6		4.9		7.8
S.E.		1.6		1.4		1.8		3.7		1.9		2.1		1.6		2.5
N		10		10		10		10		10		10		10		10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 16

WEEK	FEMALE GROUP: UNTREATED						
	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 12'
ANIMAL							
12705	5.	-18.	15.	15.	0.	1.	4.
12712	-9.	6.	22.	-5.	2.	16.	-9.
12716	6.	11.	4.	-2.	12.	-1.	-1.
12724	21.	10.	-4.	-2.	8.	7.	5.
12730	12.	8.	11.	4.	2.	1.	0.
12733	8.	12.	-13.	15.	-13.	17.	-4.
12734	-1.	11.	-6.	12.	-8.	7.	-13.
12736	15.	5.	8.	9.	1.	8.	2.
12737	11.	12.	-4.	2.	11.	-2.	-11.
12748	7.	2.	13.	1.	2.	5.	-12.
MEAN	8.	6.	5.	5.	2.	6.	-4.
S.D.	8.3	9.0	11.1	7.4	7.8	6.6	6.9
S.E.	2.6	2.9	3.5	2.3	2.5	2.1	2.2
N	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 17

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														
12706		5.		8.		11.		-8.		3.		6.		-10.
12708		10.		-2.		6.		4.		-3.		6.		-7.
12711		3.		6.		1.		4.		-7.		2.		-8.
12714		2.		0.		10.		9.		3.		-2.		2.
12718		8.		11.		2.		9.		-5.		-8.		-3.
12721		9.		16.		9.		-6.		10.		2.		10.
12744		-1.		10.		3.		5.		4.		-7.		12.
12752		-3.		11.		12.		3.		2.		0.		-13.
12757		10.		-2.		8.		5.		-2.		3.		-3.
12758		11.		6.		1.		5.		8.		-9.		4.
MEAN		5.		6.		6.		3.		1.		-1.		-2.
S.D.		5.0		6.1		4.3		5.7		5.5		5.6		8.4
S.E.		1.6		1.9		1.4		1.8		1.7		1.8		2.7
N		10		10		10		10		10		10		10

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SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 18

FEMALE GROUP: 100 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														
12707		5.		4.		5.		0.		3.		-5.		1.
12715		9.		13.		-3.		-6.		23.		-12.		-1.
12722		1.		17.		-1.		-5.		9.		-8.		10.
12738		11.		11.		11.		-9.		7.		-8.		21.
12740		-2.		10.		0.		3.		2.		2.		-2.
12743		15.		6.		-3.		4.		-3.		12.		1.
12746		16.		8.		-3.		-2.		8.		3.		1.
12753		12.		6.		-7.		6.		3.		3.		5.
12754		6.		10.		7.		-3.		1.		2.		4.
12759		-2.		12.		4.		-3.		2.		10.		1.
MEAN		7.		10.		1.		-2.		6.		0.		4.
S.D.		6.6		3.9		5.6		4.7		7.1		7.9		6.9
S.E.		2.1		1.2		1.8		1.5		2.3		2.5		2.2
N		10		10		10		10		10		10		10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 19

FEMALE GROUP: 450 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														
12709		0.		13.		-1.		-4.		1.		-5.		4.
12719		4.		5.		-1.		9.		8.		-4.		2.
12726		3.		0.		8.		5.		-5.		3.		5.
12727		-4.		6.		15.		3.		-2.		5.		-15.
12728		4.		0.		13.		-1.		1.		-1.		16.
12732		4.		15.		-5.		15.		-9.		5.		0.
12735		3.		9.		3.		3.		0.		6.		-2.
12747		1.		5.		2.		-3.		7.		1.		-3.
12760		0.		4.		9.		1.		-4.		14.		-4.
12763		2.		6.		4.		0.		1.		2.		7.
MEAN		2.		6.		5.		3.		0.		3.		1.
S.D.		2.5		4.9		6.4		5.8		5.2		5.5		8.1
S.E.		0.8		1.5		2.0		1.8		1.6		1.7		2.6
N		10		10		10		10		10		10		10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A7
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL BODY WEIGHT CHANGES [G]

PAGE 20

FEMALE GROUP: 750 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														
12720	-1.			4.		11.		0.		-3.		-12.		13.
12723	6.			6.		-1.		-2.		-1.		4.		-12.
12731	0.			2.		8.		-3.		8.		1.		-12.
12739	-2.			9.		0.		6.		2.		-4.		-5.
12742	1.			8.		-3.		11.		3.		-4.		-3.
12749	2.			14.		1.		0.		3.		6.		-17.
12750	-3.			10.		2.		3.		14.		16.		-25.
12755	3.			12.		2.		7.		2.		-3.		-16.
12761	-6.			9.		9.		0.		-7.		-5.		-2.
12764	-5.			7.		2.		1.		-3.		-2.		-2.
MEAN	-1.			8.		3.		2.		2.		0.		-8.
S.D.	3.7			3.6		4.6		4.4		6.0		7.6		10.6
S.E.	1.2			1.1		1.5		1.4		1.9		2.4		3.4
N	10			10		10		10		10		10		10

PBFTSv4.55
10/13/2011
R:10/17/2011

FINAL REPORT



Contents: Volume 4 of 4
Appendix K [continued]

Study Title: A 90-Day Repeat-Dose Dermal Toxicity
Study Utilizing Distillates (Petroleum),
Light Catalytic Cracked in Sprague Dawley Rats

Laboratory Project ID: WIL-402024

Author: Angela S. Burke, PhD, DABT

Test Guideline: OPPTS Guideline 870.3250
40 CFR 798.2250
OECD Guideline 411

Study Completion Date: 8 August 2012

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

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

Total Number of Pages: 1295

APPENDIX K

Individual Animal Data (continued)

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
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								
12649	47.	79.	114.	147.	171.	211.	229.	258.
12654	41.	65.	87.	115.	136.	159.	159.	191.
12660	23.	50.	70.	93.	116.	129.	140.	159.
12668	21.	54.	84.	105.	131.	144.	158.	174.
12684	31.	74.	109.	140.	161.	187.	206.	223.
12686	39.	84.	125.	158.	186.	216.	235.	262.
12691	17.	32.	48.	67.	84.	105.	112.	127.
12694	27.	61.	85.	109.	137.	163.	164.	188.
12701	29.	57.	94.	124.	152.	178.	195.	234.
12703	34.	81.	107.	128.	151.	170.	192.	203.
MEAN	31.	64.	92.	119.	143.	166.	179.	202.
S.D.	9.5	16.3	22.7	27.0	28.9	34.6	39.3	43.2
S.E.	3.0	5.2	7.2	8.5	9.2	10.9	12.4	13.7
N	10	10	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
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									
12648	22.	51.	83.	115.	131.	142.	155.	177.	
12650	30.	60.	84.	93.	106.	134.	146.	160.	
12661	27.	60.	90.	114.	127.	147.	145.	166.	
12675	30.	52.	89.	119.	146.	176.	193.	218.	
12676	25.	71.	103.	128.	145.	172.	192.	201.	
12679	35.	74.	113.	145.	177.	213.	232.	252.	
12683	22.	58.	89.	118.	150.	173.	199.	230.	
12693	14.	43.	55.	72.	94.	114.	126.	140.	
12697	4.	47.	64.	88.	114.	137.	147.	170.	
12700	37.	64.	97.	120.	147.	149.	170.	186.	
MEAN	25.	58.	87.	111.	134.	156.	171.	190.	
S.D.	9.9	10.0	17.1	21.2	24.4	28.1	32.6	34.8	
S.E.	3.1	3.2	5.4	6.7	7.7	8.9	10.3	11.0	
N	10	10	10	10	10	10	10	10	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 3

MALE GROUP: 100 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									
12646	32.	63.	94.	109.	125.	151.	161.	175.	
12655	15.	47.	64.	95.	111.	135.	151.	168.	
12656	39.	77.	106.	125.	150.	169.	184.	198.	
12659	25.	76.	107.	141.	167.	200.	215.	225.	
12662	36.	70.	99.	125.	144.	154.	165.	193.	
12664	29.	71.	97.	127.	153.	184.	198.	213.	
12670	22.	63.	94.	121.	145.	169.	187.	208.	
12682	29.	77.	113.	128.	154.	177.	194.	213.	
12688	2.	39.	46.	68.	82.	94.	100.	115.	
12695	34.	72.	103.	138.	162.	189.	193.	219.	
MEAN	26.	66.	92.	118.	139.	162.	175.	193.	
S.D.	11.1	13.0	21.0	21.9	26.1	30.8	32.6	33.0	
S.E.	3.5	4.1	6.6	6.9	8.3	9.7	10.3	10.4	
N	10	10	10	10	10	10	10	10	

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SPONSOR:AMERICAN PETROLEUM

TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 4

MALE GROUP: 450 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									
12645	26.	63.	84.	97.	119.	139.	149.	160.	
12652	50.	97.	138.	163.	190.	216.	227.	240.	
12669	33.	53.	68.	88.	103.	112.	122.	146.	
12671	38.	66.	91.	121.	136.	156.	163.	145.	
12674	26.	51.	73.	94.	118.	136.	131.	164.	
12677	26.	76.	109.	134.	171.	189.	207.	216.	
12685	33.	69.	97.	120.	145.	161.	172.	189.	
12690	33.	78.	109.	133.	165.	188.	204.	222.	
12692	17.	51.	73.	94.	117.	141.	148.	165.	
12699	39.	76.	111.	141.	164.	188.	192.	222.	
MEAN	32.	68.	95.	119.	143.	163.	172.	187.	
S.D.	9.1	14.5	21.9	24.8	28.8	31.9	35.0	35.4	
S.E.	2.9	4.6	6.9	7.8	9.1	10.1	11.1	11.2	
N	10	10	10	10	10	10	10	10	

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SPONSOR:AMERICAN PETROLEUM

TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 5

MALE GROUP: 750 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									
12658	30.	70.	96.	118.	138.	149.	164.		
12666	30.	51.	58.	70.	91.	107.	111.	126.	
12672	15.	40.	52.	68.	78.	104.	104.	123.	
12673	19.	61.	86.	117.	133.	148.	153.	183.	
12680	11.	64.	88.	108.	123.	137.	144.	156.	
12681	29.	53.	80.	101.	105.	126.	131.	144.	
12687	20.	53.	69.	81.	87.	96.	93.	108.	
12689	29.	63.	87.	100.	117.	128.	125.	141.	
12698	16.	43.	52.	62.	74.	86.	68.	89.	
12704	14.	48.	65.	81.	92.	114.	121.	137.	
MEAN	21.	55.	73.	91.	104.	120.	121.	134.	
S.D.	7.5	9.7	16.2	20.8	22.9	21.6	28.9	27.2	
S.E.	2.4	3.1	5.1	6.6	7.2	6.8	9.1	9.1	
N	10	10	10	10	10	10	10	9	

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SPONSOR:AMERICAN PETROLEUM

TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 6

WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	MALE GROUP: UNTREATED 0 TO 12'
ANIMAL					
12649	252.	264.	270.	283.	278.
12654	183.	207.	219.	225.	221.
12660	164.	173.	170.	174.	169.
12668	162.	191.	197.	205.	209.
12684	210.	246.	252.	260.	258.
12686	287.	307.	323.	337.	330.
12691	138.	148.	163.	178.	166.
12694	166.	197.	218.	221.	221.
12701	242.	246.	272.	274.	279.
12703	215.	223.	237.	229.	246.
MEAN	202.	220.	232.	239.	238.
S.D.	47.6	46.9	49.4	50.5	51.2
S.E.	15.0	14.8	15.6	16.0	16.2
N	10	10	10	10	10

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TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 7

MALE GROUP: 0 MG/KG/DAY					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'
ANIMAL					
12648	185.	195.	207.	217.	217.
12650	171.	174.	188.	188.	185.
12661	175.	194.	195.	208.	200.
12675	230.	243.	263.	258.	267.
12676	210.	219.	224.	226.	228.
12679	273.	287.	298.	303.	236.
12683	234.	248.	238.	290.	276.
12693	137.	159.	154.	184.	176.
12697	182.	198.	208.	223.	207.
12700	205.	227.	237.	249.	245.
MEAN	200.	214.	221.	235.	224.
S.D.	38.7	38.2	40.6	40.1	33.2
S.E.	12.2	12.1	12.9	12.7	10.5
N	10	10	10	10	10

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SPONSOR:AMERICAN PETROLEUM

TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 8

MALE GROUP: 100 MG/KG/DAY					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12 ¹
ANIMAL					
12646	182.	193.	204.	218.	213.
12655	179.	188.	198.	205.	217.
12656	202.	215.	214.	223.	224.
12659	246.	264.	279.	268.	279.
12662	200.	208.	223.	226.	233.
12664	219.	231.	251.	247.	253.
12670	221.	246.	266.	265.	267.
12682	224.	229.	235.	237.	237.
12688	122.	133.	139.	139.	131.
12695	226.	237.	239.	235.	242.
MEAN	202.	214.	225.	226.	230.
S.D.	34.9	36.9	39.8	36.5	40.5
S.E.	11.0	11.7	12.6	11.6	12.8
N	10	10	10	10	10

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SPONSOR:AMERICAN PETROLEUM

TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 9

MALE GROUP: 450 MG/KG/DAY					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12 ¹
ANIMAL					
12645	179.	188.	194.	186.	174.
12652	245.	253.	233.	266.	252.
12669	153.	167.	171.	162.	171.
12671	182.	187.	198.	204.	200.
12674	186.	198.	213.	222.	212.
12677	230.	245.	253.	251.	243.
12685	194.	201.	201.	201.	188.
12690	234.	250.	257.	260.	261.
12692	175.	182.	181.	198.	194.
12699	229.				
MEAN	201.	208.	211.	217.	211.
S.D.	31.2	32.6	30.5	35.7	33.7
S.E.	9.9	10.9	10.2	11.9	11.2
N	10	9	9	9	9

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TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 10

MALE GROUP: 750 MG/KG/DAY					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'
ANIMAL					
12666	127.	138.	139.	138.	130.
12672	128.	135.	136.	128.	139.
12673	182.	197.	202.	210.	196.
12680	163.	168.	166.	171.	175.
12681	145.	146.	158.	156.	137.
12687	121.	124.	123.	114.	126.
12689	158.	162.	169.	159.	150.
12698	97.	104.	103.	103.	69.
12704	144.	149.	139.	152.	151.
MEAN	141.	147.	148.	148.	141.
S.D.	25.4	26.9	29.0	32.1	35.2
S.E.	8.5	9.0	9.7	10.7	11.7
N	9	9	9	9	9

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TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 11

WEEK	FEMALE GROUP: UNTREATED															
	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																
12705	30.		56.		59.		79.		84.		95.		100.		82.	
12712	31.		49.		66.		77.		94.		105.		96.		102.	
12716	17.		35.		47.		64.		75.		86.		92.		103.	
12724	31.		46.		68.		81.		91.		89.		110.		120.	
12730	27.		33.		64.		85.		100.		103.		115.		123.	
12733	12.		45.		43.		66.		63.		91.		99.		111.	
12734	13.		31.		40.		49.		56.		63.		62.		73.	
12736	6.		29.		45.		54.		64.		78.		93.		98.	
12737	19.		39.		55.		61.		78.		78.		89.		101.	
12748	6.		17.		30.		43.		50.		57.		64.		66.	
MEAN	19.		38.		52.		66.		76.		85.		92.		98.	
S.D.	10.0		11.4		12.6		14.4		16.9		15.8		17.2		19.0	
S.E.	3.2		3.6		4.0		4.6		5.4		5.0		5.5		6.0	
N	10		10		10		10		10		10		10		10	

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TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 12

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									
12706	18.	32.	54.	69.	79.	82.	87.	95.	
12708	-4.	15.	26.	33.	53.	62.	72.	70.	
12711	17.	28.	33.	45.	47.	58.	61.	67.	
12714	11.	41.	55.	64.	75.	84.	86.	86.	
12718	30.	45.	60.	70.	76.	83.	91.	102.	
12721	17.	36.	57.	70.	81.	94.	103.	119.	
12744	20.	39.	55.	62.	62.	80.	79.	89.	
12752	18.	35.	53.	62.	82.	96.	93.	104.	
12757	1.	36.	46.	61.	73.	78.	88.	86.	
12758	11.	32.	38.	49.	67.	69.	80.	86.	
MEAN	14.	34.	48.	59.	70.	79.	84.	90.	
S.D.	9.7	8.2	11.5	12.3	12.0	12.4	11.7	15.6	
S.E.	3.1	2.6	3.6	3.9	3.8	3.9	3.7	4.9	
N	10	10	10	10	10	10	10	10	

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SPONSOR:AMERICAN PETROLEUM

TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 13

FEMALE GROUP: 100 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									
12707	11.	28.	36.	44.	51.	62.	67.	71.	
12715	4.	35.	55.	59.	72.	69.	78.	91.	
12722	25.	45.	55.	70.	78.	86.	87.	104.	
12738	21.	35.	57.	75.	89.	85.	96.	107.	
12740	3.	35.	28.	52.	59.	67.	65.	75.	
12743	19.	52.	68.	73.	80.	83.	98.	104.	
12746	20.	36.	57.	65.	76.	73.	89.	97.	
12753	12.	30.	44.	62.	68.	77.	89.	95.	
12754	17.	26.	49.	61.	69.	74.	80.	90.	
12759	4.	33.	42.	52.	65.	83.	81.	93.	
MEAN	14.	36.	49.	61.	71.	76.	83.	93.	
S.D.	8.0	7.8	11.8	10.0	10.9	8.3	11.1	11.9	
S.E.	2.5	2.5	3.7	3.1	3.5	2.6	3.5	3.8	
N	10	10	10	10	10	10	10	10	

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TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

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FEMALE GROUP: 450 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									
12709	14.	32.	54.	66.	72.	76.	76.	89.	
12719	2.	21.	35.	41.	46.	52.	56.	61.	
12726	11.	19.	36.	37.	45.	57.	60.	60.	
12727	19.	44.	49.	68.	66.	80.	76.	82.	
12728	10.	44.	63.	75.	85.	96.	100.	100.	
12732	5.	21.	34.	42.	53.	58.	62.	77.	
12735	4.	19.	28.	36.	47.	62.	65.	74.	
12747	18.	37.	53.	64.	73.	77.	78.	83.	
12760	20.	38.	50.	69.	81.	83.	83.	87.	
12763	14.	17.	35.	45.	47.	53.	55.	61.	
MEAN	12.	29.	44.	54.	62.	69.	71.	77.	
S.D.	6.4	10.9	11.5	15.3	15.6	15.0	14.2	13.5	
S.E.	2.0	3.5	3.6	4.8	4.9	4.7	4.5	4.3	
N	10	10	10	10	10	10	10	10	

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TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 15

FEMALE GROUP: 750 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									
12720	15.	40.	39.	54.	58.	83.	82.	86.	
12723	11.	11.	29.	31.	33.	36.	42.	48.	
12731	4.	11.	10.	16.	24.	25.	25.	27.	
12739	20.	46.	55.	70.	74.	84.	82.	91.	
12742	17.	20.	32.	37.	37.	52.	53.	61.	
12749	14.	18.	28.	36.	41.	45.	47.	61.	
12750	23.	46.	59.	78.	82.	98.	95.	105.	
12755	11.	24.	35.	42.	54.	58.	61.	73.	
12761	20.	49.	58.	72.	80.	90.	84.	93.	
12764	21.	50.	64.	86.	80.	98.	93.	100.	
MEAN	16.	32.	41.	52.	56.	67.	66.	75.	
S.D.	5.8	16.2	17.4	23.3	21.9	26.9	24.1	25.1	
S.E.	1.8	5.1	5.5	7.4	6.9	8.5	7.6	7.9	
N	10	10	10	10	10	10	10	10	

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TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 16

WEEK	FEMALE GROUP: UNTREATED				
	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'
ANIMAL					
12705	97.	112.	112.	113.	117.
12712	124.	119.	121.	137.	128.
12716	107.	105.	117.	116.	115.
12724	116.	114.	122.	129.	134.
12730	134.	138.	140.	141.	141.
12733	98.	113.	100.	117.	113.
12734	67.	79.	71.	78.	65.
12736	106.	115.	116.	124.	126.
12737	97.	99.	110.	108.	97.
12748	79.	80.	82.	87.	75.
MEAN	103.	107.	109.	115.	111.
S.D.	19.9	17.8	20.1	20.1	25.0
S.E.	6.3	5.6	6.4	6.4	7.9
N	10	10	10	10	10

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TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 17

FEMALE GROUP: 0 MG/KG/DAY					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'
ANIMAL					
12706	106.	98.	101.	107.	97.
12708	76.	80.	77.	83.	76.
12711	68.	72.	65.	67.	59.
12714	96.	105.	108.	106.	108.
12718	104.	113.	108.	100.	97.
12721	128.	122.	132.	134.	144.
12744	92.	97.	101.	94.	106.
12752	116.	119.	121.	121.	108.
12757	94.	99.	97.	100.	97.
12758	87.	92.	100.	91.	95.
MEAN	97.	100.	101.	100.	99.
S.D.	17.9	16.0	19.3	18.8	22.1
S.E.	5.6	5.1	6.1	5.9	7.0
N	10	10	10	10	10

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TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 18

FEMALE GROUP: 100 MG/KG/DAY					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12 ¹
ANIMAL					
12707	76.	76.	79.	74.	75.
12715	88.	82.	105.	93.	92.
12722	103.	98.	107.	99.	109.
12738	118.	109.	116.	108.	129.
12740	75.	78.	80.	82.	80.
12743	101.	105.	102.	114.	115.
12746	94.	92.	100.	103.	104.
12753	88.	94.	97.	100.	105.
12754	97.	94.	95.	97.	101.
12759	97.	94.	96.	106.	107.
MEAN	94.	92.	98.	98.	102.
S.D.	12.8	10.8	11.4	12.0	16.0
S.E.	4.1	3.4	3.6	3.8	5.1
N	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 19

FEMALE GROUP: 450 MG/KG/DAY					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12 ¹
ANIMAL					
12709	88.	84.	85.	80.	84.
12719	60.	69.	77.	73.	75.
12726	68.	73.	68.	71.	76.
12727	97.	100.	98.	103.	88.
12728	113.	112.	113.	112.	128.
12732	72.	87.	78.	83.	83.
12735	77.	80.	80.	86.	84.
12747	85.	82.	89.	90.	87.
12760	96.	97.	93.	107.	103.
12763	65.	65.	66.	68.	75.
MEAN	82.	85.	85.	87.	88.
S.D.	16.7	14.7	14.2	15.5	16.2
S.E.	5.3	4.6	4.5	4.9	5.1
N	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A8
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL CUMULATIVE BODY WEIGHT CHANGES [G]

PAGE 20

FEMALE GROUP: 750 MG/KG/DAY					
WEEK	0 TO 9	0 TO 10	0 TO 11	0 TO 12	0 TO 12'
ANIMAL					
12720	97.	97.	94.	82.	95.
12723	47.	45.	44.	48.	36.
12731	35.	32.	40.	41.	29.
12739	91.	97.	99.	95.	90.
12742	58.	69.	72.	68.	65.
12749	62.	62.	65.	71.	54.
12750	107.	110.	124.	140.	115.
12755	75.	82.	84.	81.	65.
12761	102.	102.	95.	90.	88.
12764	102.	103.	100.	98.	96.
MEAN	78.	80.	82.	81.	73.
S.D.	25.8	26.8	26.4	27.9	28.1
S.E.	8.2	8.5	8.4	8.8	8.9
N	10	10	10	10	10

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PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
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																
12649		31.		33.		37.		35.		35.		36.		37.		40.
12654		27.		35.		34.		31.		30.		33.		37.		41.
12660		25.		31.		31.		29.		30.		30.		30.		33.
12668		24.		27.		31.		33.		30.		30.		31.		32.
12684		28.		36.		39.		38.		38.		42.		38.		43.
12686		24.		30.		32.		33.		33.		34.		34.		39.
12691		27.		30.		32.		27.		29.		26.		29.		31.
12694		25.		30.		34.		32.		32.		33.		34.		33.
12701		29.		31.		33.		35.		33.		35.		37.		40.
12703		25.		31.		31.		32.		31.		31.		42.		36.
MEAN		27.		31.		33.		33.		32.		33.		35.		37.
S.D.		2.3		2.6		2.7		3.1		2.8		4.3		4.1		4.3
S.E.		0.7		0.8		0.9		1.0		0.9		1.4		1.3		1.4
N		10		10		10		10		10		10		10		10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
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																
12648	28.		29.		33.		35.		33.		31.		32.		36.	
12650	26.		31.		33.		33.		30.		31.		34.		34.	
12661	25.		31.		34.		35.		35.		35.		37.		37.	
12675	29.		36.		35.		34.		38.		35.		38.		39.	
12676	25.		30.		34.		36.		36.		34.		36.		39.	
12679	26.		30.		32.		35.		35.		33.		34.		40.	
12683	31.		34.		36.		38.		39.		41.		39.		43.	
12693	26.		30.		29.		30.		32.		29.		30.		35.	
12697	26.		31.		34.		31.		32.		32.		32.		36.	
12700	28.		31.		34.		35.		34.		35.		33.		39.	
MEAN	27.		31.		33.		34.		34.		34.		35.		38.	
S.D.	1.9		2.1		1.9		2.3		2.8		3.3		2.9		2.7	
S.E.	0.6		0.7		0.6		0.7		0.9		1.0		0.9		0.9	
N	10		10		10		10		10		10		10		10	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 3

MALE GROUP: 100 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															
12646	23.		29.		31.		33.		30.		31.		33.		36.
12655	23.		27.		29.		28.		29.		28.		29.		34.
12656	25.		33.		34.		35.		34.		34.		35.		37.
12659	27.		33.		36.		35.		39.		37.		39.		44.
12662	27.		33.		35.		35.		38.		35.		33.		39.
12664	29.		34.		33.		37.		38.		33.		37.		41.
12670	27.		28.		35.		34.		33.		35.		35.		40.
12682	27.		34.		36.		36.		34.		34.		35.		39.
12688	27.		31.		32.		31.		31.		27.		29.		32.
12695	25.		32.		36.		35.		38.		35.		37.		40.
MEAN	26.		31.		34.		34.		34.		33.		34.		38.
S.D.	1.9		2.5		2.4		2.6		3.7		3.2		3.3		3.5
S.E.	0.6		0.8		0.8		0.8		1.2		1.0		1.0		1.1
N	10		10		10		10		10		10		10		10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 4

MALE GROUP: 450 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																
12645	22.		26.		28.		29.		30.		27.		30.		33.	
12652	23.		33.		36.		40.		36.		35.		39.		43.	
12669	23.		27.		28.		27.		28.		26.		27.		31.	
12671	24.		30.		34.		33.		36.		29.		32.		36.	
12674	25.		31.		31.		32.		30.		32.		31.		29.	
12677	25.		30.		32.		34.		36.		34.		34.		38.	
12685	28.		35.		35.		39.		35.		34.		34.		38.	
12690	22.		29.		31.		34.		33.		33.		31.		40.	
12692	27.		28.		31.		31.		31.		31.		33.		36.	
12699	26.		32.		37.		36.		34.		35.		39.		43.	
MEAN	25.		30.		32.		34.		33.		32.		33.		37.	
S.D.	2.1		2.8		3.1		4.1		3.0		3.3		3.8		4.7	
S.E.	0.7		0.9		1.0		1.3		0.9		1.0		1.2		1.5	
N	10		10		10		10		10		10		10		10	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 5

MALE GROUP: 750 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															
12658	24.		26.		29.		34.		34.		39.		33.		38.
12666	24.		27.		30.		31.		30.		29.		32.		35.
12672	27.		30.		32.		29.		28.		27.		33.		31.
12673	27.		29.		33.		32.		32.		31.		33.		34.
12680	24.		30.		32.		34.		31.		30.		30.		34.
12681	29.		31.		33.		36.		36.		78.		36.		36.
12687	27.		28.		32.		32.		31.		30.		29.		31.
12689	26.		31.		34.		30.		32.		29.		32.		34.
12698	26.		30.		34.		32.		31.		36.		29.		41.
12704	27.		30.		30.		35.		31.		31.		32.		36.
MEAN	26.		29.		32.		33.		32.		36.		32.		35.
S.D.	1.7		1.7		1.7		2.2		2.2		15.2		2.1		3.0
S.E.	0.5		0.5		0.5		0.7		0.7		4.8		0.7		1.0
N	10		10		10		10		10		10		10		10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 6

		MALE GROUP: UNTREATED										
WEEK	7 TO	8	8 TO	9	9 TO	10	10 TO	11	11 TO	12	12 TO	13

ANIMAL												
12649		40.		45.		41.		45.		43.		39.
12654		40.		44.		39.		42.		42.		39.
12660		32.		35.		31.		32.		33.		31.
12668		31.		33.		32.		36.		32.		33.
12684		40.		44.		38.		39.		41.		40.
12686		34.		38.		38.		41.		38.		40.
12691		28.		29.		30.		31.		30.		25.
12694		34.		31.		33.		38.		36.		37.
12701		31.		39.		37.		41.		40.		39.
12703		29.		36.		35.		40.		35.		36.
MEAN		34.		37.		35.		39.		37.		36.
S.D.		4.6		5.6		3.7		4.4		4.5		4.9
S.E.		1.5		1.8		1.2		1.4		1.4		1.5
N		10		10		10		10		10		10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 7

MALE GROUP: 0 MG/KG/DAY						
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 13
ANIMAL						
12648	27.	35.	34.	35.	37.	32.
12650	31.	43.	35.	37.	37.	41.
12661	39.	38.	43.	41.	18.	36.
12675	35.	43.	41.	46.	47.	53.
12676	32.	37.	40.	40.	37.	45.
12679	33.	37.	39.	42.	40.	7.
12683	41.	46.	44.	46.	51.	44.
12693	30.	30.	31.	34.	35.	32.
12697	34.	36.	35.	40.	38.	39.
12700	35.	39.	41.	40.	41.	45.
MEAN	34.	38.	38.	40.	38.	37.
S.D.	4.1	4.6	4.3	4.0	8.7	12.5
S.E.	1.3	1.5	1.4	1.3	2.7	3.9
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 8

MALE GROUP: 100 MG/KG/DAY						
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 13
ANIMAL						
12646	34.	35.	36.	36.	36.	43.
12655	32.	33.	34.	37.	36.	45.
12656	30.	35.	36.	38.	37.	42.
12659	37.	43.	42.	42.	37.	46.
12662	37.	37.	38.	40.	38.	44.
12664	38.	39.	39.	41.	41.	49.
12670	37.	43.	41.	43.	42.	48.
12682	37.	37.	37.	40.	35.	40.
12688	31.	32.	33.	33.	35.	35.
12695	39.	42.	39.	43.	46.	39.
MEAN	35.	38.	38.	39.	38.	43.
S.D.	3.2	4.0	2.9	3.3	3.6	4.3
S.E.	1.0	1.3	0.9	1.0	1.1	1.4
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 9

MALE GROUP: 450 MG/KG/DAY						
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 13
ANIMAL						
12645	31.	34.	31.	35.	34.	36.
12652	36.	44.	40.	42.	47.	43.
12669	23.	32.	32.	34.	34.	35.
12671	24.	38.	37.	42.	38.	40.
12674	40.	40.	36.	41.	39.	47.
12677	36.	37.	40.	38.	39.	40.
12685	35.	38.	38.	43.	42.	46.
12690	36.	38.	39.	34.	41.	52.
12692	35.	36.	34.	38.	37.	43.
12699	38.	42.				
MEAN	33.	38.	36.	39.	39.	42.
S.D.	5.7	3.5	3.4	3.6	4.1	5.4
S.E.	1.8	1.1	1.1	1.2	1.4	1.8
N	10	10	9	9	9	9

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 10

MALE GROUP: 750 MG/KG/DAY						
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 13

ANIMAL						
12658						
12666	35.	33.	34.	36.	34.	41.
12672	31.	34.	33.	36.	36.	42.
12673	34.	36.	36.	37.	37.	36.
12680	34.	37.	35.	37.	38.	41.
12681	33.	37.	39.	40.	39.	39.
12687	25.	33.	34.	35.	36.	32.
12689	33.	34.	35.	36.	34.	34.
12698	37.	40.	39.	39.	42.	37.
12704	36.	37.	36.	38.	40.	48.
MEAN	33.	36.	36.	37.	37.	39.
S.D.	3.5	2.3	2.1	1.6	2.7	4.8
S.E.	1.2	0.8	0.7	0.5	0.9	1.6
N	9	9	9	9	9	9

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SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 11

WEEK	FEMALE GROUP:										UNTREATED					
	-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																
12705	21.		26.		27.		25.		25.		23.		26.		27.	
12712	20.		28.		29.		30.		27.		26.		29.		31.	
12716	17.		24.		23.		24.		22.		22.		23.		25.	
12724	22.		28.		25.		27.		25.		23.		24.		29.	
12730	22.		27.		25.		28.		28.		27.		28.		28.	
12733	20.		25.		27.		27.		26.		28.		28.		33.	
12734	23.		24.		24.		24.		22.		23.		23.		27.	
12736	22.		26.		28.		27.		26.		26.		28.		33.	
12737	20.		23.		24.		24.		21.		23.		23.		26.	
12748	24.		24.		27.		24.		25.		22.		22.		27.	
MEAN	21.		26.		26.		26.		25.		24.		25.		29.	
S.D.	2.0		1.8		2.0		2.1		2.3		2.2		2.7		2.8	
S.E.	0.6		0.6		0.6		0.7		0.7		0.7		0.8		0.9	
N	10		10		10		10		10		10		10		10	

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TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 12

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																
12706	20.		24.			26.		26.		26.		24.		24.		27.
12708	17.		24.			26.		27.		25.		27.		25.		28.
12711	20.		25.			25.		25.		25.		24.		24.		27.
12714	22.		24.			30.		34.		28.		27.		30.		35.
12718	21.		27.			28.		30.		28.		28.		28.		31.
12721	18.		25.			25.		27.		28.		28.		29.		30.
12744	21.		25.			27.		29.		28.		26.		26.		27.
12752	21.		28.			27.		29.		29.		29.		31.		32.
12757	22.		27.			29.		29.		28.		26.		26.		30.
12758	24.		26.			28.		29.		29.		29.		28.		30.
MEAN	21.		26.			27.		29.		27.		27.		27.		30.
S.D.	2.0		1.4			1.7		2.5		1.5		1.8		2.5		2.6
S.E.	0.6		0.5			0.5		0.8		0.5		0.6		0.8		0.8
N	10		10			10		10		10		10		10		10

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SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 13

FEMALE GROUP: 100 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															
12707	21.		22.		22.		25.		23.		22.		24.		25.
12715	19.		25.		26.		25.		24.		24.		24.		26.
12722	19.		26.		26.		27.		27.		26.		27.		29.
12738	20.		27.		27.		28.		27.		27.		26.		31.
12740	20.		23.		25.		25.		26.		23.		25.		26.
12743	21.		27.		28.		27.		24.		25.		24.		27.
12746	22.		25.		27.		29.		26.		24.		25.		28.
12753	23.		23.		23.		26.		26.		26.		24.		27.
12754	20.		23.		24.		27.		25.		22.		26.		28.
12759	26.		28.		34.		32.		35.		30.		31.		NA
MEAN	21.		25.		26.		27.		26.		25.		26.		27.
S.D.	2.1		2.1		3.3		2.2		3.3		2.5		2.2		1.8
S.E.	0.7		0.7		1.1		0.7		1.1		0.8		0.7		0.6
N	10		10		10		10		10		10		10		9

NA = NOT APPLICABLE

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 14

FEMALE GROUP: 450 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																
12709	21.		23.		24.		26.		24.		24.		26.		28.	
12719	24.		23.		25.		31.		26.		24.		25.		27.	
12726	18.		25.		22.		25.		22.		20.		24.		24.	
12727	19.		25.		26.		26.		26.		24.		38.		29.	
12728	22.		27.		26.		28.		30.		26.		28.		35.	
12732	20.		23.		22.		26.		23.		23.		23.		26.	
12735	17.		24.		22.		23.		24.		25.		26.		27.	
12747	23.		27.		28.		28.		27.		25.		22.		27.	
12760	22.		22.		26.		26.		27.		28.		24.		28.	
12763	22.		24.		26.		26.		25.		23.		24.		27.	
MEAN	21.		24.		25.		27.		25.		24.		26.		28.	
S.D.	2.3		1.7		2.1		2.1		2.3		2.1		4.5		2.9	
S.E.	0.7		0.5		0.7		0.7		0.7		0.7		1.4		0.9	
N	10		10		10		10		10		10		10		10	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 15

FEMALE GROUP: 750 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																
12720	23.		25.		28.		28.		27.		26.		29.		31.	
12723	20.		24.		23.		36.		23.		23.		23.		25.	
12731	21.		22.		24.		26.		24.		22.		22.		25.	
12739	17.		25.		28.		32.		32.		28.		27.		29.	
12742	24.		26.		24.		27.		25.		23.		24.		27.	
12749	27.		22.		20.		26.		22.		23.		22.		24.	
12750	19.		26.		27.		39.		30.		27.		26.		30.	
12755	18.		21.		23.		24.		23.		22.		22.		25.	
12761	25.		26.		29.		29.		28.		27.		29.		30.	
12764	23.		27.		28.		29.		29.		31.		28.		34.	
MEAN	22.		24.		25.		30.		26.		25.		25.		28.	
S.D.	3.2		2.1		3.0		4.7		3.4		3.0		2.9		3.3	
S.E.	1.0		0.7		0.9		1.5		1.1		1.0		0.9		1.0	
N	10		10		10		10		10		10		10		10	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 16

WEEK	7 TO	8	8 TO	9	9 TO	10	10 TO	FEMALE GROUP:			UNTREATED	
								11	11 TO	12	12 TO	13

ANIMAL												
12705		19.		22.		28.		27.		28.		30.
12712		24.		31.		26.		32.		31.		28.
12716		23.		25.		26.		25.		23.		23.
12724		25.		24.		27.		29.		26.		26.
12730		27.		29.		29.		29.		28.		24.
12733		29.		28.		31.		29.		28.		32.
12734		23.		24.		25.		27.		24.		24.
12736		26.		30.		29.		32.		28.		34.
12737		21.		23.		25.		27.		23.		26.
12748		22.		26.		26.		29.		26.		26.
MEAN		24.		26.		27.		29.		27.		27.
S.D.		3.0		3.1		2.0		2.2		2.6		3.7
S.E.		0.9		1.0		0.6		0.7		0.8		1.2
N		10		10		10		10		10		10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 17

FEMALE GROUP: 0 MG/KG/DAY												
WEEK	7 TO	8	8 TO	9	9 TO	10	10 TO	11	11 TO	12	12 TO	13

ANIMAL												
12706		22.		27.		24.		27.		27.		28.
12708		25.		28.		29.		29.		26.		30.
12711		23.		29.		28.		29.		26.		26.
12714		23.		31.		34.		35.		31.		30.
12718		26.		28.		30.		27.		22.		23.
12721		25.		29.		29.		28.		28.		30.
12744		25.		28.		29.		29.		28.		32.
12752		25.		34.		33.		35.		35.		34.
12757		25.		28.		30.		28.		29.		28.
12758		32.		33.		32.		35.		33.		33.
MEAN		25.		30.		30.		30.		29.		29.
S.D.		2.7		2.4		2.8		3.4		3.7		3.3
S.E.		0.9		0.7		0.9		1.1		1.2		1.0
N		10		10		10		10		10		10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 18

FEMALE GROUP: 100 MG/KG/DAY													
WEEK	7 TO	8	8 TO	9	9 TO	10	10 TO	11	11 TO	12	12 TO	13	
ANIMAL													
12707	23.		28.		24.		27.		24.		25.		
12715	24.		25.		25.		29.		25.		30.		
12722	26.		29.		26.		32.		28.		41.		
12738	29.		28.		28.		32.		29.		39.		
12740	24.		26.		27.		28.		42.		27.		
12743	24.		26.		26.		27.		27.		28.		
12746	24.		27.		26.		29.		28.		36.		
12753	24.		25.		27.		29.		29.		32.		
12754	25.		27.		30.		32.		28.		36.		
12759	35.		36.		33.		34.		34.		35.		
MEAN	26.		28.		27.		30.		29.		33.		
S.D.	3.6		3.2		2.6		2.4		5.2		5.3		
S.E.	1.2		1.0		0.8		0.8		1.6		1.7		
N	10		10		10		10		10		10		

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 19

FEMALE GROUP: 450 MG/KG/DAY						
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 13
ANIMAL						
12709	26.	27.	28.	29.	26.	26.
12719	20.	29.	27.	31.	28.	24.
12726	21.	25.	26.	28.	25.	30.
12727	26.	30.	33.	30.	29.	27.
12728	28.	32.	31.	33.	28.	46.
12732	20.	25.	29.	29.	29.	24.
12735	26.	27.	27.	27.	27.	49.
12747	21.	26.	26.	30.	25.	33.
12760	23.	26.	27.	30.	29.	38.
12763	23.	30.	27.	30.	36.	36.
MEAN	23.	28.	28.	30.	28.	33.
S.D.	2.9	2.4	2.3	1.6	3.2	8.9
S.E.	0.9	0.8	0.7	0.5	1.0	2.8
N	10	10	10	10	10	10

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TABLE A9
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL FOOD CONSUMPTION [G/ANIMAL/DAY]

PAGE 20

FEMALE GROUP: 750 MG/KG/DAY						
WEEK	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 13
ANIMAL						
12720	24.	29.	31.	32.	29.	31.
12723	20.	25.	27.	27.	25.	19.
12731	28.	26.	24.	26.	26.	21.
12739	23.	30.	33.	30.	33.	26.
12742	24.	25.	26.	29.	27.	24.
12749	23.	25.	26.	27.	26.	21.
12750	26.	34.	29.	33.	32.	22.
12755	21.	28.	28.	28.	27.	22.
12761	29.	32.	31.	35.	36.	28.
12764	28.	31.	38.	33.	33.	31.
MEAN	25.	29.	29.	30.	29.	25.
S.D.	3.1	3.2	4.1	3.1	3.8	4.3
S.E.	1.0	1.0	1.3	1.0	1.2	1.4
N	10	10	10	10	10	10

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

PAGE 1
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:	UNTREATED	MALES								
12649	10.87	9.06	15.6	47.5	52.4	17.2	32.7	910.	2.0	180.2
12654	9.73	8.40	15.2	44.7	53.2	18.1	34.0	874.	1.6	131.8
12660	10.21	8.66	15.5	46.4	53.6	17.9	33.3	977.	1.7	144.7
12668	8.74	9.17	16.1	48.7	53.1	17.5	33.0	892.	2.0	181.9
12684	10.65	8.86	14.6	44.7	50.4	16.5	32.7	1076.	2.1	184.1
12686	11.88	8.86	14.8	46.0	51.9	16.7	32.1	1034.	2.1	181.9
12691	10.28	9.01	15.3	44.8	49.7	16.9	34.1	944.	1.3	120.1
12694	12.87	8.15	14.3	43.4	53.3	17.6	33.0	1051.	3.0	245.8
12701	9.85	9.35	15.2	46.1	49.2	16.3	33.1	1058.	2.3	217.8
12703	7.94	8.51	14.5	43.8	51.5	17.1	33.1	978.	2.2	189.8
MEAN	10.30	8.80	15.1	45.6	51.8	17.2	33.1	979.	2.0	177.8
S.D.	1.418	0.372	0.56	1.65	1.59	0.60	0.60	73.4	0.46	37.99
S.E.	0.448	0.118	0.18	0.52	0.50	0.19	0.19	23.2	0.14	12.01
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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

PAGE 2
WEEK 12

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP:	UNTREATED	MALES				
12649	19.0	77.0	3.0	1.0	0.0	0.0
12654	16.3	79.2	2.5	0.4	0.4	1.2
12660	12.1	83.5	2.1	0.8	0.3	1.1
12668	22.5	72.3	2.3	1.4	0.4	1.1
12684	12.9	83.4	1.4	1.3	0.4	0.7
12686	18.2	76.7	2.4	1.7	0.5	0.5
12691	30.4	64.5	3.4	1.1	0.5	0.2
12694	15.3	81.3	1.5	1.2	0.3	0.5
12701	17.9	74.8	3.5	1.7	0.4	1.6
12703	9.7	86.8	1.7	0.7	0.4	0.7
MEAN	17.4	78.0	2.4	1.1	0.4	0.8
S.D.	5.89	6.47	0.74	0.42	0.14	0.49
S.E.	1.86	2.05	0.24	0.13	0.05	0.16
N	10	10	10	10	10	10

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SPONSOR:AMERICAN PETROLEUM

TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

PAGE 3
WEEK 12

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:	UNTREATED	MALES						
12649	2.07	8.37	0.33	0.11	0.00	0.00	ADEQUATE	1-ANISO LYMPHOCYTE COUNT INCLUDES 15 ATYPS, 1-POL, 1-PKC, NEUTROPHIL COUNT INCLUDES 1 BAND NEUTROPHIL, 1-TDC
12654	1.59	7.70	0.24	0.04	0.04	0.12	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
12660	1.23	8.53	0.21	0.08	0.04	0.12	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
12668	1.97	6.32	0.20	0.12	0.04	0.09	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
12684	1.37	8.89	0.14	0.14	0.04	0.07	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
12686	2.16	9.12	0.28	0.21	0.06	0.06	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
12691	3.13	6.63	0.35	0.11	0.05	0.02	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
12694	1.97	10.45	0.19	0.15	0.04	0.06	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
12701	1.77	7.37	0.34	0.16	0.04	0.16	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
12703	0.77	6.89	0.13	0.06	0.03	0.06	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
MEAN	1.80	8.03	0.24	0.12	0.04	0.08		
S.D.	0.636	1.286	0.081	0.050	0.015	0.048		
S.E.	0.201	0.407	0.026	0.016	0.005	0.015		
N	10	10	10	10	10	10		
thous/uL = THOUSANDS/MICROLITER								

----- MORPHOLOGY CODE -----

1 = FEW, ANISO = ANISOCYTOSIS, ATYPS = VARIANT LYMPHOCYTE, POL = POLYCHROMASIA, PKC = POIKILOCYTOSIS,
TDC = TEAR DROP CELL

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SPONSOR:AMERICAN PETROLEUM

TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

PAGE 4
WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP:	UNTREATED	MALES		
12649	17.1	17.8	11.1	2.05
12654	17.4	20.8	11.9	2.32
12660	17.1	21.8	11.9	2.27
12668	16.5	18.2	11.7	2.20
12684	17.3	19.6	12.2	2.16
12686	18.0	22.3	11.3	2.24
12691	18.5	23.0	11.7	2.16
12694	17.9	22.6	12.1	2.37
12701	19.5	22.3	12.2	2.55
12703	17.7	23.3	11.9	2.27
MEAN	17.7	21.2	11.8	2.26
S.D.	0.84	1.99	0.37	0.137
S.E.	0.27	0.63	0.12	0.043
N	10	10	10	10

g/dL = GRAMS/DECILITER

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

PAGE 5
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	MALES									
12648	10.12	8.39	14.0	41.9	50.0	16.6	33.3	910.	2.0	164.3
12650	13.13	8.45	14.7	43.7	51.7	17.4	33.6	990.	1.7	146.3
12661	15.55	9.64	16.6	51.3	53.2	17.2	32.3	1024.	1.8	178.0
12675	15.81	9.21	15.6	48.4	52.5	17.0	32.3	1083.	2.0	185.1
12676	10.17	9.11	15.1	46.3	50.8	16.5	32.5	1151.	1.5	139.5
12679	9.44	9.30	15.4	47.5	51.1	16.5	32.3	1333.	1.2	113.0
12683	17.56	8.57	14.9	45.9	53.6	17.4	32.5	952.	2.2	191.6
12693	10.29	9.38	16.2	49.7	53.0	17.3	32.6	1062.	2.1	193.9
12697	16.74	9.58	14.3	44.6	46.6	15.0	32.1	1062.	1.8	172.6
12700	13.70	8.65	15.1	45.7	52.8	17.4	33.0	988.	1.6	135.6
MEAN	13.25	9.03	15.2	46.5	51.5	16.8	32.7	1056.	1.8	162.0
S.D.	3.080	0.473	0.80	2.82	2.09	0.74	0.49	119.6	0.30	27.19
S.E.	0.974	0.149	0.25	0.89	0.66	0.24	0.16	37.8	0.10	8.60
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-402024
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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

PAGE 6
WEEK 12

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP: 0 MG/KG/DAY		MALES				
12648	25.1	68.0	3.3	1.4	0.6	1.6
12650	17.8	75.9	3.0	1.4	0.4	1.5
12661	21.0	77.0	2.0	0.0	0.0	0.0
12675	16.7	77.9	3.4	1.0	0.5	0.5
12676	20.0	76.1	2.2	0.7	0.5	0.4
12679	30.4	61.8	4.4	1.3	0.3	1.7
12683	21.6	74.7	1.9	0.6	0.5	0.8
12693	19.9	76.2	1.6	1.0	0.6	0.6
12697	24.3	70.2	2.0	1.1	0.4	2.1
12700	21.4	72.6	3.5	1.4	0.5	0.6
MEAN	21.8	73.0	2.7	1.0	0.4	1.0
S.D.	3.96	5.05	0.92	0.45	0.18	0.69
S.E.	1.25	1.60	0.29	0.14	0.06	0.22
N	10	10	10	10	10	10

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

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: 0 MG/KG/DAY								
								MALES
12648	2.54	6.89	0.34	0.14	0.06	0.16	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
12650	2.34	9.96	0.40	0.18	0.06	0.20	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
12661	3.27	11.97	0.31	0.00	0.00	0.00	ADEQUATE	1-ANISO LYMPHOCYTE COUNT INCLUDES 4 ATYPS, 1-POL, 1-PKC, 1-TDC
12675	2.65	12.31	0.54	0.16	0.07	0.08	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
12676	2.04	7.74	0.23	0.07	0.05	0.04	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
12679	2.87	5.84	0.42	0.12	0.03	0.16	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
12683	3.79	13.12	0.33	0.10	0.09	0.13	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
12693	2.05	7.84	0.17	0.11	0.06	0.06	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
12697	4.06	11.75	0.34	0.18	0.06	0.35	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
12700	2.93	9.95	0.47	0.19	0.07	0.08	PLATELET	ESTIMATE AND MORPHOLOGY NOT REVIEWED
MEAN	2.85	9.74	0.36	0.13	0.06	0.13		
S.D.	0.685	2.540	0.109	0.059	0.025	0.100		
S.E.	0.217	0.803	0.034	0.019	0.008	0.032		
N	10	10	10	10	10	10		
thous/uL = THOUSANDS/MICROLITER								

----- MORPHOLOGY CODE -----

1 = FEW, ANISO = ANISOCYTOSIS, ATYPS = VARIANT LYMPHOCYTE, POL = POLYCHROMASIA, PKC = POIKILOCYTOSIS,
TDC = TEAR DROP CELL

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP: 0 MG/KG/DAY		MALES		
12648	17.5	16.0	11.4	2.19
12650	17.9	20.9	11.5	2.12
12661	17.7	18.8	11.1	2.13
12675	17.8	19.1	12.0	2.20
12676	17.6	22.4	11.4	2.10
12679	18.3	24.2	11.4	2.26
12683	18.6	20.0	11.7	2.09
12693	19.4	25.1	12.3	2.25
12697	18.8	22.7	12.5	2.29
12700	19.6	21.6	11.5	2.31
MEAN	18.3	21.1	11.7	2.19
S.D.	0.76	2.72	0.45	0.081
S.E.	0.24	0.86	0.14	0.026
N	10	10	10	10

g/dL = GRAMS/DECILITER

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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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: 100 MG/KG/DAY MALES										
12646	CLT	CLT	CLT	CLT	CLT	CLT	CLT	CLT	CLT	CLT
12655	10.62	9.19	15.9	48.3	52.6	17.3	33.0	911.	1.7	156.0
12656	13.06	8.90	15.7	47.6	53.5	17.6	33.0	914.	1.8	158.3
12659	9.34	8.54	14.4	43.2	50.5	16.9	33.5	898.	1.2	106.1
12662	13.12	8.87	15.2	46.6	52.6	17.2	32.6	1099.	2.1	187.6
12664	12.49	9.44	16.0	51.0	54.0	17.0	31.5	1024.	1.3	125.8
12670	11.66	8.57	14.3	42.6	49.7	16.7	33.7	1152.	1.8	156.1
12682	11.93	8.43	14.6	43.5	51.6	17.3	33.5	1022.	1.9	157.6
12688	9.13	8.48	14.7	44.6	52.5	17.3	33.0	778.	1.8	148.5
12695	8.10	9.51	15.4	47.4	49.8	16.2	32.6	889.	1.3	122.6
MEAN	11.05	8.88	15.1	46.1	51.9	17.1	32.9	965.	1.7	146.5
S.D.	1.839	0.416	0.66	2.80	1.57	0.42	0.66	117.5	0.31	24.42
S.E.	0.613	0.139	0.22	0.93	0.52	0.14	0.22	39.2	0.10	8.14
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: 100	MG/KG/DAY	MALES				
12646	CLT	CLT	CLT	CLT	CLT	CLT
12655	18.0	78.2	1.8	0.6	0.8	0.6
12656	18.6	76.7	3.1	0.4	0.7	0.4
12659	14.6	81.7	2.3	0.6	0.2	0.6
12662	21.7	72.7	2.7	1.2	0.4	1.3
12664	23.9	69.5	4.3	0.5	0.6	1.2
12670	13.9	81.4	3.2	0.7	0.4	0.5
12682	14.4	82.2	1.7	0.6	0.6	0.6
12688	23.8	70.8	3.3	0.6	0.4	1.0
12695	11.3	85.0	2.1	0.8	0.4	0.4
MEAN	17.8	77.6	2.7	0.7	0.5	0.7
S.D.	4.59	5.52	0.84	0.23	0.19	0.34
S.E.	1.53	1.84	0.28	0.08	0.06	0.11
N	9	9	9	9	9	9
CLT = CLOTTED						

CLT = CLOTTED

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:	100 MG/KG/DAY	MALES										
12646	CLT	CLT	CLT	CLT	CLT	CLT	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT	REVIEWED
12655	1.91	8.30	0.19	0.06	0.09	0.06	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT	REVIEWED
12656	2.43	10.01	0.40	0.06	0.09	0.06	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT	REVIEWED
12659	1.36	7.63	0.21	0.06	0.02	0.06	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT	REVIEWED
12662	2.85	9.54	0.35	0.15	0.05	0.17	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT	REVIEWED
12664	2.99	8.68	0.54	0.06	0.08	0.15	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT	REVIEWED
12670	1.62	9.48	0.37	0.08	0.04	0.06	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT	REVIEWED
12682	1.71	9.80	0.20	0.08	0.07	0.07	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT	REVIEWED
12688	2.18	6.47	0.30	0.06	0.04	0.09	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT	REVIEWED
12695	0.92	6.89	0.17	0.07	0.03	0.03	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT	REVIEWED
MEAN	2.00	8.53	0.30	0.08	0.06	0.08						
S.D.	0.683	1.301	0.123	0.029	0.026	0.046						
S.E.	0.228	0.434	0.041	0.010	0.009	0.015						
N	9	9	9	9	9	9						
CLT = CLOTTED												
thous/uL = THOUSANDS/MICROLITER												

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP: 100 MG/KG/DAY MALES				
12646	CLT	CLT	CLT	CLT
12655	17.7	21.9	11.4	2.20
12656	17.7	21.0	11.5	2.11
12659	17.4	20.3	11.3	2.24
12662	17.2	22.3	12.0	2.27
12664	17.5	19.0	12.4	2.32
12670	18.7	24.3	13.1	2.59
12682	18.8	24.9	11.4	2.13
12688	18.1	24.8	11.2	2.08
12695	18.6	22.1	11.1	2.09
MEAN	18.0	22.3	11.7	2.23
S.D.	0.60	2.06	0.66	0.161
S.E.	0.20	0.69	0.22	0.054
N	9	9	9	9
CLT = CLOTTED				
g/dL = GRAMS/DECILITER				

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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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: 450 MG/KG/DAY	MALES									
12645	12.71	7.94	13.7	41.0	51.7	17.3	33.5	1140.	2.2	171.5
12652	18.11	7.91	13.9	41.0	51.9	17.5	33.8	982.	2.6	205.0
12669	11.94	8.43	14.7	46.2	54.8	17.5	31.9	965.	2.2	188.4
12671	9.01	8.59	14.3	42.8	49.8	16.7	33.5	661.	1.4	121.4
12674	9.01	8.25	15.0	43.8	53.1	18.2	34.2	945.	1.7	142.4
12677	9.12	8.32	14.3	42.8	51.5	17.1	33.3	897.	1.9	155.8
12685	6.92	8.40	14.7	44.0	52.4	17.6	33.5	724.	1.7	146.5
12690	13.14	8.12	13.6	40.5	49.9	16.7	33.5	1255.	3.0	240.9
12692	8.34	7.45	12.6	38.1	51.1	16.9	33.1	816.	2.7	202.8
MEAN	10.92	8.16	14.1	42.2	51.8	17.3	33.4	932.	2.2	175.0
S.D.	3.429	0.347	0.73	2.37	1.55	0.49	0.63	188.0	0.53	37.62
S.E.	1.143	0.116	0.24	0.79	0.52	0.16	0.21	62.7	0.18	12.54
N	9	9	9	9	9	9	9	9	9	9
thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER										

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP: 450 MG/KG/DAY		MALES				
12645	28.8	67.1	2.3	0.3	0.3	1.2
12652	13.8	83.0	1.5	0.3	0.5	0.8
12669	15.0	79.2	3.9	0.2	0.5	1.1
12671	19.9	77.4	1.8	0.3	0.4	0.3
12674	23.6	71.4	3.4	0.8	0.4	0.4
12677	11.3	82.9	3.7	0.4	0.5	1.3
12685	14.0	81.8	2.1	0.4	0.4	1.4
12690	12.8	83.0	2.2	0.8	0.5	0.8
12692	25.5	65.4	4.7	0.4	0.3	3.7
MEAN	18.3	76.8	2.8	0.4	0.4	1.2
S.D.	6.34	7.06	1.10	0.22	0.08	1.00
S.E.	2.11	2.35	0.37	0.07	0.03	0.33
N	9	9	9	9	9	9

ANIMAL	NEU ABSOLUTE	LYMPH ABSOLUTE	MONO ABSOLUTE	EOS ABSOLUTE	BASO ABSOLUTE	LUC ABSOLUTE	PLATELET ESTIMATE	RBC MORPHOLOGY
thous/uL								
GROUP:	450	MG/KG/DAY	MALES					
12645	3.66	8.53	0.30	0.04	0.04	0.15	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12652	2.51	15.03	0.27	0.06	0.09	0.15	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12669	1.80	9.45	0.47	0.03	0.06	0.13	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12671	1.79	6.98	0.16	0.02	0.04	0.03	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12674	2.12	6.44	0.31	0.07	0.04	0.03	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12677	1.03	7.56	0.34	0.04	0.04	0.12	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12685	0.97	5.66	0.15	0.02	0.03	0.10	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12690	1.68	10.90	0.29	0.11	0.06	0.10	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12692	2.13	5.46	0.40	0.04	0.03	0.31	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
MEAN	1.97	8.45	0.30	0.05	0.05	0.12		
S.D.	0.808	3.042	0.102	0.029	0.019	0.083		
S.E.	0.269	1.014	0.034	0.010	0.006	0.028		
N	9	9	9	9	9	9		
thous/uL = THOUSANDS/MICROLITER								

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP: 450 MG/KG/DAY		MALES		
12645	17.6	20.7	13.3	2.55
12652	17.4	18.3	12.4	2.47
12669	17.9	23.2	12.6	2.44
12671	17.5	20.5	12.0	2.42
12674	16.9	19.0	12.0	2.57
12677	18.1	18.5	13.4	2.63
12685	16.9	20.9	12.9	2.66
12690	18.2	20.9	15.2	3.26
12692	17.6	17.7	13.9	3.04
MEAN	17.6	20.0	13.1	2.67
S.D.	0.46	1.73	1.02	0.289
S.E.	0.15	0.58	0.34	0.096
N	9	9	9	9
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: 750	MG/KG/DAY	MALES								
12666	9.49	8.44	14.3	43.1	51.1	16.9	33.1	695.	2.6	222.6
12672	10.77	8.68	15.1	44.8	51.6	17.3	33.6	989.	3.1	265.1
12673	9.75	8.23	14.2	43.4	52.8	17.3	32.7	990.	1.9	154.0
12680	17.79	6.70	11.7	35.2	52.6	17.5	33.2	753.	3.9	261.3
12681	7.24	8.05	14.2	43.2	53.7	17.6	32.8	966.	1.7	137.3
12687	9.03	8.31	13.8	43.4	52.2	16.6	31.8	1016.	2.6	214.1
12689	9.10	8.21	13.8	42.6	51.9	16.8	32.5	785.	1.9	151.9
12698	6.82	8.29	14.9	44.5	53.7	18.0	33.5	1211.	1.6	134.3
12704	8.89	8.34	13.4	40.7	48.8	16.1	32.9	902.	2.7	222.1
MEAN	9.88	8.14	13.9	42.3	52.0	17.1	32.9	923.	2.4	195.9
S.D.	3.205	0.567	0.99	2.92	1.50	0.58	0.55	159.2	0.75	52.10
S.E.	1.068	0.189	0.33	0.97	0.50	0.19	0.18	53.1	0.25	17.37
N	9	9	9	9	9	9	9	9	9	9
thous/uL = THOUSANDS/MICROLITER, mil/uL = MILLIONS/MICROLITER, fL = FEMTOLITERS, pg = PICOGRAMS, g/dL = GRAMS/DECILITER										

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TABLE A10
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INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP: 750 MG/KG/DAY		MALES				
12666	15.6	80.4	2.3	0.3	0.5	0.9
12672	12.5	84.8	1.3	0.3	0.5	0.6
12673	11.8	85.1	1.8	0.4	0.3	0.6
12680	30.5	64.4	2.1	0.7	0.3	1.9
12681	15.5	81.8	1.4	0.4	0.3	0.5
12687	22.6	73.9	2.4	0.2	0.5	0.4
12689	17.5	79.5	1.3	0.3	0.4	1.0
12698	32.4	63.6	2.5	0.4	0.3	0.7
12704	14.1	83.1	1.7	0.1	0.4	0.5
MEAN	19.2	77.4	1.9	0.3	0.4	0.8
S.D.	7.65	8.30	0.48	0.17	0.09	0.46
S.E.	2.55	2.77	0.16	0.06	0.03	0.15
N	9	9	9	9	9	9

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:	750 MG/KG/DAY	MALES						
12666	1.48	7.63	0.22	0.03	0.05	0.09	PLATELET ESTIMATE AND MORPHOLOGY NOT REVIEWED	
12672	1.35	9.13	0.14	0.03	0.06	0.06	PLATELET ESTIMATE AND MORPHOLOGY NOT REVIEWED	
12673	1.15	8.30	0.17	0.04	0.03	0.06	PLATELET ESTIMATE AND MORPHOLOGY NOT REVIEWED	
12680	5.43	11.46	0.37	0.13	0.06	0.35	PLATELET ESTIMATE AND MORPHOLOGY NOT REVIEWED	
12681	1.12	5.92	0.10	0.03	0.03	0.04	PLATELET ESTIMATE AND MORPHOLOGY NOT REVIEWED	
12687	2.04	6.67	0.21	0.01	0.05	0.04	PLATELET ESTIMATE AND MORPHOLOGY NOT REVIEWED	
12689	1.59	7.24	0.12	0.03	0.04	0.09	PLATELET ESTIMATE AND MORPHOLOGY NOT REVIEWED	
12698	2.21	4.34	0.17	0.03	0.02	0.05	PLATELET ESTIMATE AND MORPHOLOGY NOT REVIEWED	
12704	1.25	7.39	0.15	0.01	0.04	0.04	PLATELET ESTIMATE AND MORPHOLOGY NOT REVIEWED	
MEAN	1.96	7.56	0.18	0.04	0.04	0.09		
S.D.	1.356	2.007	0.080	0.036	0.014	0.099		
S.E.	0.452	0.669	0.027	0.012	0.005	0.033		
N	9	9	9	9	9	9		
thous/uL = THOUSANDS/MICROLITER								

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INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP: 750 MG/KG/DAY		MALES		
12666	17.1	18.0	13.7	2.83
12672	17.2	20.5	15.4	3.04
12673	18.4	19.5	12.9	2.62
12680	17.6	17.6	16.6	3.12
12681	17.3	18.7	12.6	2.49
12687	18.6	19.3	14.6	2.52
12689	17.2	17.5	13.3	2.60
12698	18.0	18.5	14.9	2.99
12704	17.7	19.6	14.9	2.82
MEAN	17.7	18.8	14.3	2.78
S.D.	0.55	1.01	1.30	0.235
S.E.	0.18	0.34	0.43	0.078
N	9	9	9	9
g/dL = GRAMS/DECILITER				

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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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:	UNTREATED	FEMALES								
12705	10.17	8.20	15.0	43.9	53.5	18.3	34.2	852.	1.5	123.8
12712	5.47	7.54	14.0	40.7	53.9	18.6	34.5	879.	2.6	198.5
12716	13.23	9.18	16.1	47.4	51.6	17.5	33.9	1117.	2.3	213.9
12724	8.31	7.96	14.5	42.4	53.2	18.2	34.1	1123.	1.9	154.7
12730	7.41	8.66	15.0	44.7	51.7	17.3	33.6	1071.	1.8	154.0
12733	7.64	8.17	15.1	45.7	55.9	18.5	33.1	1104.	1.8	146.4
12734	9.16	8.55	15.5	45.8	53.6	18.1	33.8	1228.	1.6	133.0
12736	7.24	7.90	14.8	44.4	56.2	18.8	33.4	1054.	2.7	211.9
12737	6.73	7.95	14.4	41.5	52.2	18.1	34.8	1252.	1.5	122.3
12748	7.01	8.54	14.9	45.6	53.4	17.4	32.6	935.	1.3	113.0
MEAN	8.24	8.27	14.9	44.2	53.5	18.1	33.8	1062.	1.9	157.2
S.D.	2.186	0.473	0.59	2.11	1.56	0.52	0.66	135.8	0.48	37.89
S.E.	0.691	0.150	0.19	0.67	0.49	0.16	0.21	43.0	0.15	11.98
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-402024
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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP:	UNTREATED	FEMALES				
12705	7.0	88.9	1.8	1.1	0.6	0.5
12712	14.3	81.4	2.1	1.2	0.4	0.6
12716	9.1	87.6	1.2	0.9	0.6	0.6
12724	9.6	85.6	2.6	1.3	0.4	0.4
12730	10.7	84.6	1.9	1.7	0.4	0.8
12733	12.5	83.5	2.0	0.7	0.3	1.0
12734	15.1	80.0	2.8	1.0	0.6	0.6
12736	11.8	84.4	1.5	1.0	0.7	0.6
12737	15.8	80.5	1.2	1.7	0.4	0.4
12748	14.5	81.8	2.0	0.4	0.3	0.9
MEAN	12.0	83.8	1.9	1.1	0.5	0.6
S.D.	2.92	2.98	0.53	0.41	0.14	0.20
S.E.	0.92	0.94	0.17	0.13	0.04	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	thous/uL	thous/uL	thous/uL	thous/uL	thous/uL		
GROUP:	UNTREATED	FEMALES						
12705	0.71	9.05	0.18	0.12	0.06	0.05	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12712	0.78	4.45	0.12	0.06	0.02	0.03	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12716	1.20	11.58	0.16	0.12	0.08	0.08	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12724	0.80	7.12	0.22	0.11	0.03	0.04	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12730	0.79	6.27	0.14	0.13	0.03	0.06	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12733	0.96	6.38	0.16	0.05	0.03	0.07	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12734	1.39	7.33	0.26	0.09	0.05	0.05	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12736	0.86	6.11	0.11	0.07	0.05	0.04	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12737	1.06	5.42	0.08	0.11	0.03	0.02	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12748	1.02	5.74	0.14	0.03	0.02	0.06	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
MEAN	0.96	6.95	0.16	0.09	0.04	0.05		
S.D.	0.215	2.043	0.053	0.034	0.019	0.018		
S.E.	0.068	0.646	0.017	0.011	0.006	0.006		
N	10	10	10	10	10	10		
thous/uL = THOUSANDS/MICROLITER								

PROJECT NO.:WIL-402024
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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

PAGE 24
WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP:	UNTREATED	FEMALES		
12705	16.9	18.6	11.3	1.97
12712	17.1	17.9	11.1	2.03
12716	18.1	15.3	10.7	1.99
12724	16.4	16.1	10.8	2.06
12730	15.9	16.6	10.8	2.01
12733	QNS	QNS	11.4	2.24
12734	16.8	16.7	10.9	2.06
12736	16.3	19.1	11.3	2.17
12737	18.2	17.3	11.4	2.15
12748	17.8	18.9	10.8	1.85
MEAN	17.1	17.4	11.1	2.05
S.D.	0.82	1.33	0.28	0.112
S.E.	0.27	0.44	0.09	0.035
N	9	9	10	10
QNS = QUANTITY NOT SUFFICIENT				
g/dL = GRAMS/DECILITER				

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
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								
12706	10.34	7.70	14.1	41.5	53.9	18.3	34.0	1133.	2.4	181.8
12708	8.16	8.38	15.5	44.6	53.2	18.4	34.7	941.	1.6	135.8
12711	10.68	8.59	15.5	45.3	52.7	18.0	34.2	974.	1.4	123.7
12714	13.74	7.70	13.8	41.3	53.6	18.0	33.5	1271.	1.9	146.2
12718	8.17	8.35	15.0	46.0	55.1	18.0	32.6	957.	1.9	160.6
12721	CLT	CLT	CLT	CLT	CLT	CLT	CLT	CLT	CLT	CLT
12744	7.86	8.73	15.6	47.1	54.0	17.9	33.2	1071.	2.5	215.2
12752	8.69	7.40	13.9	40.6	54.8	18.8	34.3	1180.	1.8	136.4
12757	11.29	8.09	14.7	43.6	53.8	18.2	33.9	1072.	2.3	183.0
12758	8.57	7.99	14.9	43.7	54.7	18.7	34.1	846.	2.4	189.4
MEAN	9.72	8.10	14.8	43.7	54.0	18.3	33.8	1049.	2.0	163.6
S.D.	1.956	0.447	0.70	2.25	0.78	0.32	0.64	133.0	0.39	30.52
S.E.	0.652	0.149	0.23	0.75	0.26	0.11	0.21	44.3	0.13	10.17
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				
12706	10.4	83.1	3.1	1.1	0.6	1.8
12708	9.3	84.9	3.0	1.1	0.8	0.8
12711	12.6	83.2	2.3	1.0	0.4	0.6
12714	16.4	79.0	2.8	0.9	0.4	0.6
12718	17.1	79.9	1.6	0.5	0.3	0.6
12721	CLT	CLT	CLT	CLT	CLT	CLT
12744	18.5	77.3	2.5	1.0	0.4	0.4
12752	18.1	73.4	3.8	1.7	0.6	2.4
12757	17.4	79.3	1.5	0.8	0.4	0.6
12758	15.1	79.3	3.3	0.9	0.3	1.1
MEAN	15.0	79.9	2.7	1.0	0.5	1.0
S.D.	3.42	3.48	0.76	0.32	0.17	0.68
S.E.	1.14	1.16	0.25	0.11	0.06	0.23
N	9	9	9	9	9	9
CLT = CLOTTED						

CLT = CLOTTED

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP: 0 MG/KG/DAY		FEMALES		
12706	17.4	19.6	11.8	2.37
12708	17.2	16.8	10.7	2.09
12711	15.9	17.5	11.1	2.09
12714	16.7	19.4	11.3	2.09
12718	16.9	21.2	10.7	1.93
12721	CLT	CLT	CLT	CLT
12744	16.8	16.9	11.3	2.18
12752	15.1	17.4	12.1	2.54
12757	17.6	19.7	10.8	2.10
12758	16.8	18.8	10.8	2.09
MEAN	16.7	18.6	11.2	2.16
S.D.	0.78	1.52	0.50	0.182
S.E.	0.26	0.51	0.17	0.061
N	9	9	9	9
CLT = CLOTTED				
g/dL = GRAMS/DECILITER				

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

PAGE 29
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: 100 MG/KG/DAY		FEMALES								
12707	7.95	8.48	14.7	43.6	51.4	17.4	33.8	1052.	1.3	113.2
12715	8.11	8.46	15.3	45.1	53.3	18.1	34.0	1311.	1.7	147.8
12722	7.26	7.66	14.1	41.3	54.0	18.4	34.1	951.	1.9	144.0
12738	6.90	8.01	14.8	43.0	53.7	18.5	34.4	1022.	1.6	126.3
12740	11.03	8.27	15.5	46.2	56.0	18.7	33.4	991.	1.6	133.9
12743	6.68	8.22	15.3	46.3	56.4	18.7	33.1	1188.	1.5	122.6
12746	8.08	8.67	15.3	46.4	53.4	17.6	33.0	1206.	2.0	170.5
12753	8.83	8.50	14.9	44.5	52.3	17.5	33.5	1071.	2.1	174.8
12754	6.79	7.92	13.9	41.1	51.9	17.6	33.9	1059.	2.6	204.3
12759	8.63	8.05	13.9	41.9	52.0	17.3	33.2	1001.	1.9	155.8
MEAN	8.03	8.22	14.8	43.9	53.4	18.0	33.6	1085.	1.8	149.3
S.D.	1.301	0.314	0.61	2.07	1.69	0.56	0.47	113.6	0.37	27.85
S.E.	0.412	0.099	0.19	0.65	0.53	0.18	0.15	35.9	0.12	8.81
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
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP: 100 MG/KG/DAY		FEMALES				
12707	10.6	84.1	2.6	0.9	0.5	1.3
12715	23.2	73.0	2.1	0.8	0.4	0.5
12722	13.9	81.8	2.4	1.1	0.2	0.5
12738	24.1	71.5	2.3	0.7	0.3	1.1
12740	13.8	81.1	2.6	0.9	0.5	1.1
12743	11.3	84.0	2.4	0.5	0.6	1.1
12746	8.9	86.4	2.5	0.6	0.6	1.0
12753	9.4	84.8	2.9	1.3	0.5	1.1
12754	12.5	79.7	4.2	1.6	0.5	1.5
12759	17.4	78.7	2.1	0.7	0.3	0.8
MEAN	14.5	80.5	2.6	0.9	0.4	1.0
S.D.	5.42	4.96	0.61	0.34	0.13	0.32
S.E.	1.71	1.57	0.19	0.11	0.04	0.10
N	10	10	10	10	10	10

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

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: 100 MG/KG/DAY FEMALES								
12707	0.84	6.69	0.21	0.07	0.04	0.10	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12715	1.88	5.92	0.17	0.06	0.03	0.04	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12722	1.01	5.94	0.18	0.08	0.02	0.04	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12738	1.67	4.94	0.16	0.05	0.02	0.07	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12740	1.53	8.94	0.29	0.10	0.05	0.12	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12743	0.75	5.62	0.16	0.03	0.04	0.07	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12746	0.72	6.98	0.20	0.05	0.05	0.08	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12753	0.83	7.49	0.25	0.12	0.04	0.10	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12754	0.85	5.41	0.28	0.11	0.03	0.10	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12759	1.50	6.79	0.18	0.06	0.03	0.07	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
MEAN	1.16	6.47	0.21	0.07	0.04	0.08		
S.D.	0.437	1.170	0.049	0.029	0.011	0.026		
S.E.	0.138	0.370	0.015	0.009	0.003	0.008		
N	10	10	10	10	10	10		
thous/uL = THOUSANDS/MICROLITER								

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP: 100 MG/KG/DAY FEMALES				
12707	16.8	18.1	10.8	2.10
12715	17.1	17.6	10.9	1.99
12722	16.2	17.4	11.1	2.29
12738	16.3	17.9	11.0	2.12
12740	16.8	17.3	10.8	2.06
12743	18.0	17.2	10.5	1.91
12746	17.3	19.7	11.5	2.06
12753	17.1	15.8	11.3	2.20
12754	17.3	19.8	11.0	2.13
12759	17.1	17.2	11.6	2.16
MEAN	17.0	17.8	11.1	2.10
S.D.	0.52	1.20	0.34	0.107
S.E.	0.16	0.38	0.11	0.034
N	10	10	10	10

g/dL = GRAMS/DECILITER

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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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: 450 MG/KG/DAY	FEMALES									
12709	10.23	8.54	14.9	44.0	51.5	17.4	33.8	897.	1.2	101.4
12719	10.85	7.59	13.5	39.2	51.7	17.8	34.4	912.	2.1	159.1
12726	10.85	8.93	15.8	46.9	52.6	17.7	33.6	957.	1.0	93.4
12727	7.56	7.93	13.9	42.3	53.4	17.5	32.9	966.	1.6	127.6
12728	11.11	8.15	14.0	42.6	52.3	17.2	32.8	1242.	2.1	172.9
12732	8.75	8.72	14.7	43.5	49.9	16.9	33.9	1152.	1.4	121.8
12735	6.92	8.21	14.4	41.9	51.0	17.5	34.3	770.	1.3	110.5
12747	6.15	7.91	14.1	40.7	51.5	17.9	34.7	1033.	1.0	79.4
12760	7.63	8.01	14.7	42.8	53.4	18.4	34.4	1301.	1.5	123.8
12763	7.34	9.07	15.6	46.2	50.9	17.2	33.7	991.	1.6	143.8
MEAN	8.74	8.31	14.6	43.0	51.8	17.6	33.9	1022.	1.5	123.4
S.D.	1.866	0.487	0.74	2.32	1.12	0.42	0.63	164.3	0.39	29.15
S.E.	0.590	0.154	0.23	0.73	0.35	0.13	0.20	51.9	0.12	9.22
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										

TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP: 450 MG/KG/DAY		FEMALES				
12709	9.1	86.6	2.0	0.6	0.7	1.1
12719	30.0	62.9	5.1	0.6	0.4	0.9
12726	5.7	90.1	1.9	0.5	0.5	1.4
12727	13.6	80.5	3.7	0.4	0.3	1.6
12728	20.6	74.5	3.2	0.3	0.3	1.1
12732	21.3	72.6	3.1	0.7	0.7	1.6
12735	16.1	79.1	2.9	0.4	0.5	0.9
12747	20.6	75.8	1.8	0.6	0.4	0.9
12760	12.2	84.1	2.2	0.2	0.5	0.8
12763	25.9	68.2	3.7	0.7	0.8	0.7
MEAN	17.5	77.4	3.0	0.5	0.5	1.1
S.D.	7.57	8.38	1.04	0.17	0.17	0.33
S.E.	2.39	2.65	0.33	0.05	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	thous/uL	thous/uL	thous/uL	thous/uL	thous/uL					

GROUP:	450	MG/KG/DAY	FEMALES								
12709	0.93	8.86	0.21	0.06	0.07	0.12	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT REVIEWED
12719	3.26	6.83	0.56	0.07	0.04	0.10	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT REVIEWED
12726	0.62	9.78	0.20	0.06	0.05	0.15	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT REVIEWED
12727	1.03	6.09	0.28	0.03	0.02	0.12	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT REVIEWED
12728	2.29	8.28	0.36	0.04	0.03	0.12	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT REVIEWED
12732	1.86	6.36	0.28	0.06	0.06	0.14	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT REVIEWED
12735	1.11	5.48	0.20	0.02	0.04	0.06	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT REVIEWED
12747	1.27	4.66	0.11	0.03	0.03	0.05	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT REVIEWED
12760	0.93	6.42	0.17	0.01	0.04	0.06	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT REVIEWED
12763	1.90	5.01	0.27	0.05	0.06	0.05	PLATELET	ESTIMATE	AND	MORPHOLOGY	NOT REVIEWED
MEAN	1.52	6.78	0.26	0.04	0.04	0.10					
S.D.	0.807	1.689	0.125	0.020	0.016	0.039					
S.E.	0.255	0.534	0.040	0.006	0.005	0.012					
N	10	10	10	10	10	10					

thous/uL = THOUSANDS/MICROLITER											

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP: 450 MG/KG/DAY FEMALES				
12709	17.7	17.7	11.5	2.19
12719	16.5	16.1	12.3	2.34
12726	17.0	17.9	11.6	2.30
12727	16.4	16.7	12.1	2.42
12728	16.6	18.2	11.5	2.02
12732	17.2	20.5	11.8	2.21
12735	17.1	17.8	11.3	2.35
12747	17.2	18.8	11.5	2.37
12760	17.3	17.7	11.2	2.14
12763	16.9	18.3	11.0	2.08
MEAN	17.0	18.0	11.6	2.24
S.D.	0.40	1.18	0.40	0.134
S.E.	0.13	0.37	0.13	0.042
N	10	10	10	10

g/dL = GRAMS/DECILITER

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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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: 750 MG/KG/DAY		FEMALES								
12720	6.73	6.75	12.7	36.7	54.4	18.8	34.5	964.	2.2	149.6
12723	7.31	8.58	14.0	41.8	48.8	16.3	33.5	793.	1.7	144.1
12731	9.93	7.97	13.1	39.6	49.7	16.5	33.2	1068.	1.1	88.4
12739	6.71	7.65	13.3	40.4	52.8	17.4	33.0	1218.	1.9	147.1
12742	10.00	7.55	13.8	41.2	54.6	18.3	33.5	882.	2.6	194.2
12749	5.99	8.56	14.8	44.1	51.5	17.3	33.5	932.	2.5	210.1
12750	8.74	7.59	13.5	39.4	51.9	17.8	34.4	1134.	3.0	229.4
12755	9.97	7.78	13.5	39.4	50.6	17.3	34.2	1228.	2.3	182.2
12761	10.80	7.44	12.7	37.5	50.4	17.1	33.8	803.	1.3	93.1
12764	13.48	6.84	12.6	37.0	54.1	18.4	34.0	1271.	4.0	274.0
MEAN	8.97	7.67	13.4	39.7	51.9	17.5	33.8	1029.	2.3	171.2
S.D.	2.321	0.608	0.68	2.31	2.05	0.81	0.51	179.0	0.85	58.55
S.E.	0.734	0.192	0.22	0.73	0.65	0.26	0.16	56.6	0.27	18.52
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
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	NEU	LYMPH	MONO	EOS	BASO	LUC
	%	%	%	%	%	%
GROUP: 750 MG/KG/DAY		FEMALES				
12720	17.0	77.9	3.3	0.2	0.7	1.0
12723	11.3	85.8	1.8	0.5	0.3	0.3
12731	25.1	68.7	3.6	0.4	0.2	2.0
12739	11.1	85.1	2.0	0.3	0.3	1.3
12742	15.2	80.4	1.8	0.1	0.7	1.9
12749	15.7	78.8	2.7	0.6	0.7	1.5
12750	10.9	85.6	1.8	0.5	0.4	0.8
12755	31.6	65.4	1.7	0.2	0.3	0.8
12761	20.9	76.4	1.6	0.2	0.2	0.7
12764	28.2	65.2	3.8	0.8	0.5	1.4
MEAN	18.7	76.9	2.4	0.4	0.4	1.2
S.D.	7.45	8.00	0.86	0.22	0.21	0.55
S.E.	2.36	2.53	0.27	0.07	0.07	0.17
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: 750	MG/KG/DAY	FEMALES						
12720	1.14	5.24	0.22	0.02	0.04	0.07	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12723	0.83	6.27	0.13	0.04	0.02	0.03	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12731	2.50	6.82	0.36	0.04	0.02	0.19	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12739	0.74	5.71	0.14	0.02	0.02	0.09	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12742	1.52	8.04	0.18	0.01	0.07	0.19	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12749	0.94	4.72	0.16	0.04	0.04	0.09	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12750	0.95	7.49	0.16	0.04	0.03	0.07	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12755	3.15	6.52	0.17	0.02	0.03	0.08	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12761	2.25	8.25	0.17	0.03	0.02	0.08	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
12764	3.80	8.80	0.52	0.11	0.07	0.19	PLATELET ESTIMATE AND MORPHOLOGY	NOT REVIEWED
MEAN	1.78	6.79	0.22	0.04	0.04	0.11		
S.D.	1.083	1.351	0.124	0.028	0.020	0.059		
S.E.	0.342	0.427	0.039	0.009	0.006	0.019		
N	10	10	10	10	10	10		
thous/uL = THOUSANDS/MICROLITER								

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TABLE A10
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL HEMATOLOGY VALUES

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WEEK 12

ANIMAL	PT	APTT	RDW	HDW
	seconds	seconds	%	g/dL
GROUP: 750 MG/KG/DAY		FEMALES		
12720	17.6	17.2	12.0	2.48
12723	17.9	17.5	12.4	2.41
12731	17.1	17.3	11.7	2.21
12739	16.9	15.6	12.2	2.49
12742	16.6	15.0	12.8	2.66
12749	17.5	19.1	12.5	2.49
12750	17.1	19.5	13.9	2.88
12755	17.9	18.4	12.2	2.51
12761	16.9	16.5	12.2	2.57
12764	17.6	17.7	13.9	2.78
MEAN	17.3	17.4	12.6	2.55
S.D.	0.45	1.42	0.75	0.189
S.E.	0.14	0.45	0.24	0.060
N	10	10	10	10

g/dL = GRAMS/DECILITER

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TABLE A11
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
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									
12649	4.0	6.7	2.8	1.43	0.09	15.5	0.3	99.	63.	114.	0.4
12654	3.8	6.2	2.4	1.57	0.06	15.8	0.2	95.	32.	105.	0.1
12660	4.1	6.6	2.5	1.63	0.09	9.9	0.2	124.	61.	107.	0.1
12668	4.0	6.6	2.6	1.58	0.06	11.5	0.2	80.	40.	88.	0.6
12684	4.0	6.7	2.6	1.52	0.06	13.7	0.2	63.	35.	100.	0.1
12686	3.7	6.7	2.9	1.27	0.07	14.9	0.3	66.	52.	111.	0.2
12691	3.8	5.7	1.9	2.05	0.07	14.5	0.2	94.	43.	93.	0.9
12694	3.8	6.5	2.7	1.40	0.06	14.3	0.2	103.	50.	122.	0.4
12701	4.0	6.7	2.6	1.55	0.07	11.2	0.2	139.	53.	104.	0.8
12703	4.0	6.2	2.2	1.83	0.09	14.8	0.2	56.	30.	84.	0.7
MEAN	3.9	6.5	2.5	1.58	0.07	13.6	0.2	92.	46.	103.	0.4
S.D.	0.13	0.33	0.29	0.221	0.013	2.02	0.04	26.6	11.7	11.8	0.31
S.E.	0.04	0.10	0.09	0.070	0.004	0.64	0.01	8.4	3.7	3.7	0.10
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
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
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							
12649	112.	64.	11.4	101.	9.2	5.04	148.	31.	18.
12654	121.	42.	10.7	106.	6.8	3.91	146.	15.	10.
12660	179.	59.	11.7	103.	8.7	4.30	147.	14.	18.
12668	151.	46.	11.6	104.	7.7	5.00	146.	13.	11.
12684	147.	78.	11.7	103.	8.1	5.44	146.	31.	12.
12686	180.	77.	11.0	100.	8.5	5.59	145.	27.	7.
12691	114.	40.	11.0	105.	8.2	4.73	147.	12.	8.
12694	135.	35.	11.1	105.	8.3	5.23	148.	11.	11.
12701	176.	85.	12.0	102.	8.8	5.36	148.	27.	16.
12703	152.	50.	12.1	106.	9.2	5.35	149.	16.	5.
MEAN	147.	58.	11.4	104.	8.4	5.00	147.	20.	12.
S.D.	26.1	17.8	0.47	2.1	0.72	0.537	1.2	8.2	4.5
S.E.	8.3	5.6	0.15	0.7	0.23	0.170	0.4	2.6	1.4
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
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL SERUM CHEMISTRY VALUES

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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										
12648	3.8	6.4	2.6	1.48	0.10	12.8	0.2	79.	49.	97.	0.1
12650	3.5	6.2	2.7	1.29	0.05	16.8	0.2	81.	53.	143.	1.0
12661	4.1	7.3	3.1	1.33	0.05	15.1	0.3	82.	53.	113.	0.1
12675	4.0	7.2	3.2	1.28	0.08	9.7	0.3	78.	47.	89.	0.2
12676	3.7	6.5	2.8	1.34	0.11	17.3	0.2	102.	49.	133.	1.1
12679	3.6	6.9	3.3	1.11	0.08	13.8	0.3	48.	23.	76.	0.1
12683	3.6	6.4	2.8	1.25	0.08	17.1	0.2	66.	49.	173.	0.1
12693	4.0	6.5	2.5	1.58	0.06	16.2	0.2	107.	51.	133.	0.3
12697	3.7	6.4	2.7	1.35	0.06	15.5	0.1	88.	55.	120.	0.5
12700	3.6	6.3	2.7	1.35	0.08	13.3	0.2	67.	49.	147.	0.1
MEAN	3.8	6.6	2.8	1.34	0.08	14.8	0.2	80.	48.	122.	0.4
S.D.	0.21	0.38	0.27	0.127	0.020	2.39	0.06	17.2	9.1	29.5	0.39
S.E.	0.07	0.12	0.08	0.040	0.006	0.76	0.02	5.5	2.9	9.3	0.12
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
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
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						
12648	126.	54.	11.3	105.	8.0	5.95	145.	17.	8.
12650	109.	50.	10.6	102.	8.9	5.31	146.	71.	3.
12661	122.	57.	12.3	101.	9.7	5.79	150.	24.	22.
12675	146.	58.	12.2	101.	7.7	4.74	146.	23.	16.
12676	138.	51.	10.7	104.	8.7	5.96	147.	11.	10.
12679	137.	63.	11.3	101.	8.1	6.34	145.	17.	6.
12683	120.	37.	10.3	103.	9.6	5.17	148.	10.	15.
12693	155.	35.	12.0	104.	9.9	6.42	148.	3.	7.
12697	122.	43.	10.5	104.	7.9	4.67	146.	7.	8.
12700	121.	35.	11.3	105.	8.4	5.32	146.	16.	4.
MEAN	130.	48.	11.3	103.	8.7	5.57	147.	20.	10.
S.D.	14.0	10.2	0.73	1.6	0.81	0.619	1.6	19.1	6.0
S.E.	4.4	3.2	0.23	0.5	0.26	0.196	0.5	6.1	1.9
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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WEEK 12

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: 100 MG/KG/DAY		MALES							
12646	123.	67.	10.9	103.	8.0	5.92	145.	30.	UR
12655	143.	59.	11.3	103.	8.9	6.09	146.	10.	9.
12656	138.	56.	11.7	104.	8.1	4.62	148.	16.	20.
12659	136.	46.	11.0	104.	8.5	5.87	146.	12.	9.
12662	140.	48.	11.5	106.	8.2	5.31	148.	20.	10.
12664	140.	63.	12.1	101.	11.0	9.44	146.	23.	13.
12670	114.	43.	10.8	102.	8.2	5.31	145.	23.	12.
12682	124.	45.	11.1	102.	9.1	5.33	147.	9.	13.
12688	129.	56.	10.8	105.	8.7	6.22	144.	16.	7.
12695	138.	37.	11.3	104.	8.0	5.15	146.	12.	7.
MEAN	133.	52.	11.3	103.	8.7	5.93	146.	17.	11.
S.D.	9.5	9.6	0.42	1.5	0.90	1.329	1.3	6.8	4.0
S.E.	3.0	3.0	0.13	0.5	0.29	0.420	0.4	2.1	1.3
N	10	10	10	10	10	10	10	10	9
UR = BELOW INSTRUMENT RANGE									
mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, mEq/L = MILLIEQUIVALENTS/LITER									

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TABLE A11
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INDIVIDUAL SERUM CHEMISTRY VALUES

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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: 450 MG/KG/DAY	MALES										
12645	3.8	6.3	2.6	1.48	0.05	18.8	0.3	74.	42.	218.	0.8
12652	3.6	6.4	2.7	1.34	0.04	15.2	0.2	53.	41.	118.	0.1
12669	4.2	6.9	2.7	1.57	0.08	16.6	0.3	129.	49.	110.	0.2
12671	4.0	6.3	2.3	1.77	0.06	19.4	0.3	79.	39.	143.	0.2
12674	3.4	5.9	2.5	1.38	0.05	18.8	0.2	73.	50.	126.	0.1
12677	4.2	6.7	2.6	1.61	0.04	20.4	0.4	61.	29.	89.	0.1
12685	3.5	5.6	2.1	1.63	0.05	18.8	0.3	77.	42.	114.	0.9
12690	3.4	5.8	2.4	1.38	0.06	19.9	0.2	63.	51.	103.	0.2
12692	3.8	5.9	2.1	1.81	0.04	21.2	0.2	92.	45.	102.	0.9
MEAN	3.8	6.2	2.4	1.55	0.05	18.8	0.3	78.	43.	125.	0.4
S.D.	0.32	0.43	0.24	0.171	0.013	1.86	0.07	22.3	6.8	38.2	0.36
S.E.	0.11	0.14	0.08	0.057	0.004	0.62	0.02	7.4	2.3	12.7	0.12
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: 450	MG/KG/DAY	MALES							
12645	118.	67.	11.1	103.	6.9	4.90	146.	24.	11.
12652	143.	56.	11.6	103.	8.5	5.54	146.	16.	9.
12669	142.	71.	12.5	102.	10.1	5.98	151.	13.	17.
12671	113.	58.	11.2	105.	8.1	5.25	147.	5.	8.
12674	136.	56.	10.8	104.	7.5	4.77	146.	15.	11.
12677	176.	107.	10.7	100.	8.9	5.05	147.	30.	17.
12685	116.	66.	10.6	105.	6.9	5.28	145.	11.	10.
12690	103.	75.	11.0	105.	8.6	4.95	146.	21.	6.
12692	129.	71.	11.3	105.	7.4	4.55	146.	13.	10.
MEAN	131.	70.	11.2	104.	8.1	5.14	147.	16.	11.
S.D.	21.9	15.6	0.58	1.7	1.05	0.431	1.7	7.5	3.7
S.E.	7.3	5.2	0.19	0.6	0.35	0.144	0.6	2.5	1.2
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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TABLE A11
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL SERUM CHEMISTRY VALUES

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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: 750 MG/KG/DAY		MALES									
12666	4.3	6.5	2.2	2.00	0.06	23.1	0.3	101.	52.	135.	1.5
12672	3.7	5.9	2.2	1.63	0.06	28.5	0.3	83.	49.	144.	2.3
12673	4.1	6.8	2.7	1.52	0.11	22.7	0.3	63.	43.	132.	0.7
12680	3.7	6.0	2.3	1.60	0.04	16.9	0.2	132.	37.	98.	1.4
12681	4.0	6.1	2.1	1.91	0.06	26.5	0.3	71.	33.	133.	1.2
12687	4.1	6.3	2.1	1.93	0.09	19.1	0.3	81.	70.	200.	3.4
12689	3.7	5.8	2.1	1.73	0.06	21.9	0.2	135.	78.	167.	1.5
12698	3.6	6.0	2.4	1.50	0.10	21.9	0.2	125.	52.	143.	1.7
12704	3.9	5.9	1.9	2.06	0.02	16.2	0.2	82.	34.	93.	1.2
MEAN	3.9	6.1	2.2	1.76	0.07	21.9	0.3	97.	50.	138.	1.7
S.D.	0.24	0.33	0.23	0.214	0.029	4.06	0.05	27.3	15.6	32.5	0.78
S.E.	0.08	0.11	0.08	0.071	0.010	1.35	0.02	9.1	5.2	10.8	0.26
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: 750	MG/KG/DAY	MALES							
12666	140.	81.	11.6	106.	8.2	5.73	146.	11.	12.
12672	141.	82.	11.5	106.	10.6	7.09	148.	13.	6.
12673	121.	85.	11.0	105.	7.4	5.34	147.	17.	11.
12680	133.	81.	11.1	105.	7.5	4.46	145.	15.	5.
12681	123.	61.	11.1	107.	9.6	7.25	151.	14.	8.
12687	142.	53.	11.7	107.	11.0	7.82	152.	13.	16.
12689	126.	58.	10.7	105.	6.6	4.36	146.	13.	11.
12698	145.	110.	11.3	104.	8.6	5.64	146.	189.	10.
12704	139.	67.	11.1	104.	8.9	5.51	146.	12.	9.
MEAN	134.	75.	11.2	105.	8.7	5.91	147.	33.	10.
S.D.	9.0	17.6	0.32	1.1	1.48	1.221	2.5	58.5	3.3
S.E.	3.0	5.9	0.11	0.4	0.49	0.407	0.8	19.5	1.1
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									
12705	5.7	8.1	2.4	2.38	0.15	16.3	0.3	33.	90.	179.	1.1
12712	5.2	7.4	2.2	2.43	0.10	17.1	0.3	36.	49.	106.	1.4
12716	4.5	7.1	2.6	1.73	0.10	11.7	0.4	60.	38.	105.	0.1
12724	4.9	7.2	2.3	2.14	0.08	12.0	0.2	42.	47.	94.	0.7
12730	5.0	7.2	2.2	2.26	0.12	11.8	0.2	40.	51.	96.	1.1
12733	5.0	7.5	2.5	2.02	0.14	19.0	0.4	71.	202.	286.	5.6
12734	4.9	7.4	2.4	2.01	0.08	15.5	0.2	37.	209.	357.	1.0
12736	4.8	6.7	2.0	2.45	0.10	12.8	0.2	42.	40.	92.	0.5
12737	4.7	6.9	2.2	2.13	0.08	10.6	0.2	46.	51.	80.	2.2
12748	5.4	7.2	1.8	2.91	0.12	14.2	0.2	64.	47.	106.	0.4
MEAN	5.0	7.3	2.3	2.25	0.11	14.1	0.3	47.	82.	150.	1.4
S.D.	0.35	0.38	0.24	0.322	0.025	2.77	0.08	13.1	66.5	95.7	1.58
S.E.	0.11	0.12	0.07	0.102	0.008	0.88	0.03	4.2	21.0	30.3	0.50
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
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
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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							
12705	158.	89.	12.6	101.	7.8	5.35	144.	30.	18.
12712	129.	77.	10.9	104.	6.9	4.77	145.	19.	12.
12716	102.	66.	11.9	101.	9.7	5.99	147.	31.	21.
12724	143.	89.	12.2	102.	7.3	5.08	144.	21.	9.
12730	146.	98.	12.2	103.	7.7	4.27	147.	19.	11.
12733	103.	95.	11.7	101.	8.7	5.67	145.	22.	47.
12734	148.	62.	12.8	105.	9.4	8.09	144.	23.	36.
12736	127.	70.	12.4	105.	7.8	6.36	147.	33.	11.
12737	127.	70.	12.0	104.	7.4	4.80	145.	18.	6.
12748	138.	48.	13.0	103.	9.1	6.58	148.	16.	8.
MEAN	132.	76.	12.2	103.	8.2	5.70	146.	23.	18.
S.D.	18.5	16.1	0.60	1.6	0.97	1.117	1.5	6.0	13.5
S.E.	5.9	5.1	0.19	0.5	0.31	0.353	0.5	1.9	4.3
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:	0 MG/KG/DAY	FEMALES									
12706	4.5	6.6	2.1	2.10	0.13	18.8	0.2	52.	44.	100.	0.1
12708	5.0	7.4	2.4	2.05	0.16	11.8	0.3	62.	38.	105.	0.8
12711	4.4	7.0	2.6	1.66	0.07	12.7	0.2	33.	54.	129.	0.3
12714	4.7	7.7	3.0	1.58	0.11	11.8	0.2	34.	55.	100.	0.2
12718	4.6	7.1	2.4	1.89	0.15	15.1	0.3	48.	34.	90.	1.9
12721	4.8	7.7	2.9	1.63	0.05	13.8	0.3	52.	50.	115.	0.6
12744	4.3	6.4	2.2	1.98	0.09	11.1	0.2	67.	37.	104.	1.4
12752	4.7	7.3	2.6	1.80	0.14	11.8	0.2	24.	170.	338.	1.6
12757	4.3	6.6	2.3	1.89	0.05	13.4	0.2	45.	31.	98.	1.3
12758	4.1	6.3	2.3	1.80	0.07	13.5	0.2	65.	48.	109.	0.6
MEAN	4.5	7.0	2.5	1.84	0.10	13.4	0.2	48.	56.	129.	0.9
S.D.	0.27	0.52	0.29	0.178	0.042	2.25	0.05	14.5	40.9	74.3	0.63
S.E.	0.09	0.16	0.09	0.056	0.013	0.71	0.02	4.6	12.9	23.5	0.20
N	10	10	10	10	10	10	10	10	10	10	10
mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, q/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						
12706	138.	65.	11.5	103.	7.0	4.69	144.	20.	11.
12708	104.	101.	12.3	100.	8.6	4.61	146.	20.	9.
12711	95.	78.	12.1	102.	8.5	5.03	147.	16.	10.
12714	120.	110.	12.3	101.	7.8	4.64	146.	17.	12.
12718	104.	55.	11.8	103.	9.3	5.34	149.	17.	18.
12721	143.	100.	12.0	102.	9.6	8.89	144.	47.	UR
12744	125.	73.	11.3	105.	9.6	5.61	147.	14.	17.
12752	140.	171.	12.8	99.	7.8	4.80	147.	19.	46.
12757	124.	42.	11.4	104.	7.6	4.17	147.	13.	12.
12758	119.	55.	11.4	105.	6.4	4.35	145.	21.	7.
MEAN	121.	85.	11.9	102.	8.2	5.21	146.	20.	16.
S.D.	16.4	37.6	0.50	2.0	1.09	1.362	1.5	9.7	11.9
S.E.	5.2	11.9	0.16	0.6	0.35	0.431	0.5	3.1	4.0
N	10	10	10	10	10	10	10	10	9
UR = BELOW INSTRUMENT RANGE									
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: 100 MG/KG/DAY		FEMALES									
12707	4.9	7.1	2.2	2.24	0.14	10.3	0.2	24.	36.	75.	0.1
12715	4.5	7.1	2.5	1.79	0.13	16.5	0.3	46.	35.	91.	0.1
12722	5.2	7.6	2.4	2.21	0.11	12.4	0.2	40.	43.	90.	0.1
12738	4.4	6.6	2.2	2.00	0.08	12.4	0.2	50.	30.	79.	1.3
12740	5.5	7.7	2.1	2.61	0.14	15.2	0.3	35.	56.	119.	0.2
12743	4.8	7.3	2.5	1.90	0.10	12.4	0.3	52.	38.	95.	0.9
12746	4.7	6.8	2.1	2.25	0.10	16.9	0.3	51.	39.	97.	1.0
12753	4.4	6.4	2.0	2.19	0.10	14.2	0.3	61.	38.	82.	1.9
12754	4.8	6.8	2.1	2.30	0.10	17.9	0.3	46.	66.	92.	1.0
12759	4.3	6.3	2.0	2.13	0.09	12.6	0.2	58.	38.	98.	2.1
MEAN	4.8	7.0	2.2	2.16	0.11	14.1	0.3	46.	42.	92.	0.9
S.D.	0.38	0.48	0.19	0.229	0.021	2.46	0.05	11.0	10.8	12.3	0.75
S.E.	0.12	0.15	0.06	0.072	0.007	0.78	0.02	3.5	3.4	3.9	0.24
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: 100	MG/KG/DAY	FEMALES							
12707	138.	80.	12.3	103.	7.7	6.40	145.	23.	5.
12715	118.	75.	12.2	101.	9.0	6.29	146.	19.	15.
12722	158.	114.	13.0	101.	7.5	4.78	146.	21.	8.
12738	122.	86.	12.1	104.	7.8	4.63	147.	18.	10.
12740	97.	69.	12.5	103.	8.3	6.13	147.	19.	14.
12743	117.	63.	12.6	104.	9.4	6.14	150.	20.	15.
12746	111.	62.	12.2	101.	9.6	6.61	147.	23.	15.
12753	118.	59.	12.0	102.	7.9	5.39	146.	14.	14.
12754	138.	86.	11.5	101.	7.8	4.53	145.	17.	10.
12759	104.	81.	11.4	103.	7.7	4.93	144.	20.	9.
MEAN	122.	78.	12.2	102.	8.3	5.58	146.	19.	12.
S.D.	18.1	16.2	0.48	1.3	0.77	0.814	1.6	2.7	3.6
S.E.	5.7	5.1	0.15	0.4	0.24	0.257	0.5	0.9	1.1
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: 450	MG/KG/DAY	FEMALES									
12709	5.0	7.3	2.3	2.19	0.10	13.8	0.3	64.	41.	99.	1.7
12719	4.6	6.7	2.1	2.18	0.10	15.2	0.3	38.	42.	119.	0.7
12726	4.8	6.9	2.1	2.26	0.11	17.6	0.4	59.	41.	109.	1.1
12727	5.6	7.8	2.2	2.54	0.12	20.0	0.3	26.	36.	89.	0.1
12728	5.5	7.9	2.5	2.21	0.10	15.1	0.4	41.	33.	88.	0.4
12732	4.9	7.5	2.6	1.93	0.06	13.4	0.2	40.	45.	117.	0.6
12735	4.8	6.8	2.0	2.42	0.10	16.0	0.2	71.	29.	80.	1.5
12747	5.3	7.2	1.9	2.77	0.12	17.7	0.3	40.	46.	91.	1.4
12760	4.9	7.6	2.7	1.81	0.09	18.1	0.3	50.	41.	99.	1.3
12763	5.0	7.3	2.3	2.12	0.11	16.4	0.3	64.	72.	113.	0.5
MEAN	5.0	7.3	2.3	2.24	0.10	16.3	0.3	49.	43.	100.	0.9
S.D.	0.32	0.41	0.26	0.280	0.017	2.05	0.07	14.6	11.6	13.5	0.54
S.E.	0.10	0.13	0.08	0.089	0.005	0.65	0.02	4.6	3.7	4.3	0.17
N	10	10	10	10	10	10	10	10	10	10	10
mg/dL = MILLIGRAMS/DECILITER, U/L = INTERNATIONAL UNIT/LITER, q/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: 450 MG/KG/DAY		FEMALES							
12709	108.	83.	12.3	104.	9.6	5.89	148.	20.	14.
12719	107.	101.	11.8	101.	7.1	4.26	145.	24.	16.
12726	117.	95.	12.2	102.	8.1	5.10	147.	20.	17.
12727	136.	110.	12.6	102.	8.0	5.33	146.	22.	15.
12728	129.	99.	12.5	101.	8.8	4.59	148.	20.	18.
12732	112.	61.	11.8	106.	9.6	6.38	147.	13.	9.
12735	115.	67.	11.8	102.	9.0	4.91	146.	13.	10.
12747	135.	86.	11.8	99.	7.8	5.29	143.	20.	12.
12760	123.	72.	12.4	99.	10.0	5.09	147.	23.	12.
12763	135.	81.	12.1	101.	9.7	5.57	147.	21.	15.
MEAN	122.	86.	12.1	102.	8.8	5.24	146.	20.	14.
S.D.	11.4	15.9	0.32	2.1	0.98	0.612	1.5	3.7	3.0
S.E.	3.6	5.0	0.10	0.7	0.31	0.194	0.5	1.2	0.9
N	10	10	10	10	10	10	10	10	10

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

[illegible]

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

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A11
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
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: 750 MG/KG/DAY FEMALES									
12720	130.	89.	11.7	99.	9.3	4.40	147.	18.	18.
12723	146.	72.	11.8	103.	8.9	5.09	146.	17.	17.
12731	125.	122.	12.0	103.	8.6	6.28	143.	20.	15.
12739	125.	120.	12.1	104.	8.3	6.35	146.	14.	8.
12742	120.	87.	12.4	105.	10.5	7.06	150.	19.	14.
12749	114.	96.	11.8	105.	8.6	6.89	145.	17.	10.
12750	122.	99.	12.2	103.	7.6	5.22	147.	14.	17.
12755	134.	82.	10.3	104.	6.4	4.47	143.	17.	7.
12761	134.	106.	11.3	103.	6.7	4.69	144.	22.	17.
12764	115.	92.	11.7	104.	7.1	4.48	147.	13.	15.
MEAN	127.	97.	11.7	103.	8.2	5.49	146.	17.	14.
S.D.	9.8	15.9	0.59	1.7	1.26	1.049	2.1	2.8	4.0
S.E.	3.1	5.0	0.19	0.5	0.40	0.332	0.7	0.9	1.3
N	10	10	10	10	10	10	10	10	10

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

PCHEv4.06
11/17/2011

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A12 (WEEK -1 PRETEST EXAMINATION)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 1

EXAMINER: DAW INPUT BY: LW		EXAM 1(WEEK -1)			
ANIMAL NO.	DOSE GROUP	SEX	FINDING	GRADE	
12649	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P	
12654	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P	
12660	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P	
12668	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P	
12684	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P	
12686	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P	
12691	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P	
12694	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P	
12701	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P	
12703	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P	
12648	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
12650	0 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1	
12661	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
12675	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
12676	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
12679	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
12683	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
12693	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
12697	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
12700	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
12646	100 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
12655	100 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
12656	100 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P	
12659	100 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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A12 (WEEK -1 PRETEST EXAMINATION)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 2

EXAMINER:	DAW	INPUT BY: LW			EXAM 1(WEEK -1)	
ANIMAL NO.	DOSE	GROUP	SEX	FINDING		GRADE
12662	100	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12664	100	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12670	100	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12682	100	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12688	100	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12695	100	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12645	450	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12652	450	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12669	450	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12671	450	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12674	450	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12677	450	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12685	450	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12690	450	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12692	450	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12699	450	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12658	750	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12666	750	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12672	750	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12673	750	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12680	750	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12681	750	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12687	750	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12689	750	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A12 (WEEK -1 PRETEST EXAMINATION)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 3

EXAMINER:	DAW INPUT BY: LW			EXAM 1(WEEK -1)	
ANIMAL NO.	DOSE GROUP	SEX	FINDING		GRADE
12698	750 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12704	750 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL		P
12705	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12712	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12716	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12724	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12730	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12733	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12734	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12736	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12737	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12748	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12706	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12708	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12711	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12714	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12718	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12721	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12744	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12752	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12757	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12758	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12707	100 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12715	100 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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A12 (WEEK -1 PRETEST EXAMINATION)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 4

EXAMINER:	DAW	INPUT BY: LW			EXAM 1(WEEK -1)	
ANIMAL NO.	DOSE	GROUP	SEX	FINDING		GRADE
12722	100	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12738	100	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12740	100	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12743	100	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12746	100	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12753	100	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12754	100	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12759	100	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12709	450	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12719	450	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12726	450	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12727	450	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12728	450	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12732	450	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12735	450	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12747	450	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12760	450	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12763	450	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12720	750	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12723	750	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12731	750	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12739	750	MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL		P
12742	750	MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL		1
12749	750	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A12 (WEEK -1 PRETEST EXAMINATION)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 5

EXAMINER: DAW INPUT BY: LW			EXAM 1(WEEK -1)			
ANIMAL NO.	DOSE GROUP	SEX	FINDING	GRADE		
12750	750 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P		
12755	750 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P		
12761	750 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P		
12764	750 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
10/13/2011

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A13 (WEEK 12 EXAMINATION)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 1

EXAMINER: BCG INPUT BY: JLS		EXAM 2(WEEK 12)		
ANIMAL NO.	DOSE GROUP	SEX	FINDING	GRADE
12649	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P
12654	UNTREATED	MALE	CORNEAL CRYSTALS - BILATERAL	1
12660	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P
12668	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P
12684	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P
12686	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P
12691	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P
12694	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P
12701	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P
12703	UNTREATED	MALE	NO OCULAR LESIONS - BILATERAL	P
12648	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12650	0 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1
12661	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12675	0 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1
12676	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12679	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12683	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12693	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12697	0 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12700	0 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1
12646	100 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1
12655	100 MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12656	100 MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1
12659	100 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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A13 (WEEK 12 EXAMINATION)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 2

EXAMINER: BCG INPUT BY: JLS				EXAM 2(WEEK 12)	
ANIMAL NO.	DOSE	GROUP	SEX	FINDING	GRADE
12662	100	MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1
12664	100	MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1
12670	100	MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1
12682	100	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12688	100	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12695	100	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12645	450	MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1
12652	450	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12669	450	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12671	450	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12674	450	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12677	450	MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1
12685	450	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12690	450	MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1
12692	450	MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1
12666	750	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12672	750	MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1
12673	750	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12680	750	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12681	750	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12687	750	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12689	750	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12698	750	MG/KG/DAY	MALE	NO OCULAR LESIONS - BILATERAL	P
12704	750	MG/KG/DAY	MALE	CORNEAL CRYSTALS - BILATERAL	1

CODE: 1-SLIGHT, 2-MODERATE, 3-SEVERE, P-PRESENT, O.D.-RIGHT EYE, O.S.-LEFT EYE

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A13 (WEEK 12 EXAMINATION)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 3

EXAMINER: BCG INPUT BY: JLS		EXAM 2(WEEK 12)		
ANIMAL NO.	DOSE GROUP	SEX	FINDING	GRADE
12705	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12712	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12716	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12724	UNTREATED	FEMALE	CORNEAL CRYSTALS - BILATERAL	1
12730	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12733	UNTREATED	FEMALE	CORNEAL CRYSTALS - BILATERAL	1
12734	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12736	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12737	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12748	UNTREATED	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12706	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12708	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12711	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12714	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12718	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12721	0 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1
12744	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12752	0 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1
12757	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12758	0 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12707	100 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12715	100 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12722	100 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P
12738	100 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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A13 (WEEK 12 EXAMINATION)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 4

EXAMINER: BCG INPUT BY: JLS			EXAM 2(WEEK 12)		
ANIMAL NO.	DOSE GROUP	SEX	FINDING	GRADE	
12740	100 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1	
12743	100 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12746	100 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12753	100 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12754	100 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12759	100 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12709	450 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12719	450 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1	
12726	450 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12727	450 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12728	450 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1	
12732	450 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12735	450 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12747	450 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12760	450 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12763	450 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12720	750 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12723	750 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12731	750 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12739	750 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12742	750 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1	
12749	750 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12750	750 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1	
12755	750 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1	

CODE: 1-SLIGHT, 2-MODERATE, 3-SEVERE, P-PRESENT, O.D.-RIGHT EYE, O.S.-LEFT EYE

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A13 (WEEK 12 EXAMINATION)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL OPHTHALMIC EXAMINATION FINDINGS

PAGE 5

EXAMINER: BCG INPUT BY: JLS			EXAM 2(WEEK 12)		
ANIMAL NO.	DOSE GROUP	SEX	FINDING	GRADE	
12761	750 MG/KG/DAY	FEMALE	NO OCULAR LESIONS - BILATERAL	P	
12764	750 MG/KG/DAY	FEMALE	CORNEAL CRYSTALS - BILATERAL	1	

CODE: 1-SLIGHT, 2-MODERATE, 3-SEVERE, P-PRESENT, O.D.-RIGHT EYE, O.S.-LEFT EYE

PEXv4.03
10/13/2011

		BY CAUSE OF DEATH				
		MALES				
CAUSE OF DEATH	GROUP:	1	2	3	4	5

OTHER						
UNDETERMINED						
		-	-	-	12699	12658

1- UNTREATED	2- 0 MG/KG/DAY	3- 100 MG/KG/DAY	4- 450 MG/KG/DAY	5- 750 MG/KG/DAY		

PPCDv4.11
10/13/2011
R:10/24/2011

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A15 (UNSCHEDULED DEATHS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 1

ANIMAL NO. 12699 GROUP 4: 450 MG/KG/DAY MALE FOUND DEAD 07/24/11 DATE OF DEATH: 07/24/11 STUDY DAY: 69
GRADE

GENERAL COMMENT	MICRO: SELECTED GROSS LESIONS NOT EXAMINED PER WIL SOP				P
NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
	ONE OF PAIR PRESENT				
KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
PROSTATE	MICRO: HYPERPLASIA, EPITHELIAL				2
STOMACH	GROSS: DISTENDED				P
^==>	GROSS	UNCONFIRMED			
STOMACH	GROSS: CONTENTS, DARK RED				P
^==>	GENERAL COMMENT:	SELECTED GROSS LESIONS NOT EXAMINED PER WIL SOP			
PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
	ONE OF PAIR PRESENT				
CAUSE OF DEATH	MICRO: UNDETERMINED				P
NO SIGNIFICANT					
CHANGES OBSERVED	GROSS:	ADRENAL GLANDS	AORTA	STERNUM	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	THYMUS
		TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED
		SKIN, UNTREATED			
	MICRO:	ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM
		MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
		BRAIN	CECUM	COLON	DUODENUM
		EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
		HEART	ILEUM	JEJUNUM	LN, MANDIBULAR
		LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS

ANIMAL NO. 12699 GROUP 4: 450 MG/KG/DAY MALE FOUND DEAD 07/24/11 DATE OF DEATH: 07/24/11 STUDY DAY: 69
GRADE

NERVE, SCIATIC	PANCREAS	PITUITARY	RECTUM
SPINAL CORD	SAL. GLAND MAND	STOMACH, NON	SKELETAL MUSCLE
SKIN	SPLEEN	SEMINAL VESICLES	TESTES
THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA
URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED

T00 AUTOLYZED
FOR DIAGNOSIS

MICRO:STOMACH, GLAN

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A15 (UNSCHEDULED DEATHS)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 3

ANIMAL NO. 12658 GROUP 5: 750 MG/KG/DAY MALE EUTH IN EXTREMIS 07/05/11 DATE OF DEATH: 07/05/11 STUDY DAY: 50
GRADE

FINAL BODY WT(G)	407.	HEART	MICRO: CARDIOMYOPATHY			(1)
		KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
		LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
		THYROID GLANDS	MICRO: HYPERPLASIA, FOLLICULAR CELL			(2)
		BONE	GROSS: FRACTURED			P
			TIBIA, LEFT AND FIBULA, LEFT; CEO SWOLLEN HINDLIMB			
		^==>	BONE: FRACTURE			
		BONE	MICRO: INFLAMMATION, ACUTE			4
			PERIOSTEAL, BONE MARROW AND BONE CORTEX			
			FRACTURE			P
			TIBIA/FIBULA			
		CAUSE OF DEATH	MICRO: UNDETERMINED			P
		NO SIGNIFICANT				
		CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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	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	STERNUM
			MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
			BRAIN	CECUM	COLON	DUODENUM
			EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
			ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
			LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS

ANIMAL NO. 12658 GROUP 5: 750 MG/KG/DAY MALE EUTH IN EXTREMIS 07/05/11 DATE OF DEATH: 07/05/11 STUDY DAY: 50
GRADE

PITUITARY PROSTATE RECTUM SPINAL CORD
SAL. GLAND MAND STOMACH, GLAN STOMACH, NON SKELETAL MUSCLE
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
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED
^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING
PGRHv4.67
11/15/2011

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 1

ANIMAL NO. 12649 GROUP 1: UNTREATED MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS				((2))
BRAIN	2.20	0.418	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
LIVER	13.63	2.591	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
KIDNEYS	3.11	0.591	LUNGS	MICRO: INFLAMMATION, SUBACUTE				((1))
HEART	1.93	0.367	RECTUM	MICRO: INFLAMMATION, CHRONIC				((2))
SPLEEN	0.83	0.158	SKIN	MICRO: INFLAMMATION, SUBACUTE				((1))
PROSTATE	1.02	0.194		PANNICULUS CARNOSUS				
TESTES	3.48	0.662	THYROID GLANDS	MICRO: HYPERPLASIA, FOLLICULAR CELL				((2))
EPIDIDYMIDES	1.37	0.260	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
THYMUS	0.2381	0.045		ONE OF PAIR PRESENT				
ADRENAL GLANDS	0.0649	0.012	NO SIGNIFICANT	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
PITUITARY	0.0118	0.002	CHANGES OBSERVED	JOINT	BRAIN	CECUM	COLON	
THYROIDS/PARATHY	0.0176	0.003		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
FINAL BODY WT(G)	526.			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	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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LN, MESENTERIC	NERVE, SCIATIC	PANCREAS	PITUITARY	
				PROSTATE	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKELETAL MUSCLE	SPLEEN	SEMINAL VESICLES	

ANIMAL NO. 12649

GROUP 1:

UNTREATED

MALE

SCHEDULED EUTH 08/13/11

DATE OF DEATH: 08/13/11

STUDY DAY: 89

GRADE

TESTES	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

()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 3

ANIMAL NO. 12654 GROUP 1: UNTREATED MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: CARDIOMYOPATHY				((2))
BRAIN	2.31	0.480	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				1
LIVER	11.00	2.287	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
KIDNEYS	3.31	0.688	PITUITARY	MICRO: VACUOLATION, CYTOPLASMIC				((1))
HEART	1.61	0.335		PARS DISTALIS				
SPLEEN	0.74	0.154	SAL. GLAND MAND	MICRO: INFLAMMATION, SUBACUTE				(1)
PROSTATE	1.17	0.243	STOMACH, GLAN	MICRO: DILATATION, GLANDULAR				((1))
TESTES	4.51	0.938	THYROID GLANDS	MICRO: HYPERPLASIA, FOLLICULAR CELL				((1))
EPIDIDYMIDES	1.51	0.314	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
THYMUS	0.1826	0.038		ONE OF PAIR PRESENT				
ADRENAL GLANDS	0.0637	0.013	NO SIGNIFICANT					
PITUITARY	0.0138	0.003	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
THYROIDS/PARATHY	0.0228	0.005		JOINT	BRAIN	CECUM	COLON	
FINAL BODY WT(G)	481.			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	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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
				PROSTATE	RECTUM	SPINAL CORD	STOMACH, NON	
				SKELETAL MUSCLE	SKIN	SPLEEN	SEMINAL VESICLES	

ANIMAL NO. 12654 GROUP 1: UNTREATED MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

TESTES
URINARY BLADDER

PARATHYROID
LN, AXILLARY

THYMUS
SKIN, TREATED

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
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 5

ANIMAL NO. 12660 GROUP 1: UNTREATED MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: CARDIOMYOPATHY				((1))
BRAIN	2.12	0.515	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
LIVER	10.24	2.485	THYROID GLANDS	MICRO: HYPERPLASIA, FOLLICULAR CELL				((1))
KIDNEYS	3.11	0.755	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
HEART	1.43	0.347		ONE OF PAIR PRESENT				
SPLEEN	0.69	0.167	NO SIGNIFICANT					
PROSTATE	1.04	0.252	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
TESTES	3.66	0.888		JOINT	BRAIN	CECUM	COLON	
EPIDIDYMIDES	1.36	0.330		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
THYMUS	0.1918	0.047		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
ADRENAL GLANDS	0.0502	0.012		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
PITUITARY	0.0161	0.004		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
THYROIDS/PARATHY	0.0151	0.004		PITUITARY	PROSTATE	RECTUM	SPINAL CORD	
FINAL BODY WT(G)	412.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LIVER	LN, MESENTERIC	LUNGS	NERVE, SCIATIC	
				PANCREAS	PITUITARY	PROSTATE	RECTUM	
				SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	
				SKELETAL MUSCLE	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
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12668 GROUP 1: UNTREATED MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	GENERAL COMMENT	MICRO: SELECTED GROSS LESIONS NOT EXAMINED PER WIL SOP	P
BRAIN	2.03	0.458	HEART	MICRO: CARDIOMYOPATHY	2
LIVER	11.62	2.623	LIVER	MICRO: INFLAMMATION, SUBACUTE	((2))
KIDNEYS	3.19	0.720	SKELETAL MUSCLE	MICRO: INFLAMMATION, SUBACUTE	(1)
HEART	1.73	0.391	SKIN	MICRO: INFLAMMATION, SUBACUTE	(1)
SPLEEN	0.72	0.163		SUBCUTANEOUS	
PROSTATE	0.96	0.217	PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED	
TESTES	3.29	0.743		ONE OF PAIR PRESENT	
EPIDIDYMIDES	1.36	0.307	THYMUS	GROSS: DISCOLORATION, DARK RED	P
THYMUS	0.2987	0.067	^==> GENERAL COMMENT: SELECTED GROSS LESIONS NOT EXAMINED PER WIL SOP		
ADRENAL GLANDS	0.0628	0.014	NO SIGNIFICANT		
PITUITARY	0.0129	0.003	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	
THYROID/PARATHY	0.0208	0.005		JOINT	
FINAL BODY WT(G)	443.			DUODENUM	
				NERVES, OPTIC	
				KIDNEYS	
				LN, MESENTERIC	
				PITUITARY	
				SAL. GLAND MAND	
				SPLEEN	
				TRACHEA	
				SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	
				MARROW, STERN	
				BRAIN	
				EPIDIDYMIDES	
				ILEUM	
				LAC. GLAND EXOR	
				PANCREAS	
				SPINAL CORD	
				ADRENAL MEDULLA	
				FEMUR	
				CECUM	
				ESOPHAGUS	
				EYES	
				JEJUNUM	
				LN, MESENTERIC	
				LUNGS	
				PITUITARY	
				SAL. GLAND MAND	
				AORTA	
				MARROW, FEMUR	
				COLON	
				ESOPHAGUS	
				EYES	
				KIDNEYS	
				LUNGS	
				PROSTATE	
				STOMACH, GLAN	
				STERNUM	
				JOINT	
				DUODENUM	
				NERVES, OPTIC	
				LN, MANDIBULAR	
				NERVE, SCIATIC	
				RECTUM	
				STOMACH, NON	

ANIMAL NO. 12668 GROUP 1: UNTREATED MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89

GRADE

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12684 GROUP 1: UNTREATED MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				1
BRAIN	2.20	0.417	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
LIVER	15.15	2.869	SKELETAL MUSCLE	MICRO: INFLAMMATION, ACUTE				(1)
KIDNEYS	3.66	0.693	NO SIGNIFICANT					
HEART	2.11	0.400	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
SPLEEN	1.05	0.199		JOINT	BRAIN	CECUM	COLON	
PROSTATE	1.49	0.282		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
TESTES	3.72	0.705		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
EPIDIDYMIDES	1.47	0.278		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
THYMUS	0.3957	0.075		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
ADRENAL GLANDS	0.0787	0.015		PITUITARY	PROSTATE	RECTUM	SPINAL CORD	
PITUITARY	0.0171	0.003		SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
THYROIDS/PARATHY	0.0152	0.003		SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	
FINAL BODY WT(G)	528.			THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LAC. GLAND EXOR	LN, MESENTERIC	LUNGS	NERVE, SCIATIC	
				PANCREAS	PITUITARY	PROSTATE	RECTUM	
				SPINAL CORD	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12686 GROUP 1: UNTREATED MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	GROSS: DILATED PELVIS			3
BRAIN	2.14	0.374		RIGHT			
LIVER	14.02	2.451	^==>	KIDNEYS: DILATATION, PELVIS			
KIDNEYS	3.23	0.565	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
HEART	1.58	0.276		DILATATION, PELVIS			3
SPLEEN	1.00	0.175	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
PROSTATE	1.27	0.222	SKELETAL MUSCLE	MICRO: INFLAMMATION, SUBACUTE			((1))
TESTES	3.06	0.535	THYROID GLANDS	MICRO: HYPERPLASIA, FOLLICULAR CELL			((1))
EPIDIDYMIDES	1.27	0.222	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
THYMUS	0.2611	0.046		ONE OF PAIR PRESENT			
ADRENAL GLANDS	0.0761	0.013	NO SIGNIFICANT	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
PITUITARY	0.0176	0.003	CHANGES OBSERVED	JOINT	BRAIN	CECUM	COLON
THYROIDS/PARATHY	0.0200	0.003		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
FINAL BODY WT(G)	572.			NERVES, OPTIC	HEART	ILEUM	JEJUNUM
				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	ADRENAL MEDULLA	AORTA	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR
				LAC. GLAND EXOR	LN, MESENTERIC	LUNGS	NERVE, SCIATIC
				PANCREAS	PITUITARY	PROSTATE	RECTUM
				SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON
				SKIN	SPLEEN	SEMINAL VESICLES	TESTES

ANIMAL NO. 12686 GROUP 1: UNTREATED MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90

GRADE

PARATHYROIDSLN, AXILLARYTHYMUSURETERS

TRACHEASKIN, TREATED

URINARY BLADDERSKIN, 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

ANIMAL NO.	12691	GROUP	1:	UNTREATED	MALE	SCHEDULED EUTH	08/14/11	DATE OF DEATH: 08/14/11	STUDY DAY: 90
									GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: CARDIOMYOPATHY					((1))
BRAIN	2.03	0.498	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE					2
LIVER	9.83	2.409	LAC. GLAND EXOR	MICRO: INFLAMMATION, SUBACUTE					(1)
KIDNEYS	2.70	0.662	LIVER	MICRO: INFLAMMATION, SUBACUTE					((2))
HEART	1.28	0.314	LUNGS	MICRO: INFLAMMATION, SUBACUTE					((1))
SPLEEN	0.57	0.140	PROSTATE	MICRO: INFLAMMATION, SUBACUTE					((2))
PROSTATE	0.81	0.199	NO SIGNIFICANT						
TESTES	3.91	0.958	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR		
EPIDIDYMIDES	1.36	0.333		JOINT	BRAIN	CECUM	COLON		
THYMUS	0.1855	0.045		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES		
ADRENAL GLANDS	0.0472	0.012		NERVES, OPTIC	HEART	ILEUM	JEJUNUM		
PITUITARY	0.0118	0.003		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER		
THYROIDS/PARATHY	0.0128	0.003		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS		
FINAL BODY WT(G)	408.			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	STERNUM		
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT		
				BRAIN	CECUM	COLON	DUODENUM		
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC		
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC		
				NERVE, SCIATIC	PANCREAS	PITUITARY	RECTUM		
				SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON		
				SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12694 GROUP 1: UNTREATED MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	STERNUM	MICRO: CHONDRODYSTROPHY			(3)
BRAIN	2.17	0.469	HEART	MICRO: ENDOCARDIOSIS			((2))
LIVER	11.52	2.488	KIDNEYS	GROSS: DILATED PELVIS			1
KIDNEYS	3.26	0.704		RIGHT			
HEART	1.68	0.363	^==>	KIDNEYS: DILATATION, PELVIS			
SPLEEN	0.92	0.199	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
PROSTATE	0.99	0.214		DILATATION, PELVIS			3
TESTES	3.72	0.803	LAC. GLAND EXOR	MICRO: INFLAMMATION, SUBACUTE			(2)
EPIDIDYMIDES	1.44	0.311	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
THYMUS	0.2455	0.053		ONE OF PAIR PRESENT			
ADRENAL GLANDS	0.0627	0.014	URETERS	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
PITUITARY	0.0123	0.003		ONE OF PAIR PRESENT			
THYROIDS/PARATHY	0.0141	0.003	NO SIGNIFICANT				
FINAL BODY WT(G)	463.		CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
				JOINT	BRAIN	CECUM	COLON
				DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
				NERVES, OPTIC	HEART	ILEUM	JEJUNUM
				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	ADRENAL MEDULLA	AORTA	MARROW, STERN
				FEMUR	MARROW, FEMUR	JOINT	BRAIN
				CECUM	COLON	DUODENUM	EPIDIDYMIDES
				ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM
				JEJUNUM	LN, MANDIBULAR	LIVER	LN, MESENTERIC
				LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY

ANIMAL NO. 12694 GROUP 1: UNTREATED MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90

GRADE

PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND
STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	SKIN
SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS
PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER
LN, AXILLARY	URETERS	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12701 GROUP 1: UNTREATED MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
BRAIN	2.05	0.383	LIVER	MICRO: INFILTRATE, MONONUCLEAR			((1))
LIVER	16.18	3.024	PITUITARY	MICRO: CYST, PARS NERVOSA			P
KIDNEYS	3.32	0.621	THYROID GLANDS	MICRO: HYPERPLASIA, FOLLICULAR CELL			((2))
HEART	1.99	0.372	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
SPLEEN	0.94	0.176		ONE OF PAIR PRESENT			
PROSTATE	0.87	0.163	NO SIGNIFICANT				
TESTES	3.73	0.697	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
EPIDIDYMIDES	1.53	0.286		JOINT	BRAIN	CECUM	COLON
THYMUS	0.2274	0.043		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
ADRENAL GLANDS	0.0543	0.010		NERVES, OPTIC	HEART	ILEUM	JEJUNUM
PITUITARY	0.0137	0.003		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER
THYROID/PARATHY	0.0155	0.003		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
FINAL BODY WT(G)	535.			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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR
				LAC. GLAND EXOR	LN, MESENTERIC	LUNGS	NERVE, SCIATIC
				PANCREAS	PROSTATE	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE
				SKIN	SPLEEN	SEMINAL VESICLES	TESTES
				PARATHYROIDES	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12703 GROUP 1: UNTREATED MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: CARDIOMYOPATHY			((1))
BRAIN	2.19	0.465	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			1
LIVER	13.21	2.805	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
KIDNEYS	3.08	0.654	LUNGS	MICRO: INFLAMMATION, SUBACUTE			(1)
HEART	1.55	0.329	THYMUS	GROSS: AREA(S), DARK RED			P
SPLEEN	1.09	0.231		MULTIPLE, PINPOINT TO 1 MM IN DIAMETER			
PROSTATE	1.20	0.255	^==> GROSS UNCONFIRMED				
TESTES	3.28	0.696	NO SIGNIFICANT				
EPIDIDYMIDES	1.50	0.318	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
THYMUS	0.4219	0.090		JOINT	BRAIN	CECUM	COLON
ADRENAL GLANDS	0.0852	0.018		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
PITUITARY	0.0154	0.003		NERVES, OPTIC	HEART	ILEUM	JEJUNUM
THYROIDS/PARATHY	0.0205	0.004		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER
FINAL BODY WT(G)	471.			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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LN, MESENTERIC	NERVE, SCIATIC	PANCREAS	PITUITARY
				PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND
				STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	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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^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12648 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS				2
BRAIN	2.02	0.429	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
LIVER	12.07	2.563	LAC. GLAND EXOR	MICRO: INFILTRATE, LYMPHOCYTE				((1))
KIDNEYS	3.53	0.749	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
HEART	1.87	0.397	LUNGS	MICRO: INFLAMMATION, SUBACUTE				(1)
SPLEEN	0.87	0.185	PITUITARY	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
PROSTATE	1.11	0.236		PARS NERVOSA AND PARS INTERMEDIA MISSING				
TESTES	3.98	0.845	NO SIGNIFICANT					
EPIDIDYMIDES	1.35	0.287	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
THYMUS	0.1773	0.038		JOINT	BRAIN	CECUM	COLON	
ADRENAL GLANDS	0.0670	0.014		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
PITUITARY	0.0180	0.004		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
THYROIDS/PARATHY	0.0212	0.005		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
FINAL BODY WT(G)	471.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LN, MESENTERIC	
				NERVE, SCIATIC	PANCREAS	PITUITARY	PROSTATE	
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12650 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	2.14	0.489		ONE OF PAIR PRESENT			
LIVER	12.10	2.763	HEART	MICRO: ENDOCARDIOSIS			
KIDNEYS	3.31	0.756	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			
HEART	1.67	0.381	RECTUM	MICRO: INFLAMMATION, CHRONIC			
SPLEEN	0.71	0.162	THYROID GLANDS	MICRO: HYPERPLASIA, FOLLICULAR CELL			
PROSTATE	1.16	0.265	PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
TESTES	3.74	0.854		ONE OF PAIR PRESENT			
EPIDIDYMI	1.49	0.340	THYMUS	GROSS: AREA(S), DARK RED			
THYMUS	0.3303	0.075		MULTIPLE, IRREGULARLY SHAPED			
ADRENAL GLANDS	0.0677	0.015	^==> GROSS	UNCONFIRMED			
PITUITARY	0.0144	0.003	NO SIGNIFICANT				
THYROID/	0.0179	0.004	CHANGES OBSERVED				
FINAL BODY WT(G)	438.						
				GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
				JOINT	BRAIN	CECUM	COLON
				DUODENUM	EPIDIDYMI	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	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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				EPIDIDYMI	ESOPHAGUS	EYES	NERVES, OPTIC
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LIVER	LN, MESENTERIC	LUNGS	NERVE, SCIATIC
				PANCREAS	PITUITARY	PROSTATE	SPINAL CORD

ANIMAL NO. 12650

GROUP 2:

0 MG/KG/DAY

MALE

SCHEDULED EUTH 08/13/11

DATE OF DEATH: 08/13/11

STUDY DAY: 89

GRADE

SAL. GLAND MAND SKIN

STOMACH, GLAN SPLEEN

STOMACH, NON SEMINAL VESICLES

SKELETAL MUSCLE

PARATHYROIDS THYMUS

TRACHEA

TESTES

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12661 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				1
BRAIN	2.12	0.483	LAC. GLAND EXOR	MICRO: INFLAMMATION, SUBACUTE				((1))
LIVER	13.17	3.000	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
KIDNEYS	3.12	0.711	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
HEART	1.58	0.360		ONE OF PAIR PRESENT				
SPLEEN	0.88	0.200	NO SIGNIFICANT					
PROSTATE	0.97	0.221	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
TESTES	3.63	0.827		JOINT	BRAIN	CECUM	COLON	
EPIDIDYMIDES	1.38	0.314		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
THYMUS	0.1147	0.026		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
ADRENAL GLANDS	0.0447	0.010		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
PITUITARY	0.0138	0.003		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
THYROIDES/PARATHY	0.0190	0.004		PITUITARY	PROSTATE	RECTUM	SPINAL CORD	
FINAL BODY WT(G)	439.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
				PITUITARY	PROSTATE	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	
				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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12675 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				1
BRAIN	2.15	0.412	LIVER	MICRO: INFILTRATE, MONONUCLEAR				((1))
LIVER	14.16	2.713	PITUITARY	MICRO: CYST, PARS DISTALIS				(P)
KIDNEYS	3.95	0.757	NO SIGNIFICANT					
HEART	1.74	0.333	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
SPLEEN	0.91	0.174		JOINT	BRAIN	CECUM	COLON	
PROSTATE	0.80	0.153		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
TESTES	3.80	0.728		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
EPIDIDYMIDES	1.47	0.282		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
THYMUS	0.2872	0.055		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
ADRENAL GLANDS	0.0706	0.014		PITUITARY	PROSTATE	RECTUM	SPINAL CORD	
PITUITARY	0.0202	0.004		SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
THYROIDS/PARATHY	0.0322	0.006		SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	
FINAL BODY WT(G)	522.			THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LAC. GLAND EXOR	LN, MESENTERIC	LUNGS	NERVE, SCIATIC	
				PANCREAS	PROSTATE	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	
				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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12676 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: CARDIOMYOPATHY			((2))
BRAIN	2.20	0.486	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
LIVER	11.49	2.536	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
KIDNEYS	3.38	0.746	LUNGS	MICRO: INFLAMMATION, SUBACUTE			((1))
HEART	1.61	0.355	PITUITARY	MICRO: ATROPHY, PARS DISTALIS			(2)
SPLEEN	0.72	0.159	PROSTATE	MICRO: INFLAMMATION, SUBACUTE			((2))
PROSTATE	1.19	0.263	NO SIGNIFICANT				
TESTES	3.47	0.766	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
EPIDIDYMIDES	1.44	0.318		JOINT	BRAIN	CECUM	COLON
THYMUS	0.1770	0.039		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
ADRENAL GLANDS	0.0698	0.015		NERVES, OPTIC	HEART	ILEUM	JEJUNUM
PITUITARY	0.0149	0.003		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER
THYROIDS/PARATHY	0.0142	0.003		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
FINAL BODY WT(G)	453.			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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LN, MESENTERIC	NERVE, SCIATIC	PANCREAS	RECTUM
				SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON
				SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12679 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	2.22	0.457		ONE OF PAIR PRESENT			
LIVER	13.11	2.698	HEART	MICRO: ENDOCARDIOSIS			((2))
KIDNEYS	3.28	0.675	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
HEART	1.81	0.372	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
SPLEEN	0.95	0.195		ONE OF PAIR PRESENT			
PROSTATE	0.81	0.167	SKIN, UNTREATED	MICRO: GRANULOMA			2
TESTES	3.54	0.728		PERIFOLLICULAR			
EPIDIDYMIDES	1.49	0.307	NO SIGNIFICANT				
THYMUS	0.2666	0.055	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
ADRENAL GLANDS	0.0681	0.014		JOINT	BRAIN	CECUM	COLON
PITUITARY	0.0200	0.004		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
THYROIDS/PARATHY	0.0221	0.005		NERVES, OPTIC	HEART	ILEUM	JEJUNUM
FINAL BODY WT(G)	486.			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
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY
				SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LIVER	LN, MESENTERIC	LUNGS	NERVE, SCIATIC
				PANCREAS	PITUITARY	PROSTATE	RECTUM
				SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON
				SKELETAL MUSCLE	SKIN	SPLEEN	SEMINAL VESICLES

ANIMAL NO. 12679 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

TESTES	THYROID GLANDS	PARATHYROID	THYMUS
TRACHEA	URINARY BLADDER	LN, AXILLARY	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			
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED			

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12683 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
BRAIN	2.27	0.432	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
LIVER	13.72	2.613	STOMACH, GLAN	MICRO: EDEMA, SUBMUCOSAL				2
KIDNEYS	4.07	0.775	SKELETAL MUSCLE	MICRO: INFLAMMATION, SUBACUTE				(1)
HEART	1.67	0.318	PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
SPLEEN	1.05	0.200		ONE OF PAIR PRESENT				
PROSTATE	0.98	0.187	NO SIGNIFICANT					
TESTES	3.41	0.650	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
EPIDIDYMIDES	1.39	0.265		JOINT	BRAIN	CECUM	COLON	
THYMUS	0.4733	0.090		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
ADRENAL GLANDS	0.0691	0.013		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
PITUITARY	0.0187	0.004		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
THYROID/PARATHY	0.0205	0.004		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
FINAL BODY WT(G)	525.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LAC. GLAND EXOR	LN, MESENTERIC	LUNGS	NERVE, SCIATIC	
				PANCREAS	PITUITARY	PROSTATE	RECTUM	
				SPINAL CORD	SAL. GLAND MAND	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12693 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS				((2))
BRAIN	2.09	0.524	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE				((1))
LIVER	10.97	2.749		INTERSTITIAL				
KIDNEYS	3.13	0.784	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
HEART	1.32	0.331	LUNGS	MICRO: INFLAMMATION, SUBACUTE				((2))
SPLEEN	0.74	0.185	STOMACH, GLAN	MICRO: INFLAMMATION, SUBACUTE				((1))
PROSTATE	0.88	0.221		SEROSAL				
TESTES	3.51	0.880	NO SIGNIFICANT					
EPIDIDYMIDES	1.34	0.336	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
THYMUS	0.2379	0.060		JOINT	BRAIN	CECUM	COLON	
ADRENAL GLANDS	0.0508	0.013		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
PITUITARY	0.0118	0.003		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
THYROIDS/PARATHY	0.0163	0.004		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
FINAL BODY WT(G)	399.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LN, MESENTERIC	NERVE, SCIATIC	PANCREAS	PITUITARY	
				PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH, NON	SKELETAL MUSCLE	SKIN	SPLEEN	
				SEMINAL VESICLES	TESTES	THYROID GLANDS	PARATHYROIDS	
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12693 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 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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PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12697 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	EPIDIDYIMIDES	MICRO: INFLAMMATION, SUBACUTE				(1)
BRAIN	2.07	0.459	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
LIVER	11.09	2.459		ONE OF PAIR PRESENT				
KIDNEYS	3.19	0.707	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
HEART	1.60	0.355	STOMACH, GLAN	MICRO: EDEMA, SUBMUCOSAL				2
SPLEEN	0.83	0.184	NO SIGNIFICANT					
PROSTATE	1.11	0.246	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
TESTES	3.51	0.778		JOINT	BRAIN	CECUM	COLON	
EPIDIDYIMIDES	1.40	0.310		DUODENUM	EPIDIDYIMIDES	ESOPHAGUS	EYES	
THYMUS	0.2565	0.057		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
ADRENAL GLANDS	0.0615	0.014		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
PITUITARY	0.0146	0.003		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
THYROIDS/PARATHY	0.0195	0.004		PITUITARY	PROSTATE	RECTUM	SPINAL CORD	
FINAL BODY WT(G)	451.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR	
				LAC. GLAND EXOR	LN, MESENTERIC	LUNGS	NERVE, SCIATIC	
				PANCREAS	PITUITARY	PROSTATE	RECTUM	
				SPINAL CORD	SAL. GLAND MAND	STOMACH, NON	SKELETAL MUSCLE	
				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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12700 GROUP 2: 0 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
BRAIN	2.10	0.428	LUNGS	MICRO: INFLAMMATION, SUBACUTE			((1))
LIVER	11.93	2.430	NO SIGNIFICANT				
KIDNEYS	3.42	0.697	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
HEART	1.87	0.381		JOINT	BRAIN	CECUM	COLON
SPLEEN	0.96	0.196		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
PROSTATE	1.28	0.261		NERVES, OPTIC	HEART	ILEUM	JEJUNUM
TESTES	3.82	0.778		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER
EPIDIDYMIDES	1.42	0.289		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
THYMUS	0.2976	0.061		PITUITARY	PROSTATE	RECTUM	SPINAL CORD
ADRENAL GLANDS	0.0664	0.014		SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN
PITUITARY	0.0205	0.004		SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS
THYROIDS/PARATHY	0.0139	0.003		THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY
FINAL BODY WT(G)	491.			SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	AORTA	STERNUM	MARROW, STERN
				FEMUR	MARROW, FEMUR	JOINT	BRAIN
				CECUM	COLON	DUODENUM	EPIDIDYMIDES
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART
				ILEUM	JEJUNUM	KIDNEYS	LN, MANDIBULAR
				LAC. GLAND EXOR	LN, MESENTERIC	NERVE, SCIATIC	PANCREAS
				PITUITARY	PROSTATE	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE
				SKIN	SPLEEN	SEMINAL VESICLES	TESTES
				THYROID GLANDS	PARATHYROIDS	THYMUS	TRACHEA
				URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED

NOT PRESENT FOR EXAMINATION

MICRO:ADRENAL MEDULLA

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12646 GROUP 3: 100 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	2.19	0.485		ONE OF PAIR PRESENT			
LIVER	14.37	3.179	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			1
KIDNEYS	3.38	0.748	PITUITARY	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
HEART	1.99	0.440		PARS NERVOSA MISSING			
SPLEEN	0.76	0.168	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
PROSTATE	1.12	0.248		ONE OF PAIR PRESENT			
TESTES	4.09	0.905	SKIN, UNTREATED	MICRO: HYPERPLASIA, EPITHELIAL, PAPILLARY			(2)
EPIDIDYMIDES	1.64	0.363	NO SIGNIFICANT				
THYMUS	0.3004	0.066	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
ADRENAL GLANDS	0.0690	0.015		JOINT	BRAIN	CECUM	COLON
PITUITARY	0.0172	0.004		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
THYROIDES/PARATHY	0.0198	0.004		NERVES, OPTIC	HEART	ILEUM	JEJUNUM
FINAL BODY WT(G)	452.			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
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY
				SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR
				LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS
				NERVE, SCIATIC	PANCREAS	PITUITARY	PROSTATE
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN
				STOMACH, NON	SKELETAL MUSCLE	SKIN	SPLEEN

ANIMAL NO. 12646 GROUP 3: 100 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89

GRADE

SEMINAL VESICLES TESTES THYROID GLANDS PARATHYROIDSGRADE
THYMUS TRACHEA URINARY BLADDER LN, AXILLARY
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
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12655 GROUP 3: 100 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS				(1)
BRAIN	2.01	0.455		CARDIOMYOPATHY				((1))
LIVER	11.76	2.661	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
KIDNEYS	3.00	0.679	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
HEART	1.38	0.312	LUNGS	MICRO: INFLAMMATION, SUBACUTE				((1))
SPLEEN	0.69	0.156	PITUITARY	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
PROSTATE	0.99	0.224		PARS NERVOSA MISSING				
TESTES	3.79	0.857	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
EPIDIDYIMIDES	1.45	0.328		ONE OF PAIR PRESENT				
THYMUS	0.2547	0.058	NO SIGNIFICANT					
ADRENAL GLANDS	0.0630	0.014	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
PITUITARY	0.0137	0.003		JOINT	BRAIN	CECUM	COLON	
THYROIDES/PARATHY	0.0212	0.005		DUODENUM	EPIDIDYIMIDES	ESOPHAGUS	EYES	
FINAL BODY WT(G)	442.			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	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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYIMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LN, MESENTERIC	NERVE, SCIATIC	PANCREAS	PITUITARY	
				PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	SKIN	
				SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	

ANIMAL NO. 12655

GROUP 3: 100 MG/KG/DAY

MALE

SCHEDULED EUTH 08/13/11

DATE OF DEATH: 08/13/11

STUDY DAY: 89

GRADE

PARATHYROIDSLN, AXILLARY

THYMUS
SKIN, TREATED

TRACHEA
SKIN, UNTREATED

URINARY BLADDER

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12656 GROUP 3: 100 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	AORTA	MICRO: INFLAMMATION, SUBACUTE			(1)
BRAIN	2.25	0.497	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
LIVER	13.66	3.015	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
KIDNEYS	3.23	0.713	PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
HEART	1.57	0.347		ONE OF PAIR PRESENT			
SPLEEN	0.86	0.190	NO SIGNIFICANT				
PROSTATE	0.99	0.219	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
TESTES	3.82	0.843		JOINT	BRAIN	CECUM	COLON
EPIDIDYMIDES	1.50	0.331		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
THYMUS	0.2235	0.049		NERVES, OPTIC	HEART	ILEUM	JEJUNUM
ADRENAL GLANDS	0.0589	0.013		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER
PITUITARY	0.0149	0.003		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
THYROID/PARATHY	0.0220	0.005		PITUITARY	PROSTATE	RECTUM	SPINAL CORD
FINAL BODY WT(G)	453.			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	STERNUM	MARROW, STERN
				FEMUR	MARROW, FEMUR	JOINT	BRAIN
				CECUM	COLON	DUODENUM	EPIDIDYMIDES
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
				PITUITARY	PROSTATE	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE
				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
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12659 GROUP 3: 100 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS				((1))
BRAIN	2.05	0.390	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				1
LIVER	13.51	2.568	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
KIDNEYS	3.59	0.683	PITUITARY	MICRO: VACUOLATION, CYTOPLASMIC				((1))
HEART	1.98	0.376		PARS NERVOSA				
SPLEEN	0.97	0.184	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
PROSTATE	0.93	0.177		ONE OF PAIR PRESENT				
TESTES	3.47	0.660	URINARY BLADDER	GROSS: DISTENDED				P
EPIDIDYMIDES	1.30	0.247	^==> GROSS	UNCONFIRMED				
THYMUS	0.2240	0.043	NO SIGNIFICANT					
ADRENAL GLANDS	0.0814	0.015	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
PITUITARY	0.0160	0.003		JOINT	BRAIN	CECUM	COLON	
THYROIDES/PARATHY	0.0204	0.004		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
FINAL BODY WT(G)	526.			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	STOMACH	SKELETAL MUSCLE	SKIN	
				SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	
				THYMUS	TRACHEA	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
				PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	SKIN	
				SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	

ANIMAL NO. 12659 GROUP 3: 100 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89

GRADE

PARATHYROIDSLN, AXILLARY

THYMUS
SKIN, TREATED

TRACHEA
SKIN, UNTREATED

URINARY BLADDER

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12662 GROUP 3: 100 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	2.14	0.432		ONE OF PAIR PRESENT			
LIVER	15.31	3.093	HEART	MICRO: CARDIOMYOPATHY			((1))
KIDNEYS	3.67	0.741	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			1
HEART	1.79	0.362	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
SPLEEN	0.82	0.166	NO SIGNIFICANT				
PROSTATE	1.23	0.248	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
TESTES	3.53	0.713		JOINT	BRAIN	CECUM	COLON
EPIDIDYMIDES	1.49	0.301		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
THYMUS	0.3306	0.067		NERVES, OPTIC	HEART	ILEUM	JEJUNUM
ADRENAL GLANDS	0.0695	0.014		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER
PITUITARY	0.0164	0.003		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
THYROIDS/PARATHY	0.0254	0.005		PITUITARY	PROSTATE	RECTUM	SPINAL CORD
FINAL BODY WT(G)	495.			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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
				PITUITARY	PROSTATE	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE
				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
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12664 GROUP 3: 100 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: CARDIOMYOPATHY				((1))
BRAIN	2.16	0.429	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				1
LIVER	12.73	2.531	LIVER	MICRO: INFILTRATE, MONONUCLEAR				((2))
KIDNEYS	3.33	0.662	LUNGS	MICRO: INFLAMMATION, SUBACUTE				((2))
HEART	1.61	0.320	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
SPLEEN	0.74	0.147		ONE OF PAIR PRESENT				
PROSTATE	1.06	0.211	NO SIGNIFICANT					
TESTES	3.86	0.767	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
EPIDIDYMIDES	1.52	0.302		JOINT	BRAIN	CECUM	COLON	
THYMUS	0.1912	0.038		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
ADRENAL GLANDS	0.0568	0.011		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
PITUITARY	0.0156	0.003		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
THYROIDS/PARATHY	0.0219	0.004		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
FINAL BODY WT(G)	503.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LN, MESENTERIC	NERVE, SCIATIC	PANCREAS	PITUITARY	
				PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12670 GROUP 3: 100 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS				((2))
BRAIN	2.20	0.419		CARDIOMYOPATHY				1
LIVER	14.34	2.731	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
KIDNEYS	4.11	0.783	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
HEART	1.87	0.356	PITUITARY	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
SPLEEN	0.94	0.179		PARS NERVOSA MISSING				
PROSTATE	1.13	0.215	SKIN	MICRO: INFLAMMATION, SUBACUTE				(1)
TESTES	3.85	0.733		PANNICULUS CARNOSUS				
EPIDIDYMIDES	1.53	0.291	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
THYMUS	0.2509	0.048		ONE OF PAIR PRESENT				
ADRENAL GLANDS	0.0715	0.014	NO SIGNIFICANT					
PITUITARY	0.0174	0.003	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
THYROIDS/PARATHY	0.0190	0.004		JOINT	BRAIN	CECUM	COLON	
FINAL BODY WT(G)	525.			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	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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
				PITUITARY	PROSTATE	RECTUM	SPINAL CORD	

ANIMAL NO. 12670

GROUP 3: 100 MG/KG/DAY

MALE

SCHEDULED EUTH 08/14/11

DATE OF DEATH: 08/14/11

STUDY DAY: 90

GRADE

SAL. GLAND MAND

SPLEEN

PARATHYROIDS

LN, AXILLARY

STOMACH, GLAN

SEMINAL VESICLES

THYMUS

SKIN, TREATED

STOMACH, NON

TESTES

TRACHEA

SKIN, UNTREATED

SKELETAL MUSCLE

THYROID GLANDS

URINARY BLADDER

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 40

ANIMAL NO. 12682 GROUP 3: 100 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
BRAIN	2.14	0.445	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
LIVER	12.74	2.649	LUNGS	MICRO: INFLAMMATION, SUBACUTE				(1)
KIDNEYS	3.28	0.682	PITUITARY	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
HEART	1.58	0.328		PARS NERVOSA AND PARS INTERMEDIA MISSING				
SPLEEN	0.88	0.183	NO SIGNIFICANT					
PROSTATE	0.99	0.206	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
TESTES	3.33	0.692		JOINT	BRAIN	CECUM	COLON	
EPIDIDYMIDES	1.37	0.285		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
THYMUS	0.2122	0.044		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
ADRENAL GLANDS	0.0606	0.013		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
PITUITARY	0.0169	0.004		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
THYROIDS/PARATHY	0.0113	0.002		PITUITARY	PROSTATE	RECTUM	SPINAL CORD	
FINAL BODY WT(G)	481.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LAC. GLAND EXOR	LN, MESENTERIC	NERVE, SCIATIC	PANCREAS	
				PITUITARY	PROSTATE	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	
				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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12688 GROUP 3: 100 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	EYES	MICRO: CYST				((P))
BRAIN	1.98	0.567		RETINAL				
LIVER	9.88	2.831	HEART	MICRO: CARDIOMYOPATHY				((1))
KIDNEYS	3.14	0.900	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
HEART	1.55	0.444	THYROID GLANDS	MICRO: HYPERPLASIA, FOLLICULAR CELL				((2))
SPLEEN	0.62	0.178	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
PROSTATE	1.36	0.390		ONE OF PAIR PRESENT				
TESTES	3.48	0.997	NO SIGNIFICANT					
EPIDIDYIMIDES	1.33	0.381	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
THYMUS	0.1910	0.055		JOINT	BRAIN	CECUM	COLON	
ADRENAL GLANDS	0.0544	0.016		DUODENUM	EPIDIDYIMIDES	ESOPHAGUS	EYES	
PITUITARY	0.0147	0.004		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
THYROIDS/PARATHY	0.0177	0.005		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
FINAL BODY WT(G)	349.			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	STERNUM	MARROW, STERN	
				FEMUR	MARROW, FEMUR	JOINT	BRAIN	
				CECUM	COLON	DUODENUM	EPIDIDYIMIDES	
				ESOPHAGUS	NERVES, OPTIC	ILEUM	JEJUNUM	
				KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
				PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	SKIN	
				SPLEEN	SEMINAL VESICLES	TESTES	PARATHYROIDS	
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12688 GROUP 3: 100 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

NOT PRESENT FOR EXAMINATION

MICRO:ADRENAL MEDULLA

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12695 GROUP 3: 100 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	2.25	0.470		ONE OF PAIR PRESENT			
LIVER	12.25	2.557	HEART	MICRO: ENDOCARDIOSIS			((2))
KIDNEYS	3.13	0.653	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
HEART	1.54	0.322	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
SPLEEN	0.86	0.180	NO SIGNIFICANT				
PROSTATE	0.99	0.207	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
TESTES	3.67	0.766		JOINT	BRAIN	CECUM	COLON
EPIDIDYMIDES	1.50	0.313		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
THYMUS	0.2286	0.048		NERVES, OPTIC	HEART	ILEUM	JEJUNUM
ADRENAL GLANDS	0.0607	0.013		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER
PITUITARY	0.0130	0.003		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
THYROIDS/PARATHY	0.0172	0.004		PITUITARY	PROSTATE	RECTUM	SPINAL CORD
FINAL BODY WT(G)	479.			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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
				PITUITARY	PROSTATE	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE
				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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12645 GROUP 4: 450 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	ADRENAL CORTEX	MICRO: CONGESTION				2
BRAIN	2.01	0.508		VASCULAR				
LIVER	12.34	3.116	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
KIDNEYS	3.14	0.793	LUNGS	MICRO: INFLAMMATION, SUBACUTE				((1))
HEART	1.44	0.364	NO SIGNIFICANT					
SPLEEN	0.64	0.162	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
PROSTATE	1.08	0.273		JOINT	BRAIN	CECUM	COLON	
TESTES	3.34	0.843		DUODENUM	EPIDIDYIMIDES	ESOPHAGUS	EYES	
EPIDIDYIMIDES	1.28	0.323		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
THYMUS	0.1818	0.046		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
ADRENAL GLANDS	0.0600	0.015		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
PITUITARY	0.0106	0.003		PITUITARY	PROSTATE	RECTUM	SPINAL CORD	
THYROIDS/PARATHY	0.0155	0.004		SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
FINAL BODY WT(G)	396.			SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL MEDULLA	AORTA	STERNUM	MARROW, STERN	
				FEMUR	MARROW, FEMUR	JOINT	BRAIN	
				CECUM	COLON	DUODENUM	EPIDIDYIMIDES	
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LIVER	LN, MESENTERIC	NERVE, SCIATIC	PANCREAS	
				PITUITARY	PROSTATE	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	
				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
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 45

ANIMAL NO. 12652 GROUP 4: 450 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
BRAIN	2.02	0.385	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
LIVER	16.12	3.076	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
KIDNEYS	4.53	0.865		ONE OF PAIR PRESENT				
HEART	1.76	0.336	NO SIGNIFICANT					
SPLEEN	1.12	0.214	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
PROSTATE	1.04	0.198		JOINT	BRAIN	CECUM	COLON	
TESTES	3.78	0.721		DUODENUM	EPIDIDYIMIDES	ESOPHAGUS	EYES	
EPIDIDYIMIDES	1.38	0.263		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
THYMUS	0.2308	0.044		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
ADRENAL GLANDS	0.0872	0.017		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
PITUITARY	0.0161	0.003		PITUITARY	PROSTATE	RECTUM	SPINAL CORD	
THYROIDS/PARATHY	0.0243	0.005		SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
FINAL BODY WT(G)	524.			SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYIMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LAC. GLAND EXOR	LN, MESENTERIC	LUNGS	NERVE, SCIATIC	
				PANCREAS	PITUITARY	PROSTATE	RECTUM	
				SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	
				SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12669 GROUP 4: 450 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			1
BRAIN	2.14	0.519	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
LIVER	13.99	3.396	LUNGS	MICRO: INFLAMMATION, SUBACUTE			((1))
KIDNEYS	3.17	0.769	THYROID GLANDS	MICRO: HYPERPLASIA, FOLLICULAR CELL			((2))
HEART	1.59	0.386	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
SPLEEN	0.83	0.201		ONE OF PAIR PRESENT			
PROSTATE	1.30	0.316	TRACHEA	MICRO: DILATATION, GLANDULAR			((2))
TESTES	3.77	0.915		SUBMUCOSAL			
EPIDIDYMIDES	1.40	0.340	NO SIGNIFICANT				
THYMUS	0.1186	0.029	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
ADRENAL GLANDS	0.0664	0.016		JOINT	BRAIN	CECUM	COLON
PITUITARY	0.0116	0.003		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
THYROID/PARATHY	0.0222	0.005		NERVES, OPTIC	HEART	ILEUM	JEJUNUM
FINAL BODY WT(G)	412.			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
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY
				SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR
				LAC. GLAND EXOR	LN, MESENTERIC	NERVE, SCIATIC	PANCREAS
				PITUITARY	PROSTATE	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE
				SKIN	SPLEEN	SEMINAL VESICLES	TESTES
				PARATHYROIDES	THYMUS	URINARY BLADDER	LN, AXILLARY

ANIMAL NO. 12669 GROUP 4: 450 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89

GRADE

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12671 GROUP 4: 450 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS				((2))
BRAIN	2.10	0.481	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
LIVER	14.02	3.208	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
KIDNEYS	3.35	0.767	LUNGS	MICRO: INFLAMMATION, SUBACUTE				((2))
HEART	1.34	0.307	THYROID GLANDS	MICRO: HYPERPLASIA, FOLLICULAR CELL				((1))
SPLEEN	0.90	0.206	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
PROSTATE	1.34	0.307		ONE OF PAIR PRESENT				
TESTES	3.78	0.865	NO SIGNIFICANT					
EPIDIDYMIDES	1.29	0.295	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
THYMUS	0.1564	0.036		JOINT	BRAIN	CECUM	COLON	
ADRENAL GLANDS	0.0631	0.014		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
PITUITARY	0.0156	0.004		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
THYROIDS/PARATHY	0.0200	0.005		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
FINAL BODY WT(G)	437.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LN, MESENTERIC	NERVE, SCIATIC	PANCREAS	PITUITARY	
				PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	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
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 49

ANIMAL NO. 12674 GROUP 4: 450 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	STERNUM	MICRO: INFLAMMATION, SUBACUTE				((2))
BRAIN	2.07	0.477		BROWN FAT - IN PLANE OF SECTION				
LIVER	12.91	2.975	HEART	MICRO: CARDIOMYOPATHY				((1))
KIDNEYS	3.02	0.696	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
HEART	1.72	0.396	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
SPLEEN	0.75	0.173	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
PROSTATE	1.03	0.237		ONE OF PAIR PRESENT				
TESTES	3.07	0.707	NO SIGNIFICANT					
EPIDIDYMIDES	1.16	0.267	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
THYMUS	0.1535	0.035		JOINT	BRAIN	CECUM	COLON	
ADRENAL GLANDS	0.0716	0.016		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
PITUITARY	0.0139	0.003		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
THYROIDES/PARATHY	0.0198	0.005		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
FINAL BODY WT(G)	434.			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	MARROW, STERN	
				FEMUR	MARROW, FEMUR	JOINT	BRAIN	
				CECUM	COLON	DUODENUM	EPIDIDYMIDES	
				ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM	
				JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC	
				LUNGS	NERVE, SCIATIC	PANCREAS	PITUITARY	
				PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND	
				STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	SKIN	
				SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	

ANIMAL NO. 12674 GROUP 4: 450 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89

GRADE

PARATHYROIDSLN, AXILLARYTHYMUS SKIN, TREATEDTRACHEA SKIN, UNTREATEDURINARY BLADDER

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 51

ANIMAL NO. 12677 GROUP 4: 450 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
BRAIN	2.20	0.452	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
LIVER	17.10	3.511	NO SIGNIFICANT					
KIDNEYS	3.60	0.739	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
HEART	1.87	0.384		JOINT	BRAIN	CECUM	COLON	
SPLEEN	0.90	0.185		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
PROSTATE	0.72	0.148		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
TESTES	3.75	0.770		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
EPIDIDYMIDES	1.45	0.298		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
THYMUS	0.1891	0.039		PITUITARY	PROSTATE	RECTUM	SPINAL CORD	
ADRENAL GLANDS	0.0696	0.014		SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
PITUITARY	0.0132	0.003		SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	
THYROIDS/PARATHY	0.0198	0.004		THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY	
FINAL BODY WT(G)	487.			SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LAC. GLAND EXOR	LN, MESENTERIC	LUNGS	NERVE, SCIATIC	
				PANCREAS	PITUITARY	PROSTATE	RECTUM	
				SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	
				SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12685 GROUP 4: 450 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: CARDIOMYOPATHY			(1)
BRAIN	2.21	0.488	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
LIVER	14.17	3.128	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
KIDNEYS	3.64	0.804	LUNGS	MICRO: INFLAMMATION, SUBACUTE			((1))
HEART	1.90	0.419	PROSTATE	MICRO: INFLAMMATION, CHRONIC			((1))
SPLEEN	0.75	0.166	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
PROSTATE	1.07	0.236		ONE OF PAIR PRESENT			
TESTES	3.98	0.879	NO SIGNIFICANT				
EPIDIDYMIDES	1.42	0.313	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
THYMUS	0.1535	0.034		JOINT	BRAIN	CECUM	COLON
ADRENAL GLANDS	0.0670	0.015		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
PITUITARY	0.0145	0.003		NERVES, OPTIC	HEART	ILEUM	JEJUNUM
THYROIDES/PARATHY	0.0225	0.005		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER
FINAL BODY WT(G)	453.			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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LN, MESENTERIC	NERVE, SCIATIC	PANCREAS	PITUITARY
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN
				STOMACH, NON	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12690 GROUP 4: 450 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
BRAIN	2.20	0.445	LUNGS	MICRO: INFLAMMATION, SUBACUTE				((1))
LIVER	17.23	3.488	PROSTATE	MICRO: INFLAMMATION, SUBACUTE				((1))
KIDNEYS	3.86	0.781	NO SIGNIFICANT					
HEART	1.97	0.399	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
SPLEEN	1.10	0.223		JOINT	BRAIN	CECUM	COLON	
PROSTATE	1.10	0.223		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
TESTES	3.89	0.787		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
EPIDIDYMIDES	1.39	0.281		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
THYMUS	0.1866	0.038		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
ADRENAL GLANDS	0.0753	0.015		PITUITARY	PROSTATE	RECTUM	SPINAL CORD	
PITUITARY	0.0183	0.004		SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
THYROIDS/PARATHY	0.0229	0.005		SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	
FINAL BODY WT(G)	494.			THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LAC. GLAND EXOR	LIVER	LN, MESENTERIC	NERVE, SCIATIC	
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	
				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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12692 GROUP 4: 450 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	ADRENAL CORTEX	MICRO: VACUOLATION, CYTOPLASMIC			((2))
BRAIN	2.10	0.490		ZONA FASCICULATA			
LIVER	15.36	3.580	HEART	MICRO: ENDOCARDIOSIS			((2))
KIDNEYS	3.09	0.720		CARDIOMYOPATHY			1
HEART	1.57	0.366	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
SPLEEN	0.91	0.212	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
PROSTATE	1.16	0.270	LUNGS	MICRO: INFLAMMATION, SUBACUTE			((2))
TESTES	3.28	0.765	STOMACH, GLAN	MICRO: METAPLASIA, SQUAMOUS			(2)
EPIDIDYMIDES	1.08	0.252	URINARY BLADDER	MICRO: INFLAMMATION, CHRONIC			((2))
THYMUS	0.1300	0.030	NO SIGNIFICANT				
ADRENAL GLANDS	0.0711	0.017	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
PITUITARY	0.0129	0.003		JOINT	BRAIN	CECUM	COLON
THYROIDS/PARATHY	0.0254	0.006		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
FINAL BODY WT(G)	429.			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	STOMACH	SKELETAL MUSCLE	SKIN
				SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS
				THYMUS	TRACHEA	URINARY BLADDER	LN, AXILLARY
				SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL MEDULLA	AORTA	STERNUM	MARROW, STERN
				FEMUR	MARROW, FEMUR	JOINT	BRAIN
				CECUM	COLON	DUODENUM	EPIDIDYMIDES
				ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM
				JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC
				NERVE, SCIATIC	PANCREAS	PITUITARY	PROSTATE
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, NON
				SKELETAL MUSCLE	SKIN	SPLEEN	SEMINAL VESICLES

ANIMAL NO.12692GROUP 4: 450 MG/KG/DAYMALESCHEDULED EUTH08/14/11DATE OF DEATH: 08/14/11STUDY DAY: 90
GRADE

TESTESTHYROID GLANDSPARATHYROIDSTHYMUS
TRACHEALN, AXILLARYSKIN, TREATEDSKIN, 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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 56

ANIMAL NO. 12666 GROUP 5: 750 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS			(2)
BRAIN	1.99	0.565	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
LIVER	13.23	3.759	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
KIDNEYS	2.63	0.747	PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
HEART	1.35	0.384		ONE OF PAIR PRESENT			
SPLEEN	0.72	0.205	NO SIGNIFICANT				
PROSTATE	0.71	0.202	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
TESTES	3.70	1.051		JOINT	BRAIN	CECUM	COLON
EPIDIDYMIDES	1.18	0.335		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
THYMUS	0.0990	0.028		NERVES, OPTIC	HEART	ILEUM	JEJUNUM
ADRENAL GLANDS	0.0618	0.018		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER
PITUITARY	0.0145	0.004		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
THYROID/PARATHY	0.0222	0.006		PITUITARY	PROSTATE	RECTUM	SPINAL CORD
FINAL BODY WT(G)	352.			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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
				PITUITARY	PROSTATE	RECTUM	SPINAL CORD
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE
				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
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12672 GROUP 5: 750 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: CARDIOMYOPATHY			((1))
BRAIN	2.10	0.533	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			3
LIVER	14.08	3.574	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
KIDNEYS	2.92	0.741	PITUITARY	MICRO: VACUOLATION, CYTOPLASMIC			((2))
HEART	1.37	0.348		PARS DISTALIS			
SPLEEN	0.79	0.201	NO SIGNIFICANT				
PROSTATE	1.17	0.297	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
TESTES	3.41	0.865		JOINT	BRAIN	CECUM	COLON
EPIDIDYIMIDES	1.33	0.338		DUODENUM	EPIDIDYIMIDES	ESOPHAGUS	EYES
THYMUS	0.1024	0.026		NERVES, OPTIC	HEART	ILEUM	JEJUNUM
ADRENAL GLANDS	0.0731	0.019		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER
PITUITARY	0.0155	0.004		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
THYROIDS/PARATHY	0.0234	0.006		PITUITARY	PROSTATE	RECTUM	SPINAL CORD
FINAL BODY WT(G)	394.			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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				EPIDIDYIMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
				PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND
				STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12673 GROUP 5: 750 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	DUODENUM	MICRO: INFILTRATE, LYMPHOCYTE			(2)
BRAIN	2.04	0.465	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
LIVER	15.13	3.446	LN, MANDIBULAR	MICRO: HYPERPLASIA, LYMPHOID			3
KIDNEYS	3.13	0.713	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
HEART	1.73	0.394	LUNGS	MICRO: INFLAMMATION, SUBACUTE			((2))
SPLEEN	0.68	0.155	NO SIGNIFICANT				
PROSTATE	1.14	0.260	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
TESTES	3.41	0.777		JOINT	BRAIN	CECUM	COLON
EPIDIDYMIDES	1.30	0.296		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
THYMUS	0.1334	0.030		NERVES, OPTIC	HEART	ILEUM	JEJUNUM
ADRENAL GLANDS	0.0784	0.018		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER
PITUITARY	0.0177	0.004		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
THYROIDS/PARATHY	0.0219	0.005		PITUITARY	PROSTATE	RECTUM	SPINAL CORD
FINAL BODY WT(G)	439.			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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	EPIDIDYMIDES
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART
				ILEUM	JEJUNUM	LAC. GLAND EXOR	LN, MESENTERIC
				NERVE, SCIATIC	PANCREAS	PITUITARY	PROSTATE
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN
				STOMACH, NON	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12680 GROUP 5: 750 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE	2
BRAIN	1.97	0.471	LIVER	MICRO: INFLAMMATION, SUBACUTE	((1))
LIVER	15.32	3.665	LUNGS	MICRO: INFLAMMATION, SUBACUTE	((1))
KIDNEYS	3.23	0.773	SPLEEN	GROSS: AREA(S), WHITE	P
HEART	1.51	0.361		MULTIPLE, IRREGULARLY SHAPED	
SPLEEN	0.89	0.213	^==>	GROSS UNCONFIRMED	
PROSTATE	0.89	0.213	TAIL	GROSS: SCABBING	P
TESTES	3.38	0.809		PROXIMAL; CEO SCABBING	
EPIDIDYMIDES	1.23	0.294	^==>	TAIL: HYPERPLASIA, EPITHELIAL	
THYMUS	0.1427	0.034	^==>	TAIL: HYPERKERATOSIS	
ADRENAL GLANDS	0.0802	0.019	TAIL	GROSS: NODULE(S)	P
PITUITARY	0.0145	0.003		FEW, PINPOINT TO 3 MM, ENTIRE LENGTH	
THYROIDS/PARATHY	0.0207	0.005	^==>	TAIL: HYPERKERATOSIS	
FINAL BODY WT(G)	418.		TAIL	MICRO: HYPERPLASIA, EPITHELIAL	(3)
				HYPERKERATOSIS	2
				INFLAMMATION, ACUTE	2
			NO SIGNIFICANT		
			CHANGES OBSERVED	GROSS:ADRENAL GLANDS	
				JOINT	AORTA
				DUODENUM	BRAIN
				NERVES, OPTIC	EPIDIDYMIDES
				KIDNEYS	HEART
				LN, MESENTERIC	LN, MANDIBULAR
				PITUITARY	LUNGS
				SAL. GLAND MAND	PROSTATE
				SEMINAL VESICLES	STOMACH
				TRACHEA	TESTES
				SKIN, UNTREATED	URINARY BLADDER
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA
				MARROW, STERN	FEMUR
				BRAIN	CECUM
				EPIDIDYMIDES	ESOPHAGUS
					AORTA
					MARROW, FEMUR
					COLON
					EYES
					STERNUM
					JOINT
					DUODENUM
					NERVES, OPTIC
					FEMUR
					COLON
					EYES
					STERNUM
					JOINT
					DUODENUM
					NERVES, OPTIC

ANIMAL NO. 12680 GROUP 5: 750 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89

GRADE

HEART	ILEUM	JEJUNUM	LN, MANDIBULAR
LAC. GLAND EXOR	LN, MESENTERIC	NERVE, SCIATIC	PANCREAS
PITUITARY	PROSTATE	RECTUM	SPINAL CORD
SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE
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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12681 GROUP 5: 750 MG/KG/DAY MALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	ADRENAL MEDULLA	MICRO: VACUOLATION, CYTOPLASMIC				((2))
BRAIN	2.02	0.514	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
LIVER	14.34	3.649	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
KIDNEYS	3.39	0.863	LUNGS	MICRO: INFLAMMATION, SUBACUTE				(1)
HEART	1.33	0.338	PITUITARY	MICRO: VACUOLATION, CYTOPLASMIC				((2))
SPLEEN	0.66	0.168		PARS DISTALIS				
PROSTATE	0.98	0.249	THYROID GLANDS	MICRO: HYPERPLASIA, FOLLICULAR CELL				((2))
TESTES	3.74	0.952	NO SIGNIFICANT					
EPIDIDYMIDES	1.35	0.344	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
THYMUS	0.0589	0.015		JOINT	BRAIN	CECUM	COLON	
ADRENAL GLANDS	0.0576	0.015		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
PITUITARY	0.0153	0.004		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
THYROIDS/PARATHY	0.0189	0.005		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
FINAL BODY WT(G)	393.			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	STERNUM	MARROW, STERN	
				FEMUR	MARROW, FEMUR	JOINT	BRAIN	
				CECUM	COLON	DUODENUM	EPIDIDYMIDES	
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LN, MESENTERIC	NERVE, SCIATIC	PANCREAS	PROSTATE	
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12687 GROUP 5: 750 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE	2
BRAIN	1.97	0.537	LIVER	GROSS: AREA(S), WHITE	P
LIVER	14.13	3.850		ONE, 4 MM IN DIAMETER, IN MEDIAN CLEFT	
KIDNEYS	2.74	0.747	^==>	LIVER: VACUOLATION, HEPATOCELLULAR	
HEART	1.45	0.395	LIVER	MICRO: INFLAMMATION, SUBACUTE	((2))
SPLEEN	0.83	0.226		VACUOLATION, HEPATOCELLULAR	((2))
PROSTATE	1.27	0.346	PITUITARY	MICRO: CYST, PARS DISTALIS	P
TESTES	3.15	0.858	PROSTATE	GROSS: DISCOLORATION, GREEN	P
EPIDIDYMIDES	1.22	0.332	^==> GROSS	UNCONFIRMED	
THYMUS	0.0685	0.019	SPLEEN	GROSS: AREA(S), WHITE	P
ADRENAL GLANDS	0.0726	0.020		MULTIPLE, IRREGULARLY SHAPED	
PITUITARY	0.0170	0.005	^==> GROSS	UNCONFIRMED	
THYROID/SPLEEN	0.0228	0.006	PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED	
FINAL BODY WT(G)	367.			ONE OF PAIR PRESENT	
			NO SIGNIFICANT CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA
				JOINT	BRAIN
				DUODENUM	EPIDIDYMIDES
				NERVES, OPTIC	HEART
				KIDNEYS	LN, MANDIBULAR
				LUNGS	NERVE, SCIATIC
				RECTUM	SPINAL CORD
				SKELETAL MUSCLE	SKIN
				THYROID GLANDS	THYMUS
				LN, AXILLARY	SKIN, TREATED
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA
				MARROW, STERN	FEMUR
				BRAIN	CECUM
				EPIDIDYMIDES	ESOPHAGUS
				HEART	ILEUM
				LAC. GLAND EXOR	LN, MESENTERIC
					STERNUM
					CECUM
					ESOPHAGUS
					ILEUM
					LAC. GLAND EXOR
					LN, MESENTERIC
					PANCREAS
					SAL. GLAND MAND
					SEMINAL VESICLES
					TRACHEA
					SKIN, UNTREATED
					AORTA
					MARROW, FEMUR
					COLON
					EYES
					JEJUNUM
					LUNGS
					STERNUM
					JOINT
					DUODENUM
					NERVES, OPTIC
					LN, MANDIBULAR
					NERVE, SCIATIC

ANIMAL NO. 12687 GROUP 5: 750 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90

GRADE

PANCREAS PROSTATE RECTUM SPINAL CORD

SAL. GLAND MAND STOMACH, GLAN STOMACH, NON SKELETAL MUSCLE

SKIN 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

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 64

ANIMAL NO. 12689 GROUP 5: 750 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: CARDIOMYOPATHY			((1))
BRAIN	1.98	0.506	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
LIVER	14.87	3.803	LIVER	MICRO: INFLAMMATION, SUBACUTE			((3))
KIDNEYS	2.99	0.765	PITUITARY	MICRO: VACUOLATION, CYTOPLASMIC			((2))
HEART	1.47	0.376		PARS DISTALIS			
SPLEEN	1.02	0.261	NO SIGNIFICANT				
PROSTATE	1.05	0.269	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
TESTES	3.25	0.831		JOINT	BRAIN	CECUM	COLON
EPIDIDYMIDES	1.27	0.325		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES
THYMUS	0.1230	0.031		NERVES, OPTIC	HEART	ILEUM	JEJUNUM
ADRENAL GLANDS	0.0732	0.019		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER
PITUITARY	0.0114	0.003		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
THYROIDS/PARATHY	0.0226	0.006		PITUITARY	PROSTATE	RECTUM	SPINAL CORD
FINAL BODY WT(G)	391.			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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS
				PROSTATE	RECTUM	SPINAL CORD	SAL. GLAND MAND
				STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 65

ANIMAL NO. 12698 GROUP 5: 750 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
BRAIN	1.92	0.636	THYMUS	GROSS: SMALL				P
LIVER	11.65	3.858	^==> GROSS	UNCONFIRMED				
KIDNEYS	2.66	0.881	NO SIGNIFICANT					
HEART	1.25	0.414	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
SPLEEN	0.47	0.156		JOINT	BRAIN	CECUM	COLON	
PROSTATE	0.84	0.278		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
TESTES	3.38	1.119		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
EPIDIDYMIDES	1.07	0.354		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
THYMUS	0.0420	0.014		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
ADRENAL GLANDS	0.0698	0.023		PITUITARY	PROSTATE	RECTUM	SPINAL CORD	
PITUITARY	0.0132	0.004		SAL. GLAND MAND	STOMACH	SKELETAL MUSCLE	SKIN	
THYROIDS/PARATHY	0.0215	0.007		SPLEEN	SEMINAL VESICLES	TESTES	THYROID GLANDS	
FINAL BODY WT(G)	302.			TRACHEA	URINARY BLADDER	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LAC. GLAND EXOR	LIVER	LN, MESENTERIC	LUNGS	
				NERVE, SCIATIC	PANCREAS	PITUITARY	PROSTATE	
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKELETAL MUSCLE	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

^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

PAGE 66

ANIMAL NO. 12704 GROUP 5: 750 MG/KG/DAY MALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				2
BRAIN	2.05	0.560	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
LIVER	13.95	3.811	PITUITARY	MICRO: VACUOLATION, CYTOPLASMIC				((2))
KIDNEYS	2.71	0.740		PARS DISTALIS				
HEART	1.43	0.391	STOMACH, GLAN	MICRO: INFILTRATE, LYMPHOCYTE				((1))
SPLEEN	0.96	0.262	NO SIGNIFICANT					
PROSTATE	1.03	0.281	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
TESTES	3.96	1.082		JOINT	BRAIN	CECUM	COLON	
EPIDIDYMIDES	1.23	0.336		DUODENUM	EPIDIDYMIDES	ESOPHAGUS	EYES	
THYMUS	0.1258	0.034		NERVES, OPTIC	HEART	ILEUM	JEJUNUM	
ADRENAL GLANDS	0.0771	0.021		KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	
PITUITARY	0.0128	0.003		LN, MESENTERIC	LUNGS	NERVE, SCIATIC	PANCREAS	
THYROIDS/PARATHY	0.0199	0.005		PITUITARY	PROSTATE	RECTUM	SPINAL CORD	
FINAL BODY WT(G)	366.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				EPIDIDYMIDES	ESOPHAGUS	EYES	NERVES, OPTIC	
				HEART	ILEUM	JEJUNUM	LN, MANDIBULAR	
				LAC. GLAND EXOR	LN, MESENTERIC	LUNGS	NERVE, SCIATIC	
				PANCREAS	PROSTATE	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH, NON	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12705 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS	((1))
BRAIN	1.88	0.631	KIDNEYS	MICRO: MINERALIZATION	((2))
LIVER	9.67	3.245		TUBULAR	
KIDNEYS	2.09	0.701	LIVER	MICRO: INFLAMMATION, SUBACUTE	((1))
HEART	1.24	0.416	THYROID GLANDS	MICRO: HYPERPLASIA, FOLLICULAR CELL	((1))
SPLEEN	0.68	0.228	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED	
UTERUS	0.55	0.185		ONE OF PAIR PRESENT	
OVARIES/OVIDUCTS	0.1258	0.042	THYMUS	GROSS: AREA(S), DARK RED	P
THYMUS	0.3200	0.107		MULTIPLE, PINPOINT TO 1 MM IN DIAMETER	
ADRENAL GLANDS	0.0750	0.025	^==> GROSS	UNCONFIRMED	
PITUITARY	0.0265	0.009	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS	P
THYROIDS/PARATHY	0.0148	0.005	SKIN, UNTREATED	MICRO: INFLAMMATION, SUBACUTE	((1))
FINAL BODY WT(G)	298.			PANNICULUS CARNOSUS	
			NO SIGNIFICANT CHANGES OBSERVED		
			GROSS:ADRENAL GLANDS	AORTA	STERNUM
			JOINT	BRAIN	FEMUR
			DUODENUM	ESOPHAGUS	CECUM
			HEART	ILEUM	EYES
			LN, MANDIBULAR	LAC. GLAND EXOR	JEJUNUM
			LUNGS	MAMMARY GLAND	LIVER
			OVARIES	PANCREAS	NERVE, SCIATIC
			SPINAL CORD	SAL. GLAND MAND	PITUITARY
			SKIN	SPLEEN	STOMACH
			URINARY BLADDER	UTERUS	THYROID GLANDS
			LN, AXILLARY	SKIN, TREATED	VAGINA
			MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	SKIN, UNTREATED
			MARROW, STERN	FEMUR	AORTA
			BRAIN	CECUM	MARROW, FEMUR
			ESOPHAGUS	EYES	COLON
					NERVES, OPTIC
					STERNUM
					JOINT
					DUODENUM
					ILEUM

ANIMAL NO. 12705 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89

GRADE

JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC
LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS
OVARIES	PANCREAS	PITUITARY	RECTUM
SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON
SKELETAL MUSCLE	SKIN	SPLEEN	PARATHYROIDES
THYMUS	TRACHEA	URINARY BLADDER	UTERUS
CERVIX	LN, AXILLARY	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

()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12712 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS				(1)
BRAIN	1.92	0.651	KIDNEYS	MICRO: MINERALIZATION				((2))
LIVER	8.37	2.837		TUBULAR				
KIDNEYS	2.02	0.685	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
HEART	1.23	0.417	PANCREAS	MICRO: INFLAMMATION, CHRONIC				(2)
SPLEEN	0.56	0.190	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
UTERUS	1.35	0.458		ONE OF PAIR PRESENT				
OVARIES/OVIDUCTS	0.1256	0.043	THYMUS	GROSS: AREA(S), DARK RED				P
THYMUS	0.3039	0.103		MULTIPLE, 1 MM IN DIAMETER				
ADRENAL GLANDS	0.0696	0.024	^==>	GROSS UNCONFIRMED				
PITUITARY	0.0262	0.009	UTERUS	GROSS: CONTENTS, CLEAR FLUID				P
THYROIDS/PARATHY	0.0141	0.005		BOTH HORNS				
FINAL BODY WT(G)	295.		^==>	UTERUS: DILATATION, LUMEN				1
			UTERUS	MICRO: DILATATION, LUMEN				
				CONSISTENT WITH ESTROUS STAGE				
			VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
			NO SIGNIFICANT					
			CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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	TRACHEA	
				URINARY BLADDER	VAGINA	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	

ANIMAL NO. 12712 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89

GRADE

MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
BRAIN	CECUM	COLON	DUODENUM
ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM
JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC
LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS
OVARIES	PITUITARY	RECTUM	SPINAL CORD
SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE
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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12716 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LN, MANDIBULAR	MICRO: HYPERPLASIA, LYMPHOID				2
BRAIN	1.88	0.676	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
LIVER	8.05	2.896	UTERUS	GROSS: CONTENTS, CLEAR FLUID				P
KIDNEYS	1.85	0.665		BOTH HORNS				
HEART	1.10	0.396	^==>	UTERUS: DILATATION, LUMEN				
SPLEEN	0.56	0.201	UTERUS	MICRO: DILATATION, LUMEN				1
UTERUS	1.08	0.388		CONSISTENT WITH ESTROUS STAGE				
OVARIES/OVIDUCTS	0.1121	0.040	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
THYMUS	0.3368	0.121	NO SIGNIFICANT					
ADRENAL GLANDS	0.0779	0.028	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
PITUITARY	0.0154	0.006		JOINT	BRAIN	CECUM	COLON	
THYROID/SPLEEN	0.0136	0.005		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC	
FINAL BODY WT(G)	278.			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	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
				ILEUM	JEJUNUM	KIDNEYS	LAC. GLAND EXOR	
				LN, MESENTERIC	LUNGS	MAMMARY GLAND	NERVE, SCIATIC	
				OVIDUCTS	OVARIES	PANCREAS	PITUITARY	
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKELETAL MUSCLE	SKIN	SPLEEN	
				THYROID GLANDS	THYMUS	TRACHEA	URINARY BLADDER	
				CERVIX	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	

ANIMAL NO. 12716

GROUP 1:

UNTREATED

FEMALE

SCHEDULED EUTH 08/13/11

DATE OF DEATH: 08/13/11

STUDY DAY: 89

GRADE

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12724 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE			((1))
BRAIN	2.03	0.670		INTERSTITIAL			
LIVER	8.42	2.779	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
KIDNEYS	2.16	0.713	UTERUS	GROSS: CONTENTS, CLEAR FLUID			P
HEART	1.14	0.376		BOTH HORNS			
SPLEEN	0.61	0.201	^==>	UTERUS: DILATATION, LUMEN			
UTERUS	0.85	0.281	UTERUS	MICRO: DILATATION, LUMEN			1
OVARIES/OVIDUCTS	0.1210	0.040		CONSISTENT WITH ESTROUS STAGE			
THYMUS	0.2273	0.075	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS			P
ADRENAL GLANDS	0.0842	0.028	LN, AXILLARY	MICRO: HYPERPLASIA, LYMPHOID			2
PITUITARY	0.0203	0.007	NO SIGNIFICANT				
THYROIDS/PARATHY	0.0147	0.005	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
FINAL BODY WT(G)	303.			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	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LN, MESENTERIC	LUNGS	MAMMARY GLAND	NERVE, SCIATIC
				OVIDUCTS	OVARIES	PANCREAS	PITUITARY
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN

ANIMAL NO. 12724 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89

GRADE

STOMACH, NON	SKELETAL MUSCLE	SKIN	SPLEEN
THYROID GLANDS	PARATHYROIDES	THYMUS	TRACHEA
URINARY BLADDER	CERVIX	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12730 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE				((2))
BRAIN	1.99	0.599		INTERSTITIAL				
LIVER	9.40	2.831	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
KIDNEYS	2.14	0.645	UTERUS	GROSS: CONTENTS, CLEAR FLUID				P
HEART	1.30	0.392		BOTH HORNS				
SPLEEN	0.66	0.199	^==>	UTERUS: DILATATION, LUMEN				
UTERUS	1.01	0.304	UTERUS	MICRO: DILATATION, LUMEN				1
OVARIES/OVIDUCTS	0.1211	0.036		CONSISTENT WITH ESTROUS STAGE				
THYMUS	0.3106	0.094	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS				P
ADRENAL GLANDS	0.0982	0.030	NO SIGNIFICANT					
PITUITARY	0.0271	0.008	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
THYROID/SPARATHY	0.0217	0.007		JOINT	BRAIN	CECUM	COLON	
FINAL BODY WT(G)	332.			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	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LN, MESENTERIC	LUNGS	MAMMARY GLAND	NERVE, SCIATIC	
				OVIDUCTS	OVARIES	PANCREAS	PITUITARY	
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKELETAL MUSCLE	SKIN	SPLEEN	

ANIMAL NO. 12730

GROUP 1:

UNTREATED

FEMALE

SCHEDULED EUTH 08/13/11

DATE OF DEATH: 08/13/11

STUDY DAY: 89

GRADE

THYROID GLANDS
CERVIX

THYMUS
LN, AXILLARY

TRACHEA
SKIN, TREATED

URINARY BLADDER
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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12733 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION				((2))
BRAIN	1.93	0.641		TUBULAR				
LIVER	7.45	2.475	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
KIDNEYS	2.06	0.684		ONE OF PAIR PRESENT				
HEART	1.15	0.382	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				P
SPLEEN	0.68	0.226	NO SIGNIFICANT					
UTERUS	0.52	0.173	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
OVARIES/OVIDUCTS	0.1269	0.042		JOINT	BRAIN	CECUM	COLON	
THYMUS	0.2560	0.085		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC	
ADRENAL GLANDS	0.0772	0.026		HEART	ILEUM	JEJUNUM	KIDNEYS	
PITUITARY	0.0181	0.006		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
THYROIDES/PARATHY	0.0163	0.005		LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	
FINAL BODY WT(G)	301.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, 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, GLAN	STOMACH, NON	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12734 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	COLON	MICRO: HYPERPLASIA, LYMPHOID				2
BRAIN	1.90	0.779	HEART	MICRO: ENDOCARDIOSIS				2
LIVER	7.11	2.914	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE				1
KIDNEYS	1.82	0.746		MINERALIZATION				((1))
HEART	1.15	0.471		TUBULAR				
SPLEEN	0.52	0.213	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
UTERUS	0.81	0.332	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				P
OVARIES/OVIDUCTS	0.1107	0.045	NO SIGNIFICANT					
THYMUS	0.2328	0.095	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
ADRENAL GLANDS	0.0695	0.028		JOINT	BRAIN	CECUM	COLON	
PITUITARY	0.0219	0.009		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC	
THYROIDS/PARATHY	0.0101	0.004		HEART	ILEUM	JEJUNUM	KIDNEYS	
FINAL BODY WT(G)	244.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	DUODENUM	ESOPHAGUS	
				EYES	NERVES, OPTIC	ILEUM	JEJUNUM	
				LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC	LUNGS	
				MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	
				SKIN	SPLEEN	THYROID GLANDS	THYMUS	
				TRACHEA	URINARY BLADDER	UTERUS	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12734 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12736 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	1.92	0.664		ONE OF PAIR PRESENT			
LIVER	7.64	2.644	HEART	MICRO: ENDOCARDIOSIS			((2))
KIDNEYS	2.16	0.747	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
HEART	1.20	0.415		MINERALIZATION			((2))
SPLEEN	0.56	0.194		TUBULAR			
UTERUS	0.89	0.308	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
OVARIES/OVIDUCTS	0.1246	0.043	THYMUS	MICRO: CONGESTION			2
THYMUS	0.1369	0.047		VASCULAR			
ADRENAL GLANDS	0.0709	0.025	URINARY BLADDER	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
PITUITARY	0.0195	0.007		EPITHELIUM NOT PRESENT			
THYROID/SPLEEN	0.0172	0.006	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS			P
FINAL BODY WT(G)	289.		NO SIGNIFICANT CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM

ANIMAL NO. 12736 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC
LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS
OVARIES	PANCREAS	PITUITARY	RECTUM
SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON
SKELETAL MUSCLE	SKIN	SPLEEN	THYROID GLANDS
TRACHEA	URINARY BLADDER	UTERUS	CERVIX
LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	

NOT PRESENT FOR EXAMINATION

MICRO:PARATHYROIDES

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12737 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: CARDIOMYOPATHY			1
BRAIN	1.90	0.712		ENDOCARDIOSIS			((2))
LIVER	6.97	2.610	KIDNEYS	GROSS: DILATED PELVIS			2
KIDNEYS	2.06	0.772		RIGHT			
HEART	0.96	0.360	^==>	KIDNEYS: DILATATION, PELVIS			
SPLEEN	0.56	0.210	KIDNEYS	MICRO: DILATATION, PELVIS			3
UTERUS	0.44	0.165	LN, MANDIBULAR	MICRO: GRANULOMA			(2)
OVARIES/OVIDUCTS	0.1331	0.050		WITH BACTERIA			
THYMUS	0.1703	0.064	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
ADRENAL GLANDS	0.0570	0.021	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
PITUITARY	0.0207	0.008		ONE OF PAIR PRESENT			
THYROIDES/PARATHY	0.0142	0.005	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS			P
FINAL BODY WT(G)	267.		NO SIGNIFICANT CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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	THYMUS	TRACHEA
				URINARY BLADDER	UTERUS	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM
				JEJUNUM	LAC. GLAND EXOR	LN, MESENTERIC	LUNGS
				MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES

ANIMAL NO. 12737

GROUP 1:

UNTREATED

FEMALE

SCHEDULED EUTH 08/14/11

DATE OF DEATH: 08/14/11

STUDY DAY: 90

GRADE

PANCREAS	PITUITARY	RECTUM	SPINAL CORD
SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE
SKIN	SPLEEN	THYROID GLANDS	PARATHYROIDS
THYMUS	TRACHEA	URINARY BLADDER	UTERUS
CERVIX	LN, AXILLARY	URETERS	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12748 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	1.87	0.763		ONE OF PAIR PRESENT			
LIVER	6.45	2.633	KIDNEYS	MICRO: MINERALIZATION			((2))
KIDNEYS	1.89	0.771		TUBULAR			
HEART	1.04	0.424	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
SPLEEN	0.53	0.216	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
UTERUS	2.43	0.992		ONE OF PAIR PRESENT			
OVARIES/OVIDUCTS	0.0977	0.040	UTERUS	GROSS: CONTENTS, CLEAR FLUID			P
THYMUS	0.2118	0.086		BOTH HORNS			
ADRENAL GLANDS	0.0734	0.030	^==>	UTERUS: DILATATION, LUMEN			
PITUITARY	0.0205	0.008	UTERUS	MICRO: DILATATION, LUMEN			1
THYROIDS/PARATHY	0.0198	0.008		CONSISTENT WITH ESTROUS STAGE			
FINAL BODY WT(G)	245.		VAGINA	MICRO: ESTROUS CYCLE: ESTRUS			P
			NO SIGNIFICANT				
			CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM

ANIMAL NO. 12748 GROUP 1: UNTREATED FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90

GRADE

ESOPHAGUS	EYES	NERVES, OPTIC	HEART
ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
LN, MESENTERIC	LUNGS	MAMMARY GLAND	NERVE, SCIATIC
OVIDUCTS	OVARIES	PANCREAS	PITUITARY
RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN
STOMACH, NON	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12706 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION				((2))
BRAIN	1.88	0.686		TUBULAR				
LIVER	7.85	2.865	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
KIDNEYS	1.99	0.726	UTERUS	GROSS: CONTENTS, CLEAR FLUID				P
HEART	1.05	0.383		BOTH HORNS				
SPLEEN	0.62	0.226	^==>	UTERUS: DILATATION, LUMEN				
UTERUS	1.46	0.533	UTERUS	MICRO: DILATATION, LUMEN				2
OVARIES/OVIDUCTS	0.1390	0.051		CONSISTENT WITH ESTROUS STAGE				
THYMUS	0.2828	0.103	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
ADRENAL GLANDS	0.0805	0.029	NO SIGNIFICANT					
PITUITARY	0.0210	0.008	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
THYROIDS/PARATHY	0.0191	0.007		JOINT	BRAIN	CECUM	COLON	
FINAL BODY WT(G)	274.			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	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LN, MESENTERIC	LUNGS	MAMMARY GLAND	NERVE, SCIATIC	
				OVIDUCTS	OVARIES	PANCREAS	PITUITARY	
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKELETAL MUSCLE	SKIN	SPLEEN	

ANIMAL NO. 12706

GROUP 2: 0 MG/KG/DAY

FEMALE

SCHEDULED EUTH 08/13/11

DATE OF DEATH: 08/13/11

STUDY DAY: 89

GRADE

	THYROID GLANDS CERVIX	THYMUS LN, AXILLARY	TRACHEA SKIN, TREATED	URINARY BLADDER 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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12708 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE				((1))
BRAIN	2.02	0.743		INTERSTITIAL				
LIVER	8.24	3.029	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
KIDNEYS	2.36	0.868	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS				P
HEART	1.12	0.412	NO SIGNIFICANT					
SPLEEN	0.57	0.210	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
UTERUS	0.62	0.228		JOINT	BRAIN	CECUM	COLON	
OVARIES/OVIDUCTS	0.1481	0.054		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC	
THYMUS	0.1898	0.070		HEART	ILEUM	JEJUNUM	KIDNEYS	
ADRENAL GLANDS	0.0810	0.030		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
PITUITARY	0.0248	0.009		LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	
THYROIDS/PARATHY	0.0176	0.006		OVARIES	PANCREAS	PITUITARY	RECTUM	
FINAL BODY WT(G)	272.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LN, MESENTERIC	LUNGS	MAMMARY GLAND	NERVE, SCIATIC	
				OVIDUCTS	OVARIES	PANCREAS	PITUITARY	
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12711 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	GROSS: AREA(S), DEPRESSED			P
BRAIN	1.82	0.737		FEW, PINPOINT, IN CORTEX, RIGHT			
LIVER	7.53	3.049	^==>	KIDNEYS: INFLAMMATION, SUBACUTE			
KIDNEYS	1.76	0.713	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE			((1))
HEART	1.09	0.441		INTERSTITIAL			
SPLEEN	0.56	0.227	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
UTERUS	0.42	0.170	TRACHEA	MICRO: INFLAMMATION, SUBACUTE			((2))
OVARIES/OVIDUCTS	0.1126	0.046		SUBMUCOSAL			
THYMUS	0.3002	0.122	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS			P
ADRENAL GLANDS	0.0844	0.034	NO SIGNIFICANT				
PITUITARY	0.0171	0.007	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
THYROID/SPARATHY	0.0192	0.008		JOINT	BRAIN	CECUM	COLON
FINAL BODY WT(G)	247.			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	UTERUS	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LN, MESENTERIC	LUNGS	MAMMARY GLAND	NERVE, SCIATIC
				OVIDUCTS	OVARIES	PANCREAS	PITUITARY
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN
				STOMACH, NON	SKELETAL MUSCLE	SKIN	SPLEEN

ANIMAL NO. 12711 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89

GRADE

-----				THYROID GLANDS	THYMUS	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12714 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS				(1)
BRAIN	1.99	0.760	KIDNEYS	MICRO: MINERALIZATION				((1))
LIVER	8.92	3.405		TUBULAR				
KIDNEYS	2.38	0.908	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
HEART	1.28	0.489	UTERUS	GROSS: CONTENTS, CLEAR FLUID				P
SPLEEN	0.61	0.233		BOTH HORNS				
UTERUS	1.32	0.504	^==>	UTERUS: DILATATION, LUMEN				
OVARIES/OVIDUCTS	0.1043	0.040	UTERUS	MICRO: DILATATION, LUMEN				2
THYMUS	0.2206	0.084		CONSISTENT WITH ESTROUS STAGE				
ADRENAL GLANDS	0.0791	0.030	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS				P
PITUITARY	0.0293	0.011	SKIN, TREATED	MICRO: HYPERPLASIA, EPITHELIAL				((2))
THYROIDS/PARATHY	0.0136	0.005	NO SIGNIFICANT					
FINAL BODY WT(G)	262.		CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM	
				JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC	
				LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	
				OVARIES	PANCREAS	PITUITARY	RECTUM	

ANIMAL NO. 12714 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89

GRADE

SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON
SKELETAL MUSCLE	SKIN	SPLEEN	THYROID GLANDS
PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER
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

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12718 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
BRAIN	1.94	0.705	SAL. GLAND MAND	MICRO: INFLAMMATION, SUBACUTE				(1)
LIVER	7.74	2.815	PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
KIDNEYS	2.04	0.742		ONE OF PAIR PRESENT				
HEART	1.01	0.367	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				P
SPLEEN	0.60	0.218	NO SIGNIFICANT					
UTERUS	0.58	0.211	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
OVARIES/OVIDUCTS	0.1354	0.049		JOINT	BRAIN	CECUM	COLON	
THYMUS	0.2590	0.094		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC	
ADRENAL GLANDS	0.0815	0.030		HEART	ILEUM	JEJUNUM	KIDNEYS	
PITUITARY	0.0168	0.006		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
THYROID/SPLEEN	0.0179	0.007		LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	
FINAL BODY WT(G)	275.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, 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	STOMACH, GLAN	
				STOMACH, NON	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12721 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION				((1))
BRAIN	1.91	0.632		TUBULAR				
LIVER	8.75	2.897	UTERUS	MICRO: DILATATION, GLANDULAR				(3)
KIDNEYS	2.19	0.725	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
HEART	1.13	0.374	NO SIGNIFICANT					
SPLEEN	0.57	0.189	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
UTERUS	1.09	0.361		JOINT	BRAIN	CECUM	COLON	
OVARIES/OVIDUCTS	0.1215	0.040		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC	
THYMUS	0.2281	0.076		HEART	ILEUM	JEJUNUM	KIDNEYS	
ADRENAL GLANDS	0.0735	0.024		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
PITUITARY	0.0166	0.005		LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	
THYROIDS/PARATHY	0.0150	0.005		OVARIES	PANCREAS	PITUITARY	RECTUM	
FINAL BODY WT(G)	302.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, 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, GLAN	STOMACH, NON	SKELETAL MUSCLE	SKIN	
				SPLEEN	THYROID GLANDS	THYMUS	TRACHEA	
				URINARY BLADDER	CERVIX	LN, AXILLARY	SKIN, TREATED	
				SKIN, UNTREATED				

NOT PRESENT FOR EXAMINATION

MICRO:PARATHYROID

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12744 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS			(1)
BRAIN	1.96	0.688	KIDNEYS	MICRO: MINERALIZATION			((1))
LIVER	8.01	2.811	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
KIDNEYS	2.27	0.796	PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
HEART	1.08	0.379		ONE OF PAIR PRESENT			
SPLEEN	0.62	0.218	UTERUS	GROSS: CONTENTS, CLEAR FLUID			P
UTERUS	1.37	0.481		BOTH HORNS			
OVARIES/OVIDUCTS	0.1258	0.044	^==>	UTERUS: DILATATION, LUMEN			
THYMUS	0.2630	0.092	UTERUS	MICRO: DILATATION, LUMEN			2
ADRENAL GLANDS	0.0736	0.026		CONSISTENT WITH ESTROUS STAGE			
PITUITARY	0.0155	0.005	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS			P
THYROID/PARATHY	0.0178	0.006	NO SIGNIFICANT				
FINAL BODY WT(G)	285.		CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM
				JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC
				LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS
				OVARIES	PANCREAS	PITUITARY	RECTUM

ANIMAL NO. 12744

GROUP 2:

0 MG/KG/DAY

FEMALE

SCHEDULED EUTH 08/14/11

DATE OF DEATH: 08/14/11

STUDY DAY: 90

GRADE

SPINAL CORD

SAL. GLAND MAND

STOMACH, GLAN

STOMACH, NON

SKELETAL MUSCLE

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12752 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	ADRENAL CORTEX	MICRO: VACUOLATION, CYTOPLASMIC			(2)
BRAIN	1.94	0.688		ZONA FASCICULATA			
LIVER	11.34	4.021	KIDNEYS	MICRO: MINERALIZATION			((2))
KIDNEYS	2.34	0.830		TUBULAR			
HEART	1.21	0.429		NEPHROPATHY, CHRONIC PROGRESSIVE			2
SPLEEN	0.55	0.195	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
UTERUS	0.85	0.301	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS			P
OVARIES/OVIDUCTS	0.0990	0.035	NO SIGNIFICANT				
THYMUS	0.2150	0.076	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
ADRENAL GLANDS	0.0971	0.034		JOINT	BRAIN	CECUM	COLON
PITUITARY	0.0342	0.012		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC
THYROIDS/PARATHY	0.0171	0.006		HEART	ILEUM	JEJUNUM	KIDNEYS
FINAL BODY WT(G)	282.			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 MEDULLA	AORTA	STERNUM	MARROW, STERN
				FEMUR	MARROW, FEMUR	JOINT	BRAIN
				CECUM	COLON	DUODENUM	ESOPHAGUS
				EYES	NERVES, OPTIC	HEART	ILEUM
				JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC
				LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS
				OVARIES	PANCREAS	PITUITARY	RECTUM
				SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON
				SKELETAL MUSCLE	SKIN	SPLEEN	THYROID GLANDS
				PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER
				UTERUS	CERVIX	LN, AXILLARY	SKIN, TREATED

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12752 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12757 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	STERNUM	MICRO: INFLAMMATION, SUBACUTE			(2)
BRAIN	1.92	0.733		BROWN FAT - IN PLANE OF SECTION			
LIVER	8.14	3.107	HEART	MICRO: CARDIOMYOPATHY			((1))
KIDNEYS	2.19	0.836		ENDOCARDIOSIS			((2))
HEART	1.12	0.427	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE			((1))
SPLEEN	0.74	0.282		INTERSTITIAL			
UTERUS	2.05	0.782	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
OVARIES/OVIDUCTS	0.0987	0.038	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
THYMUS	0.3150	0.120		ONE OF PAIR PRESENT			
ADRENAL GLANDS	0.0927	0.035	UTERUS	GROSS: CONTENTS, CLEAR FLUID			P
PITUITARY	0.0208	0.008		BOTH HORNS			
THYROIDES/PARATHY	0.0180	0.007	^==>	UTERUS: DILATATION, LUMEN			
FINAL BODY WT(G)	262.		UTERUS	MICRO: DILATATION, LUMEN			3
				CONSISTENT WITH ESTROUS STAGE			
			VAGINA	MICRO: ESTROUS CYCLE: ESTRUS			P
			NO SIGNIFICANT				
			CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	MARROW, STERN

ANIMAL NO. 12757 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90

GRADE

FEMUR	MARROW, FEMUR	JOINT	BRAIN
CECUM	COLON	DUODENUM	ESOPHAGUS
EYES	NERVES, OPTIC	ILEUM	JEJUNUM
LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC	LUNGS
MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES
PANCREAS	PITUITARY	RECTUM	SPINAL CORD
SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE
SKIN	SPLEEN	THYROID GLANDS	PARATHYROIDES
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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12758 GROUP 2: 0 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS				((1))
BRAIN	1.99	0.706	LAC. GLAND EXOR	MICRO: INFLAMMATION, SUBACUTE				((2))
LIVER	7.20	2.553	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
KIDNEYS	1.95	0.691	UTERUS	GROSS: CONTENTS, CLEAR FLUID				P
HEART	1.12	0.397		BOTH HORNS				
SPLEEN	0.48	0.170	^==>	VAGINA: ESTROUS CYCLE: PROESTRUS				
UTERUS	1.29	0.457	UTERUS	MICRO: DILATATION, LUMEN				2
OVARIES/OVIDUCTS	0.1340	0.048		CONSISTENT WITH ESTROUS STAGE				
THYMUS	0.3346	0.119	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
ADRENAL GLANDS	0.0711	0.025	NO SIGNIFICANT					
PITUITARY	0.0225	0.008	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
THYROID/SPARATHY	0.0139	0.005		JOINT	BRAIN	CECUM	COLON	
FINAL BODY WT(G)	282.			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	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM	
				JEJUNUM	KIDNEYS	LN, MANDIBULAR	LN, MESENTERIC	
				LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	
				OVARIES	PANCREAS	PITUITARY	RECTUM	
				SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	
				SKELETAL MUSCLE	SKIN	SPLEEN	THYROID GLANDS	
				PARATHYROID	THYMUS	TRACHEA	URINARY BLADDER	

ANIMAL NO.12758GROUP 2: 0 MG/KG/DAYFEMALESCHEDULED EUTH08/14/11DATE OF DEATH: 08/14/11STUDY DAY: 90

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12707 GROUP 3: 100 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION			((1))
BRAIN	1.90	0.742		TUBULAR			
LIVER	9.12	3.563	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
KIDNEYS	2.38	0.930	LUNGS	MICRO: INFLAMMATION, SUBACUTE			((1))
HEART	1.05	0.410	PITUITARY	MICRO: VACUOLATION, CYTOPLASMIC			2
SPLEEN	0.52	0.203		PARS NERVOSA			
UTERUS	0.68	0.266	THYROID GLANDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
OVARIES/OVIDUCTS	0.0937	0.037		ONE OF PAIR PRESENT			
THYMUS	0.1905	0.074	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
ADRENAL GLANDS	0.0805	0.031		ONE OF PAIR PRESENT			
PITUITARY	0.0202	0.008	URINARY BLADDER	MICRO: INFLAMMATION, SUBACUTE			((1))
THYROIDS/PARATHY	0.0136	0.005		SUBMUCOSAL			
FINAL BODY WT(G)	256.		VAGINA	MICRO: ESTROUS CYCLE: ESTRUS			P
				PERSISTENT			
			NO SIGNIFICANT				
			CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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

ANIMAL NO. 12707 GROUP 3: 100 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89

GRADE

MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM
MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
BRAIN	CECUM	COLON	DUODENUM
ESOPHAGUS	EYES	NERVES, OPTIC	HEART
ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
LN, MESENTERIC	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS
OVARIES	PANCREAS	RECTUM	SPINAL CORD
SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE
SKIN	SPLEEN	THYROID GLANDS	PARATHYROIDS
THYMUS	TRACHEA	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12715 GROUP 3: 100 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	GENERAL COMMENT	MICRO: SELECTED GROSS LESIONS NOT EXAMINED PER WIL SOP	P
BRAIN	2.04	0.734	HEART	MICRO: ENDOCARDIOSIS	1
LIVER	8.48	3.050	LIVER	MICRO: INFLAMMATION, SUBACUTE	((2))
KIDNEYS	1.81	0.651	LUNGS	MICRO: INFLAMMATION, SUBACUTE	((1))
HEART	1.03	0.371	SPLEEN	GROSS: ACCESSORY	P
SPLEEN	0.60	0.216		ONE, 3 X 2 X 1 MM	
UTERUS	1.24	0.446	^==> GENERAL COMMENT: SELECTED GROSS LESIONS NOT EXAMINED PER WIL SOP		
OVARIES/OVIDUCTS	0.1280	0.046	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED	
THYMUS	0.1598	0.057		ONE OF PAIR PRESENT	
ADRENAL GLANDS	0.0728	0.026	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS	P
PITUITARY	0.0214	0.008	NO SIGNIFICANT		
THYROIDES/PARATHY	0.0152	0.005	CHANGES OBSERVED	GROSS:ADRENAL GLANDS AORTA STERNUM FEMUR	
FINAL BODY WT(G)	278.			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 STERNUM	
				MARROW, STERN FEMUR MARROW, FEMUR JOINT	
				BRAIN CECUM COLON DUODENUM	
				ESOPHAGUS EYES NERVES, OPTIC ILEUM	
				JEJUNUM KIDNEYS LN, MANDIBULAR LAC. GLAND EXOR	
				LN, MESENTERIC MAMMARY GLAND NERVE, SCIATIC OVIDUCTS	
				OVARIES PANCREAS PITUITARY RECTUM	
				SPINAL CORD SAL. GLAND MAND STOMACH, GLAN STOMACH, NON	
				SKELETAL MUSCLE SKIN SPLEEN THYROID GLANDS	

ANIMAL NO.12715GROUP 3: 100 MG/KG/DAYFEMALESCHEDULED EUTH08/13/11DATE OF DEATH: 08/13/11STUDY DAY: 89

GRADE

PARATHYROIDSTHYMUS
UTERUSCERVIX
SKIN, UNTREATEDTRACHEA
LN, AXILLARYURINARY 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
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED
^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12722 GROUP 3: 100 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS, VALVULAR			((1))
BRAIN	1.86	0.676	KIDNEYS	MICRO: MINERALIZATION			((1))
LIVER	9.60	3.491		TUBULAR			
KIDNEYS	2.00	0.727	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
HEART	1.18	0.429		ONE OF PAIR PRESENT			
SPLEEN	0.61	0.222	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS			P
UTERUS	0.93	0.338	SKIN, TREATED	MICRO: CYST, KERATIN			P
OVARIES/OVIDUCTS	0.1099	0.040		FOLLICULAR			
THYMUS	0.2589	0.094	NO SIGNIFICANT				
ADRENAL GLANDS	0.0784	0.029	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
PITUITARY	0.0243	0.009		JOINT	BRAIN	CECUM	COLON
THYROIDS/PARATHY	0.0208	0.008		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC
FINAL BODY WT(G)	275.			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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	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, GLAN
				STOMACH, NON	SKELETAL MUSCLE	SKIN	SPLEEN

ANIMAL NO. 12722

GROUP 3: 100 MG/KG/DAY

FEMALE

SCHEDULED EUTH 08/13/11

DATE OF DEATH: 08/13/11

STUDY DAY: 89

GRADE

THYROID GLANDS PARATHYROIDES THYMUS 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

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ORGAN WEIGHT	ABS.(G)	REL.	GENERAL COMMENT	GROSS: ORGAN DAMAGED AT NECROPSY				P
BRAIN	1.98	0.669		BRAIN				
LIVER	9.28	3.135	^==> GROSS	UNCONFIRMED				
KIDNEYS	2.16	0.730	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE INTERSTITIAL WITH CORTICAL LOSS				((2))
HEART	1.09	0.368						
SPLEEN	0.62	0.209	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
UTERUS	1.24	0.419	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
OVARIES/OVIDUCTS	0.1473	0.050		ONE OF PAIR PRESENT				
THYMUS	0.2937	0.099	UTERUS	GROSS: CONTENTS, CLEAR FLUID				P
ADRENAL GLANDS	0.0852	0.029		BOTH HORNS				
PITUITARY	0.0213	0.007	^==>	UTERUS: DILATATION, LUMEN				
THYROIDES/PARATHY	0.0190	0.006	UTERUS	MICRO: DILATATION, LUMEN				2
FINAL BODY WT(G)	296.			CONSISTENT WITH ESTROUS STAGE				
			VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
			NO SIGNIFICANT					
			CHANGES OBSERVED					
				GROSS:ADRENAL GLANDS	AORTA	STERNUM	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	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	

ANIMAL NO.12738GROUP 3: 100 MG/KG/DAYFEMALESCHEDULED EUTH08/13/11DATE OF DEATH: 08/13/11STUDY DAY: 89

GRADE

ESOPHAGUS	EYES	NERVES, OPTIC	HEART
ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
LN, MESENTERIC	LUNGS	MAMMARY GLAND	NERVE, SCIATIC
OVIDUCTS	OVARIES	PANCREAS	PITUITARY
RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN
STOMACH, NON	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12740 GROUP 3: 100 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS			1
BRAIN	1.82	0.692	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE			((1))
LIVER	8.40	3.194		INTERSTITIAL			
KIDNEYS	1.89	0.719	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
HEART	1.02	0.388	OVARIES	GROSS: CYST(S)			P
SPLEEN	0.57	0.217		MULTIPLE, PINPOINT TO 1 MM IN DIAMETER, BILATERAL			
UTERUS	0.48	0.183	^==> GROSS	UNCONFIRMED			
OVARIES/OVIDUCTS	0.1435	0.055	STOMACH, NON	MICRO: EDEMA, SUBMUCOSAL			2
THYMUS	0.1642	0.062	THYROID GLANDS	GROSS: SMALL			P
ADRENAL GLANDS	0.0626	0.024		BILATERAL			
PITUITARY	0.0225	0.009	^==> GROSS	UNCONFIRMED			
THYROIDS/PARATHY	0.0126	0.005	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS			P
FINAL BODY WT(G)	263.		NO SIGNIFICANT				
			CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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
				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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM
				JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC
				LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS
				OVARIES	PANCREAS	PITUITARY	RECTUM

ANIMAL NO.12740

GROUP 3: 100 MG/KG/DAY

FEMALE

SCHEDULED EUTH08/13/11

DATE OF DEATH: 08/13/11

STUDY DAY: 89

GRADE

SPINAL CORD

SKIN

THYMUS

CERVIX

SAL. GLAND MAND

SPLEEN

TRACHEA

LN, AXILLARY

STOMACH, GLAN

THYROID GLANDS

URINARY BLADDER

SKIN, TREATED

SKELETAL MUSCLE

PARATHYROIDS

UTERUS

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12743 GROUP 3: 100 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	2.01	0.663		ONE OF PAIR PRESENT			
LIVER	8.80	2.904	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE			((1))
KIDNEYS	2.00	0.660		INTERSTITIAL			
HEART	1.06	0.350	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
SPLEEN	0.76	0.251	LUNGS	MICRO: INFLAMMATION, SUBACUTE			((1))
UTERUS	0.94	0.310	PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
OVARIES/OVIDUCTS	0.1393	0.046		ONE OF PAIR PRESENT			
THYMUS	0.3241	0.107	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS			P
ADRENAL GLANDS	0.0706	0.023	NO SIGNIFICANT				
PITUITARY	0.0205	0.007	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
THYROID/PARATHY	0.0163	0.005		JOINT	BRAIN	CECUM	COLON
FINAL BODY WT(G)	303.			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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LN, MESENTERIC	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS
				OVARIES	PANCREAS	PITUITARY	RECTUM
				SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON

ANIMAL NO.12743GROUP 3: 100 MG/KG/DAYFEMALESCHEDULED EUTH08/14/11DATE OF DEATH: 08/14/11STUDY DAY: 90

GRADE

SKELETAL MUSCLE 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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12746 GROUP 3: 100 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION				((2))
BRAIN	1.92	0.691		TUBULAR				
LIVER	8.42	3.029	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
KIDNEYS	1.96	0.705	PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
HEART	1.30	0.468		ONE OF PAIR PRESENT				
SPLEEN	0.61	0.219	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
UTERUS	1.01	0.363	NO SIGNIFICANT					
OVARIES/OVIDUCTS	0.1275	0.046	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
THYMUS	0.3312	0.119		JOINT	BRAIN	CECUM	COLON	
ADRENAL GLANDS	0.0668	0.024		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC	
PITUITARY	0.0216	0.008		HEART	ILEUM	JEJUNUM	KIDNEYS	
THYROID/PARATHY	0.0173	0.006		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
FINAL BODY WT(G)	278.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LN, MESENTERIC	LUNGS	MAMMARY GLAND	NERVE, SCIATIC	
				OVIDUCTS	OVARIES	PANCREAS	PITUITARY	
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKELETAL MUSCLE	SKIN	SPLEEN	
				THYROID GLANDS	PARATHYROID	THYMUS	TRACHEA	

ANIMAL NO.12746GROUP 3: 100 MG/KG/DAYFEMALESCHEDULED EUTH08/14/11DATE OF DEATH: 08/14/11STUDY DAY: 90

GRADE

URINARY BLADDERUTERUSCERVIXLN, AXILLARY
SKIN, TREATEDSKIN, 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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12753 GROUP 3: 100 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION			(1)
BRAIN	2.05	0.743		TUBULAR			
LIVER	8.88	3.217		INFLAMMATION, SUBACUTE			((1))
KIDNEYS	1.88	0.681		INTERSTITIAL			
HEART	1.12	0.406	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
SPLEEN	0.65	0.236	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS			P
UTERUS	0.69	0.250	NO SIGNIFICANT				
OVARIES/OVIDUCTS	0.1726	0.063	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
THYMUS	0.2516	0.091		JOINT	BRAIN	CECUM	COLON
ADRENAL GLANDS	0.0822	0.030		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC
PITUITARY	0.0209	0.008		HEART	ILEUM	JEJUNUM	KIDNEYS
THYROIDS/PARATHY	0.0157	0.006		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC
FINAL BODY WT(G)	276.			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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LN, MESENTERIC	LUNGS	MAMMARY GLAND	NERVE, SCIATIC
				OVIDUCTS	OVARIES	PANCREAS	PITUITARY
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN
				STOMACH, NON	SKELETAL MUSCLE	SKIN	SPLEEN
				THYROID GLANDS	THYMUS	TRACHEA	URINARY BLADDER
				UTERUS	CERVIX	LN, AXILLARY	SKIN, TREATED
				SKIN, UNTREATED			

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12753 GROUP 3: 100 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12754 GROUP 3: 100 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LIVER	GROSS: AREA(S), WHITE				P
BRAIN	1.81	0.707		ONE, IRREGULARLY SHAPED, IN MEDIAN CLEFT				
LIVER	8.52	3.328	^==> GROSS UNCONFIRMED					
KIDNEYS	2.04	0.797	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
HEART	0.95	0.371	NO SIGNIFICANT					
SPLEEN	0.59	0.230	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
UTERUS	0.57	0.223		JOINT	BRAIN	CECUM	COLON	
OVARIES/OVIDUCTS	0.1319	0.052		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC	
THYMUS	0.2056	0.080		HEART	ILEUM	JEJUNUM	KIDNEYS	
ADRENAL GLANDS	0.0661	0.026		LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC	LUNGS	
PITUITARY	0.0219	0.009		MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
THYROID/SPARATHY	0.0127	0.005		PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
FINAL BODY WT(G)	256.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, 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, GLAN	STOMACH, NON	SKELETAL MUSCLE	
				SKIN	SPLEEN	THYROID GLANDS	THYMUS	
				TRACHEA	URINARY BLADDER	UTERUS	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		

NOT PRESENT FOR EXAMINATION

MICRO:PARATHYROID

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12759 GROUP 3: 100 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: CARDIOMYOPATHY			(3)
BRAIN	1.84	0.643	KIDNEYS	GROSS: AREA(S), DEPRESSED			P
LIVER	8.93	3.122		MULTIPLE, PINPOINT TO 1 MM IN DIAMETER, IN CORTEX, BILATERAL			
KIDNEYS	2.12	0.741	^==>	KIDNEYS: NEPHROPATHY, CHRONIC PROGRESSIVE			
HEART	1.24	0.434	KIDNEYS	MICRO: MINERALIZATION			((2))
SPLEEN	0.55	0.192		TUBULAR			
UTERUS	0.55	0.192		NEPHROPATHY, CHRONIC PROGRESSIVE			1
OVARIES/OVIDUCTS	0.1388	0.049	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
THYMUS	0.2098	0.073	PANCREAS	MICRO: INFLAMMATION, SUBACUTE			(2)
ADRENAL GLANDS	0.0691	0.024		IN PLANE OF SECTION WITH DUODENUM			
PITUITARY	0.0212	0.007	THYROID GLANDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
THYROIDS/PARATHY	0.0169	0.006		ONE OF PAIR PRESENT			
FINAL BODY WT(G)	286.		VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS			P
			NO SIGNIFICANT				
			CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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	THYMUS	TRACHEA
				URINARY BLADDER	UTERUS	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM

ANIMAL NO.12759GROUP 3: 100 MG/KG/DAYFEMALESCHEDULED EUTH08/14/11DATE OF DEATH: 08/14/11STUDY DAY: 90
GRADE

JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC
LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS
OVARIES	PITUITARY	RECTUM	SPINAL CORD
SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE
SKIN	SPLEEN	THYROID GLANDS	THYMUS
TRACHEA	URINARY BLADDER	UTERUS	CERVIX
LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	

NOT PRESENT FOR EXAMINATION

MICRO:PARATHYROIDSD

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12709 GROUP 4: 450 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	ADRENAL MEDULLA	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	1.96	0.734		ONE OF PAIR PRESENT			
LIVER	9.49	3.554	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
KIDNEYS	2.19	0.820		ONE OF PAIR PRESENT			
HEART	1.03	0.386	HEART	MICRO: ENDOCARDIOSIS			((1))
SPLEEN	0.59	0.221		CARDIOMYOPATHY			((1))
UTERUS	1.16	0.434	KIDNEYS	GROSS: AREA(S), DEPRESSED			P
OVARIES/OVIDUCTS	0.1517	0.057		FEW, 1 TO 2 MM IN DIAMETER, IN CORTEX, RIGHT			
THYMUS	0.1940	0.073	^==>	KIDNEYS: INFLAMMATION, SUBACUTE			
ADRENAL GLANDS	0.0774	0.029	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE			((2))
PITUITARY	0.0222	0.008		INTERSTITIAL			
THYROID/SPLEEN	0.0226	0.008	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
FINAL BODY WT(G)	267.		PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
				ONE OF PAIR PRESENT			
			UTERUS	GROSS: CONTENTS, CLEAR FLUID			P
				BOTH HORNS			
			^==>	UTERUS: DILATATION, LUMEN			
			UTERUS	MICRO: DILATATION, LUMEN			2
			VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS			P
			NO SIGNIFICANT CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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

ANIMAL NO.12709

GROUP 4: 450 MG/KG/DAY

FEMALE

SCHEDULED EUTH08/13/11

DATE OF DEATH: 08/13/11

STUDY DAY: 89

GRADE

MICRO:	SPLEEN	THYROID GLANDS	THYMUS	TRACHEA
	URINARY BLADDER	VAGINA	CERVIX	LN, AXILLARY
	SKIN, TREATED	SKIN, UNTREATED		
	ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM
	MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
	BRAIN	CECUM	COLON	DUODENUM
	ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM
	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC
	LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS
	OVARIES	PANCREAS	PITUITARY	RECTUM
	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON
	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12719 GROUP 4: 450 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS				((2))
BRAIN	2.07	0.805	KIDNEYS	MICRO: MINERALIZATION				((1))
LIVER	10.01	3.895		TUBULAR				
KIDNEYS	2.17	0.844	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
HEART	1.15	0.447	LUNGS	MICRO: INFLAMMATION, SUBACUTE				((1))
SPLEEN	0.66	0.257	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
UTERUS	0.46	0.179		ONE OF PAIR PRESENT				
OVARIES/OVIDUCTS	0.1212	0.047	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS				P
THYMUS	0.1261	0.049	NO SIGNIFICANT					
ADRENAL GLANDS	0.0860	0.033	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
PITUITARY	0.0219	0.009		JOINT	BRAIN	CECUM	COLON	
THYROIDS/PARATHY	0.0184	0.007		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC	
FINAL BODY WT(G)	257.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM	
				JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC	
				MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	
				SKIN	SPLEEN	THYROID GLANDS	PARATHYROIDS	
				THYMUS	TRACHEA	URINARY BLADDER	UTERUS	

ANIMAL NO. 12719 GROUP 4: 450 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 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

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12726 GROUP 4: 450 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE				((1))
BRAIN	1.88	0.828		INTERSTITIAL				
LIVER	7.54	3.322	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
KIDNEYS	1.65	0.727	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				P
HEART	0.95	0.419	NO SIGNIFICANT					
SPLEEN	0.53	0.233	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
UTERUS	0.44	0.194		JOINT	BRAIN	CECUM	COLON	
OVARIES/OVIDUCTS	0.1270	0.056		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC	
THYMUS	0.1880	0.083		HEART	ILEUM	JEJUNUM	KIDNEYS	
ADRENAL GLANDS	0.0727	0.032		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
PITUITARY	0.0161	0.007		LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	
THYROID/SPARATHY	0.0222	0.010		OVARIES	PANCREAS	PITUITARY	RECTUM	
FINAL BODY WT(G)	227.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LN, MESENTERIC	LUNGS	MAMMARY GLAND	NERVE, SCIATIC	
				OVIDUCTS	OVARIES	PANCREAS	PITUITARY	
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12727 GROUP 4: 450 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS				((2))
BRAIN	2.03	0.769	KIDNEYS	MICRO: MINERALIZATION				((1))
LIVER	10.34	3.917		TUBULAR				
KIDNEYS	2.08	0.788		INFLAMMATION, SUBACUTE				((2))
HEART	1.21	0.458		INTERSTITIAL				
SPLEEN	0.47	0.178	LIVER	MICRO: INFLAMMATION, SUBACUTE				((1))
UTERUS	0.61	0.231	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
OVARIES/OVIDUCTS	0.0823	0.031		ONE OF PAIR PRESENT				
THYMUS	0.1527	0.058	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS				P
ADRENAL GLANDS	0.0798	0.030	NO SIGNIFICANT					
PITUITARY	0.0230	0.009	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
THYROIDES/PARATHY	0.0198	0.008		JOINT	BRAIN	CECUM	COLON	
FINAL BODY WT(G)	264.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM	
				JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC	
				LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	
				OVARIES	PANCREAS	PITUITARY	RECTUM	
				SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	

ANIMAL NO.12727GROUP 4: 450 MG/KG/DAYFEMALESCHEDULED EUTH08/13/11DATE OF DEATH: 08/13/11STUDY DAY: 89

GRADE

SKELETAL MUSCLESKINSPLEEN
PARATHYROIDSTHYMUS
UTERUSCERVIX
SKIN, UNTREATED

TRACHEA
LN, AXILLARY

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
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12728 GROUP 4: 450 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	2.00	0.658		ONE OF PAIR PRESENT			
LIVER	11.60	3.816	KIDNEYS	MICRO: MINERALIZATION			
KIDNEYS	2.36	0.776		TUBULAR			
HEART	1.27	0.418	LIVER	MICRO: INFLAMMATION, SUBACUTE			
SPLEEN	0.57	0.188	LUNGS	MICRO: INFLAMMATION, SUBACUTE			
UTERUS	0.51	0.168	STOMACH, NON	MICRO: HYPERKERATOSIS			
OVARIES/OVIDUCTS	0.1651	0.054	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS			
THYMUS	0.1658	0.055	NO SIGNIFICANT				
ADRENAL GLANDS	0.0818	0.027	CHANGES OBSERVED	GROSS:ADRENAL GLANDS			
PITUITARY	0.0210	0.007		JOINT			
THYROID/SPARATHY	0.0205	0.007		DUODENUM			
FINAL BODY WT(G)	304.			HEART			
				LN, MANDIBULAR			
				LUNGS			
				OVARIES			
				SPINAL CORD			
				SKIN			
				TRACHEA			
				CERVIX			
				MICRO:ADRENAL CORTEX			
				MARROW, STERN			
				BRAIN			
				ESOPHAGUS			
				ILEUM			
				LN, MESENTERIC			
				OVARIES			
				SPINAL CORD			
				SKIN			
				THYMUS			
				AORTA			
				BRAIN			
				ESOPHAGUS			
				ILEUM			
				LAC. GLAND EXOR			
				MAMMARY GLAND			
				PANCREAS			
				SAL. GLAND MAND			
				SPLEEN			
				URINARY BLADDER			
				LN, AXILLARY			
				ADRENAL MEDULLA			
				FEMUR			
				CECUM			
				EYES			
				JEJUNUM			
				MAMMARY GLAND			
				PANCREAS			
				SAL. GLAND MAND			
				SPLEEN			
				TRACHEA			
				STERNUM			
				FEMUR			
				CECUM			
				EYES			
				JEJUNUM			
				LIVER			
				NERVE, SCIATIC			
				PITUITARY			
				STOMACH			
				THYROID GLANDS			
				UTERUS			
				SKIN, TREATED			
				AORTA			
				MARROW, FEMUR			
				COLON			
				NERVES, OPTIC			
				LN, MANDIBULAR			
				MAMMARY GLAND			
				NERVE, SCIATIC			
				PITUITARY			
				STOMACH, GLAN			
				THYROID GLANDS			
				URINARY BLADDER			
				FEMUR			
				COLON			
				NERVES, OPTIC			
				LN, MANDIBULAR			
				LAC. GLAND EXOR			
				OVIDUCTS			
				RECTUM			
				SKELETAL MUSCLE			
				THYMUS			
				VAGINA			
				SKIN, UNTREATED			
				STERNUM			
				JOINT			
				DUODENUM			
				HEART			
				LAC. GLAND EXOR			
				OVIDUCTS			
				RECTUM			
				SKELETAL MUSCLE			
				PARATHYROID			
				UTERUS			

((1))
((2))
((1))
((2))
P

ANIMAL NO. 12728 GROUP 4: 450 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 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

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12732 GROUP 4: 450 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE				((1))
BRAIN	1.84	0.742		INTERSTITIAL				
LIVER	9.58	3.863	LN, MANDIBULAR	MICRO: HYPERPLASIA, LYMPHOID				2
KIDNEYS	2.03	0.819	LUNGS	MICRO: INFLAMMATION, SUBACUTE				((1))
HEART	1.21	0.488	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				P
SPLEEN	0.49	0.198	NO SIGNIFICANT					
UTERUS	0.87	0.351	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
OVARIES/OVIDUCTS	0.1410	0.057		JOINT	BRAIN	CECUM	COLON	
THYMUS	0.2461	0.099		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC	
ADRENAL GLANDS	0.0704	0.028		HEART	ILEUM	JEJUNUM	KIDNEYS	
PITUITARY	0.0198	0.008		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
THYROIDS/PARATHY	0.0140	0.006		LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	
FINAL BODY WT(G)	248.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
				ILEUM	JEJUNUM	LAC. GLAND EXOR	LIVER	
				LN, MESENTERIC	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	
				OVARIES	PANCREAS	PITUITARY	RECTUM	
				SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	
				SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12735 GROUP 4: 450 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	1.88	0.758		ONE OF PAIR PRESENT			
LIVER	8.28	3.339	HEART	MICRO: ENDOCARDIOSIS			((2))
KIDNEYS	2.00	0.806		CARDIOMYOPATHY			(1)
HEART	0.88	0.355	KIDNEYS	MICRO: MINERALIZATION			((1))
SPLEEN	0.44	0.177		TUBULAR			
UTERUS	0.49	0.198	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
OVARIES/OVIDUCTS	0.1306	0.053	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS			P
THYMUS	0.1556	0.063	NO SIGNIFICANT				
ADRENAL GLANDS	0.0706	0.028	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
PITUITARY	0.0169	0.007		JOINT	BRAIN	CECUM	COLON
THYROIDS/PARATHY	0.0142	0.006		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC
FINAL BODY WT(G)	248.			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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM
				JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC
				LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS
				OVARIES	PANCREAS	PITUITARY	RECTUM
				SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON
				SKELETAL MUSCLE	SKIN	SPLEEN	THYROID GLANDS
				THYMUS	TRACHEA	URINARY BLADDER	UTERUS

ANIMAL NO.12735GROUP 4: 450 MG/KG/DAYFEMALESCHEDULED EUTH08/14/11DATE OF DEATH: 08/14/11STUDY DAY: 90

GRADE

CERVIXLN, AXILLARYSKIN, TREATEDSKIN, 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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12747 GROUP 4: 450 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	1.87	0.719		ONE OF PAIR PRESENT			
LIVER	10.29	3.958	HEART	MICRO: CARDIOMYOPATHY			(1)
KIDNEYS	2.04	0.785	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
HEART	0.98	0.377	LUNGS	MICRO: INFLAMMATION, SUBACUTE			((1))
SPLEEN	0.49	0.188	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
UTERUS	1.26	0.485		ONE OF PAIR PRESENT			
OVARIES/OVIDUCTS	0.1103	0.042	UTERUS	GROSS: CONTENTS, CLEAR FLUID			P
THYMUS	0.1718	0.066		BOTH HORNS			
ADRENAL GLANDS	0.0968	0.037	^==> GROSS	UNCONFIRMED			
PITUITARY	0.0203	0.008	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS			P
THYROIDES/PARATHY	0.0180	0.007	NO SIGNIFICANT				
FINAL BODY WT(G)	260.		CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM
				JEJUNUM	KIDNEYS	LN, MANDIBULAR	LAC. GLAND EXOR
				LN, MESENTERIC	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS
				OVARIES	PANCREAS	PITUITARY	RECTUM

ANIMAL NO.12747

GROUP 4: 450 MG/KG/DAY

FEMALE

SCHEDULED EUTH08/14/11

DATE OF DEATH: 08/14/11

STUDY DAY: 90

GRADE

SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON
SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12760 GROUP 4: 450 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	1.93	0.717		ONE OF PAIR PRESENT			
LIVER	9.92	3.688	HEART	MICRO: ENDOCARDIOSIS, VALVULAR			
KIDNEYS	1.83	0.680	KIDNEYS	MICRO: INFLAMMATION, SUBACUTE			
HEART	1.15	0.428		INTERSTITIAL			
SPLEEN	0.62	0.230	LIVER	MICRO: INFLAMMATION, SUBACUTE			
UTERUS	0.59	0.219	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS			
OVARIES/OVIDUCTS	0.1318	0.049	NO SIGNIFICANT				
THYMUS	0.1854	0.069	CHANGES OBSERVED				
ADRENAL GLANDS	0.0825	0.031		GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
PITUITARY	0.0161	0.006		JOINT	BRAIN	CECUM	COLON
THYROIDS/PARATHY	0.0131	0.005		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC
FINAL BODY WT(G)	269.			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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM
				JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC
				LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS
				OVARIES	PANCREAS	PITUITARY	RECTUM
				SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON
				SKELETAL MUSCLE	SKIN	SPLEEN	THYROID GLANDS
				THYMUS	TRACHEA	URINARY BLADDER	UTERUS
				CERVIX	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12760 GROUP 4: 450 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12763 GROUP 4: 450 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION				((1))
BRAIN	1.95	0.762		TUBULAR				
LIVER	8.72	3.406	PARATHYROIDES	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
KIDNEYS	1.79	0.699		ONE OF PAIR PRESENT				
HEART	1.02	0.398	THYMUS	GROSS: SMALL				P
SPLEEN	0.53	0.207	^==> GROSS	UNCONFIRMED				
UTERUS	1.05	0.410	UTERUS	GROSS: CONTENTS, CLEAR FLUID				P
OVARIES/OVIDUCTS	0.0991	0.039		BOTH HORNS				
THYMUS	0.0787	0.031	UTERUS	MICRO: DILATATION, LUMEN				2
ADRENAL GLANDS	0.0831	0.032	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
PITUITARY	0.0184	0.007	SKIN, TREATED	MICRO: INFLAMMATION, SUBACUTE				((1))
THYROIDES/PARATHY	0.0104	0.004	NO SIGNIFICANT					
FINAL BODY WT(G)	256.		CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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	TRACHEA	
				URINARY BLADDER	VAGINA	CERVIX	LN, AXILLARY	
				SKIN, TREATED	SKIN, UNTREATED			
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	
				MARROW, STERN	FEMUR	MARROW, 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	

ANIMAL NO.12763GROUP 4: 450 MG/KG/DAYFEMALESCHEDULED EUTH08/14/11DATE OF DEATH: 08/14/11STUDY DAY: 90

GRADE

PITUITARY	RECTUM	SPINAL CORD	SAL. GLAND MAND
STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE	SKIN
SPLEEN	THYROID GLANDS	PARATHYROIDS	THYMUS
TRACHEA	URINARY BLADDER	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

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12720 GROUP 5: 750 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	HEART	MICRO: ENDOCARDIOSIS, VALVULAR				2
BRAIN	1.79	0.639	KIDNEYS	MICRO: MINERALIZATION				((2))
LIVER	10.89	3.889		TUBULAR				
KIDNEYS	1.94	0.693		INFLAMMATION, SUBACUTE				((1))
HEART	1.11	0.396		INTERSTITIAL				
SPLEEN	0.54	0.193		CYST				((P))
UTERUS	0.49	0.175	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
OVARIES/OVIDUCTS	0.1211	0.043	PANCREAS	MICRO: INFLAMMATION, CHRONIC				(2)
THYMUS	0.0893	0.032	PARATHYROIDS	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
ADRENAL GLANDS	0.0730	0.026		ONE OF PAIR PRESENT				
PITUITARY	0.0188	0.007	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				P
THYROIDS/PARATHY	0.0199	0.007	NO SIGNIFICANT					
FINAL BODY WT(G)	280.		CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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	STOMACH	
				SKIN	SPLEEN	THYROID GLANDS	THYMUS	
				TRACHEA	URINARY BLADDER	UTERUS	VAGINA	
				CERVIX	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM	
				JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC	
				LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	

ANIMAL NO.12720GROUP 5: 750 MG/KG/DAYFEMALESCHEDULED EUTH08/13/11DATE OF DEATH: 08/13/11STUDY DAY: 89

GRADE

OVARIES	PITUITARY	RECTUM	SPINAL CORD
SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE
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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12723 GROUP 5: 750 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION				((2))
BRAIN	1.85	0.845		TUBULAR				
LIVER	8.35	3.813		NEPHROPATHY, CHRONIC PROGRESSIVE				1
KIDNEYS	1.83	0.836	LAC. GLAND EXOR	MICRO: INFLAMMATION, SUBACUTE				(2)
HEART	0.84	0.384	PANCREAS	MICRO: INFLAMMATION, CHRONIC				(2)
SPLEEN	0.46	0.210		IN PLANE OF SECTION WITH DUODENUM				
UTERUS	0.82	0.374	STOMACH, GLAN	MICRO: INFILTRATE, LYMPHOCYTE				(2)
OVARIES/OVIDUCTS	0.1248	0.057	THYMUS	GROSS: SMALL				P
THYMUS	0.1015	0.046	^==> GROSS	UNCONFIRMED				
ADRENAL GLANDS	0.0824	0.038	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS				P
PITUITARY	0.0163	0.007	NO SIGNIFICANT					
THYROID/SPARATHY	0.0161	0.007	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
FINAL BODY WT(G)	219.			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	TRACHEA	
				URINARY BLADDER	UTERUS	VAGINA	CERVIX	
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED		
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LIVER	
				LN, MESENTERIC	LUNGS	MAMMARY GLAND	NERVE, SCIATIC	
				OVIDUCTS	OVARIES	PITUITARY	RECTUM	
				SPINAL CORD	SAL. GLAND MAND	STOMACH, NON	SKELETAL MUSCLE	

ANIMAL NO.12723GROUP 5: 750 MG/KG/DAYFEMALESCHEDULED EUTH08/13/11DATE OF DEATH: 08/13/11STUDY DAY: 89

GRADE

SKINSPLEENTHYROID GLANDSPARATHYROIDS

THYMUSTRACHEAURINARY BLADDERUTERUS

CERVIXLN, AXILLARYSKIN, TREATEDSKIN, 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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12731 GROUP 5: 750 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	GENERAL COMMENT	MICRO: SELECTED GROSS LESIONS NOT EXAMINED PER WIL SOP	P
BRAIN	1.74	0.825	ADRENAL MEDULLA	MICRO: DILATATION, VASCULAR	2
LIVER	8.85	4.194	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE	1
KIDNEYS	1.81	0.858	LIVER	MICRO: INFILTRATE, MONONUCLEAR	((1))
HEART	0.94	0.445	SKIN	MICRO: HYPERPLASIA, EPITHELIAL	(2)
SPLEEN	0.49	0.232	THYMUS	GROSS: DISCOLORATION, DARK RED	P
UTERUS	0.45	0.213	^==> GENERAL COMMENT: SELECTED GROSS LESIONS NOT EXAMINED PER WIL SOP		
OVARIES/OVIDUCTS	0.1009	0.048	THYMUS	GROSS: SMALL	P
THYMUS	0.0765	0.036	^==> GROSS UNCONFIRMED		
ADRENAL GLANDS	0.0713	0.034	VAGINA	MICRO: ESTROUS CYCLE: ESTRUS	P
PITUITARY	0.0107	0.005	NO SIGNIFICANT		
THYROID/SPARATHY	0.0223	0.011	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	
FINAL BODY WT(G)	211.			JOINT	
				DUODENUM	
				HEART	
				LN, MANDIBULAR	
				LUNGS	
				OVARIES	
				SPINAL CORD	
				SKIN	
				URINARY BLADDER	
				LN, AXILLARY	
				MICRO:ADRENAL CORTEX	
				FEMUR	
				CECUM	
				EYES	
				JEJUNUM	
				LUNGS	
				OVARIES	
				SPINAL CORD	
				SKELETAL MUSCLE	
				TRACHEA	
				AORTA	
				BRAIN	
				ESOPHAGUS	
				ILEUM	
				LAC. GLAND EXOR	
				MAMMARY GLAND	
				PANCREAS	
				SAL. GLAND MAND	
				SPLEEN	
				UTERUS	
				SKIN, TREATED	
				SKIN, UNTREATED	
				STERNUM	
				JOINT	
				DUODENUM	
				HEART	
				LAC. GLAND EXOR	
				NERVE, SCIATIC	
				PITUITARY	
				STOMACH, GLAN	
				THYROID GLANDS	
				UTERUS	
				FEMUR	
				COLON	
				NERVES, OPTIC	
				LN, MESENTERIC	
				OVIDUCTS	
				RECTUM	
				STOMACH, NON	
				THYMUS	
				CERVIX	
				MARROW, STERN	
				BRAIN	
				ESOPHAGUS	
				ILEUM	
				LN, MESENTERIC	
				OVIDUCTS	
				RECTUM	
				STOMACH, NON	
				THYMUS	
				CERVIX	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12731 GROUP 5: 750 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12739 GROUP 5: 750 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	1.89	0.756		ONE OF PAIR PRESENT			
LIVER	10.76	4.304	KIDNEYS	MICRO: MINERALIZATION			((2))
KIDNEYS	2.03	0.812		TUBULAR			
HEART	1.17	0.468		INFLAMMATION, SUBACUTE			((1))
SPLEEN	0.55	0.220		INTERSTITIAL			
UTERUS	0.48	0.192	LAC. GLAND EXOR	MICRO: INFLAMMATION, SUBACUTE			((2))
OVARIES/OVIDUCTS	0.1284	0.051	LIVER	MICRO: INFLAMMATION, SUBACUTE			((1))
THYMUS	0.1118	0.045	LN, MESENTERIC	MICRO: INFLAMMATION, SUBACUTE			(2)
ADRENAL GLANDS	0.0759	0.030		INFLAMMATION OF BROWN FAT IN PLANE OF SECTION WITH MESENTERIC			
PITUITARY	0.0200	0.008	SKIN	MICRO: HYPERPLASIA, EPITHELIAL			(2)
THYROID/SPLEEN	0.0203	0.008		MILD HYPERKERATOSIS			
FINAL BODY WT(G)	250.		PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
			VAGINA	MICRO: ESTROUS CYCLE: ESTRUS			P
			NO SIGNIFICANT CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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

ANIMAL NO.12739GROUP 5: 750 MG/KG/DAYFEMALESCHEDULED EUTH08/13/11DATE OF DEATH: 08/13/11STUDY DAY: 89

GRADE

	CERVIX	LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED
MICRO:	ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM
	MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
	BRAIN	CECUM	COLON	DUODENUM
	ESOPHAGUS	EYES	NERVES, OPTIC	HEART
	ILEUM	JEJUNUM	LN, MANDIBULAR	LUNGS
	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES
	PANCREAS	PITUITARY	RECTUM	SPINAL CORD
	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKELETAL MUSCLE
	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12742 GROUP 5: 750 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	ADRENAL CORTEX	MICRO: HYPERPLASIA				2
BRAIN	1.83	0.753	HEART	MICRO: ENDOCARDIOSIS				1
LIVER	10.26	4.222	KIDNEYS	MICRO: MINERALIZATION				((2))
KIDNEYS	1.86	0.765	LIVER	MICRO: INFLAMMATION, SUBACUTE				((2))
HEART	1.15	0.473	PITUITARY	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
SPLEEN	0.65	0.267		PARS NERVOSA MISSING				
UTERUS	0.47	0.193	SKELETAL MUSCLE	MICRO: INFLAMMATION, SUBACUTE				((1))
OVARIES/OVIDUCTS	0.1384	0.057	VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS				P
THYMUS	0.1409	0.058	NO SIGNIFICANT					
ADRENAL GLANDS	0.1026	0.042	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
PITUITARY	0.0170	0.007		JOINT	BRAIN	CECUM	COLON	
THYROID/SPARATHY	0.0228	0.009		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC	
FINAL BODY WT(G)	243.			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 MEDULLA	AORTA	STERNUM	MARROW, STERN	
				FEMUR	MARROW, FEMUR	JOINT	BRAIN	
				CECUM	COLON	DUODENUM	ESOPHAGUS	
				EYES	NERVES, OPTIC	ILEUM	JEJUNUM	
				LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC	LUNGS	
				MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS	OVARIES	
				PANCREAS	PITUITARY	RECTUM	SPINAL CORD	
				SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON	SKIN	
				SPLEEN	THYROID GLANDS	PARATHYROID	THYMUS	

ANIMAL NO. 12742 GROUP 5: 750 MG/KG/DAY FEMALE SCHEDULED EUTH 08/13/11 DATE OF DEATH: 08/13/11 STUDY DAY: 89

GRADE

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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12749 GROUP 5: 750 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	KIDNEYS	MICRO: MINERALIZATION				((1))
BRAIN	1.75	0.810		NEPHROPATHY, CHRONIC PROGRESSIVE				1
LIVER	9.25	4.282	LIVER	MICRO: INFILTRATE, MONONUCLEAR				((2))
KIDNEYS	1.81	0.838	PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED				
HEART	1.10	0.509		ONE OF PAIR PRESENT				
SPLEEN	0.61	0.282	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS				P
UTERUS	1.04	0.481	NO SIGNIFICANT					
OVARIES/OVIDUCTS	0.1054	0.049	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR	
THYMUS	0.1303	0.060		JOINT	BRAIN	CECUM	COLON	
ADRENAL GLANDS	0.0707	0.033		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC	
PITUITARY	0.0120	0.006		HEART	ILEUM	JEJUNUM	KIDNEYS	
THYROID/PARATHY	0.0142	0.007		LN, MANDIBULAR	LAC. GLAND EXOR	LIVER	LN, MESENTERIC	
FINAL BODY WT(G)	216.			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	STERNUM	
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT	
				BRAIN	CECUM	COLON	DUODENUM	
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART	
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	
				LN, MESENTERIC	LUNGS	MAMMARY GLAND	NERVE, SCIATIC	
				OVIDUCTS	OVARIES	PANCREAS	PITUITARY	
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	
				STOMACH, NON	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12750 GROUP 5: 750 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	1.93	0.699		ONE OF PAIR PRESENT			
LIVER	12.05	4.366	KIDNEYS	MICRO: NEPHROPATHY, CHRONIC PROGRESSIVE			2
KIDNEYS	2.19	0.793	LIVER	MICRO: INFILTRATE, MONONUCLEAR			((1))
HEART	1.21	0.438	STOMACH, NON	MICRO: HYPERPLASIA, EPITHELIAL			(2)
SPLEEN	0.64	0.232		INFLAMMATION, CHRONIC ACTIVE			(2)
UTERUS	0.91	0.330	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS			P
OVARIES/OVIDUCTS	0.1700	0.062	NO SIGNIFICANT				
THYMUS	0.1399	0.051	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
ADRENAL GLANDS	0.0937	0.034		JOINT	BRAIN	CECUM	COLON
PITUITARY	0.0213	0.008		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC
THYROIDS/PARATHY	0.0210	0.008		HEART	ILEUM	JEJUNUM	KIDNEYS
FINAL BODY WT(G)	276.			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	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT
				BRAIN	CECUM	COLON	DUODENUM
				ESOPHAGUS	EYES	NERVES, OPTIC	HEART
				ILEUM	JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR
				LN, MESENTERIC	LUNGS	MAMMARY GLAND	NERVE, SCIATIC
				OVIDUCTS	OVARIES	PANCREAS	PITUITARY
				RECTUM	SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN
				SKELETAL MUSCLE	SKIN	SPLEEN	THYROID GLANDS
				PARATHYROIDS	THYMUS	TRACHEA	URINARY BLADDER

ANIMAL NO. 12750 GROUP 5: 750 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 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
()-FOCAL/SOLITARY, (())-MULTIFOCAL/MULTIPLE, NO PARENTHESES-NOT SPECIFIED

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12755 GROUP 5: 750 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	LIVER	MICRO: INFLAMMATION, SUBACUTE	((2))
BRAIN	1.91	0.864	THYMUS	GROSS: SMALL	P
LIVER	9.29	4.204	^==>	GROSS UNCONFIRMED	
KIDNEYS	1.81	0.819	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS	P
HEART	1.01	0.457	TAIL	GROSS: SCABBING	P
SPLEEN	0.47	0.213		ENTIRE LENGTH	
UTERUS	0.53	0.240	^==>	TAIL: HYPERPLASIA, EPITHELIAL	
OVARIES/OVIDUCTS	0.1143	0.052	TAIL	MICRO: HYPERKERATOSIS	((3))
THYMUS	0.0772	0.035		HYPERPLASIA, EPITHELIAL	((2))
ADRENAL GLANDS	0.0921	0.042	EARS	GROSS: SCABBING	P
PITUITARY	0.0149	0.007		BILATERAL	
THYROIDS/PARATHY	0.0185	0.008	^==>	EARS: HYPERPLASIA, EPITHELIAL	
FINAL BODY WT(G)	221.		EARS	MICRO: HYPERPLASIA, EPITHELIAL	((3))
				HYPERKERATOSIS	((3))
				INFLAMMATION, CHRONIC ACTIVE	((2))
			PAWS	GROSS: SCABBING	P
				ALL PAWS	
			^==>	PAWS: HYPERPLASIA, EPITHELIAL	
			PAWS	MICRO: HYPERPLASIA, EPITHELIAL	((3))
				ULCER	
				INFLAMMATION, CHRONIC ACTIVE	((2))
				HYPERKERATOSIS	((2))
			NO SIGNIFICANT		
			CHANGES OBSERVED	GROSS:ADRENAL GLANDS	
				JOINT	
				DUODENUM	
				HEART	
				LN, MANDIBULAR	
				LUNGS	
				OVARIES	
				SPINAL CORD	
				AORTA	
				BRAIN	
				ESOPHAGUS	
				ILEUM	
				LAC. GLAND EXOR	
				MAMMARY GLAND	
				PANCREAS	
				SAL. GLAND MAND	
				STERNUM	
				CECUM	
				EYES	
				JEJUNUM	
				LIVER	
				NERVE, SCIATIC	
				PITUITARY	
				STOMACH	
				FEMUR	
				COLON	
				NERVES, OPTIC	
				KIDNEYS	
				LN, MESENTERIC	
				OVIDUCTS	
				RECTUM	
				SKELETAL MUSCLE	

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12755 GROUP 5: 750 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

SKIN	SPLEEN	THYROID GLANDS	TRACHEA
URINARY BLADDER	UTERUS	VAGINA	CERVIX
LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM
MARROW, STERN	FEMUR	MARROW, 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, GLAN	STOMACH, NON	SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12761 GROUP 5: 750 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	ADRENAL MEDULLA	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
BRAIN	1.88	0.726		ONE OF PAIR PRESENT			
LIVER	10.87	4.197	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
KIDNEYS	2.22	0.857		ONE OF PAIR PRESENT			
HEART	1.12	0.432	HEART	MICRO: ENDOCARDIOSIS			((2))
SPLEEN	0.69	0.266	KIDNEYS	GROSS: AREA(S), DEPRESSED			P
UTERUS	0.55	0.212		MULTIPLE, PINPOINT TO 2 MM IN DIAMETER, IN CORTEX, BILATERAL			
OVARIES/OVIDUCTS	0.1272	0.049	^==>	KIDNEYS: INFLAMMATION, SUBACUTE			
THYMUS	0.1547	0.060	KIDNEYS	MICRO: MINERALIZATION			(1)
ADRENAL GLANDS	0.1050	0.041		TUBULAR			
PITUITARY	0.0217	0.008		INFLAMMATION, SUBACUTE			((2))
THYROIDS/PARATHY	0.0180	0.007		INTERSTITIAL			
FINAL BODY WT(G)	259.		LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
			VAGINA	MICRO: ESTROUS CYCLE: DIESTRUS			P
			NO SIGNIFICANT				
			CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	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	THYMUS	TRACHEA
				URINARY BLADDER	UTERUS	VAGINA	CERVIX
				LN, AXILLARY	SKIN, TREATED	SKIN, UNTREATED	
				MICRO:ADRENAL CORTEX	ADRENAL MEDULLA	AORTA	STERNUM
				MARROW, STERN	FEMUR	MARROW, FEMUR	JOINT

ANIMAL NO.12761

GROUP 5: 750 MG/KG/DAY

FEMALE

SCHEDULED EUTH08/14/11

DATE OF DEATH: 08/14/11

STUDY DAY: 90

GRADE

BRAIN	CECUM	COLON	DUODENUM
ESOPHAGUS	EYES	NERVES, OPTIC	ILEUM
JEJUNUM	LN, MANDIBULAR	LAC. GLAND EXOR	LN, MESENTERIC
LUNGS	MAMMARY GLAND	NERVE, SCIATIC	OVIDUCTS
OVARIES	PANCREAS	PITUITARY	RECTUM
SPINAL CORD	SAL. GLAND MAND	STOMACH, GLAN	STOMACH, NON
SKELETAL MUSCLE	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-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A16 (SCHEDULED NECROPSY)
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

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ANIMAL NO. 12764 GROUP 5: 750 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

ORGAN WEIGHT	ABS.(G)	REL.	ADRENAL CORTEX	MICRO: VACUOLATION, CYTOPLASMIC			(2)
BRAIN	1.96	0.683	NERVES, OPTIC	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
LIVER	12.79	4.456		ONE OF PAIR PRESENT			
KIDNEYS	2.36	0.822	LIVER	MICRO: INFLAMMATION, SUBACUTE			((2))
HEART	1.22	0.425	PARATHYROID	MICRO: NO SIGNIFICANT CHANGES OBSERVED			
SPLEEN	0.80	0.279		ONE OF PAIR PRESENT			
UTERUS	0.74	0.258	VAGINA	MICRO: ESTROUS CYCLE: PROESTRUS			P
OVARIES/OVIDUCTS	0.1546	0.054	SKIN, TREATED	MICRO: INFLAMMATION, GRANULOMATOUS			(1)
THYMUS	0.1635	0.057	NO SIGNIFICANT				
ADRENAL GLANDS	0.0999	0.035	CHANGES OBSERVED	GROSS:ADRENAL GLANDS	AORTA	STERNUM	FEMUR
PITUITARY	0.0219	0.008		JOINT	BRAIN	CECUM	COLON
THYROID/PARATHY	0.0199	0.007		DUODENUM	ESOPHAGUS	EYES	NERVES, OPTIC
FINAL BODY WT(G)	287.			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 MEDULLA	AORTA	STERNUM	MARROW, STERN
				FEMUR	MARROW, 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, GLAN
				STOMACH, NON	SKELETAL MUSCLE	SKIN	SPLEEN
				THYROID GLANDS	PARATHYROID	THYMUS	TRACHEA

ANIMAL NO. 12764 GROUP 5: 750 MG/KG/DAY FEMALE SCHEDULED EUTH 08/14/11 DATE OF DEATH: 08/14/11 STUDY DAY: 90
GRADE

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
PGRHv4.67
11/15/2011
R:11/15/2011

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 1

MALE GROUP: UNTREATED

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN	PROS TATE
12649	526.	2.20	13.63	3.11	1.93	0.83	1.02
12654	481.	2.31	11.00	3.31	1.61	0.74	1.17
12660	412.	2.12	10.24	3.11	1.43	0.69	1.04
12668	443.	2.03	11.62	3.19	1.73	0.72	0.96
12684	528.	2.20	15.15	3.66	2.11	1.05	1.49
12686	572.	2.14	14.02	3.23	1.58	1.00	1.27
12691	408.	2.03	9.83	2.70	1.28	0.57	0.81
12694	463.	2.17	11.52	3.26	1.68	0.92	0.99
12701	535.	2.05	16.18	3.32	1.99	0.94	0.87
12703	471.	2.19	13.21	3.08	1.55	1.09	1.20
MEAN	484.	2.14	12.64	3.20	1.69	0.86	1.08
S.D.	55.1	0.089	2.126	0.241	0.258	0.172	0.203
S.E.	17.4	0.028	0.672	0.076	0.082	0.054	0.064
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 2

MALE GROUP: 0 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN	PROS TATE
12648	471.	2.02	12.07	3.53	1.87	0.87	1.11
12650	438.	2.14	12.10	3.31	1.67	0.71	1.16
12661	439.	2.12	13.17	3.12	1.58	0.88	0.97
12675	522.	2.15	14.16	3.95	1.74	0.91	0.80
12676	453.	2.20	11.49	3.38	1.61	0.72	1.19
12679	486.	2.22	13.11	3.28	1.81	0.95	0.81
12683	525.	2.27	13.72	4.07	1.67	1.05	0.98
12693	399.	2.09	10.97	3.13	1.32	0.74	0.88
12697	451.	2.07	11.09	3.19	1.60	0.83	1.11
12700	491.	2.10	11.93	3.42	1.87	0.96	1.28
MEAN	468.	2.14	12.38	3.44	1.67	0.86	1.03
S.D.	39.5	0.075	1.103	0.329	0.164	0.113	0.166
S.E.	12.5	0.024	0.349	0.104	0.052	0.036	0.052
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 3

MALE GROUP: 100 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN	PROS TATE
12646	452.	2.19	14.37	3.38	1.99	0.76	1.12
12655	442.	2.01	11.76	3.00	1.38	0.69	0.99
12656	453.	2.25	13.66	3.23	1.57	0.86	0.99
12659	526.	2.05	13.51	3.59	1.98	0.97	0.93
12662	495.	2.14	15.31	3.67	1.79	0.82	1.23
12664	503.	2.16	12.73	3.33	1.61	0.74	1.06
12670	525.	2.20	14.34	4.11	1.87	0.94	1.13
12682	481.	2.14	12.74	3.28	1.58	0.88	0.99
12688	349.	1.98	9.88	3.14	1.55	0.62	1.36
12695	479.	2.25	12.25	3.13	1.54	0.86	0.99
MEAN	471.	2.14	13.06	3.39	1.69	0.81	1.08
S.D.	51.8	0.095	1.551	0.327	0.207	0.111	0.133
S.E.	16.4	0.030	0.490	0.103	0.066	0.035	0.042
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 4

MALE GROUP: 450 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN	PROS TATE
12645	396.	2.01	12.34	3.14	1.44	0.64	1.08
12652	524.	2.02	16.12	4.53	1.76	1.12	1.04
12669	412.	2.14	13.99	3.17	1.59	0.83	1.30
12671	437.	2.10	14.02	3.35	1.34	0.90	1.34
12674	434.	2.07	12.91	3.02	1.72	0.75	1.03
12677	487.	2.20	17.10	3.60	1.87	0.90	0.72
12685	453.	2.21	14.17	3.64	1.90	0.75	1.07
12690	494.	2.20	17.23	3.86	1.97	1.10	1.10
12692	429.	2.10	15.36	3.09	1.57	0.91	1.16
MEAN	452.	2.12	14.80	3.49	1.68	0.88	1.09
S.D.	41.8	0.076	1.751	0.485	0.215	0.159	0.179
S.E.	13.9	0.025	0.584	0.162	0.072	0.053	0.060
N	9	9	9	9	9	9	9

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 5

MALE GROUP: 750 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN	PROS TATE
12666	352.	1.99	13.23	2.63	1.35	0.72	0.71
12672	394.	2.10	14.08	2.92	1.37	0.79	1.17
12673	439.	2.04	15.13	3.13	1.73	0.68	1.14
12680	418.	1.97	15.32	3.23	1.51	0.89	0.89
12681	393.	2.02	14.34	3.39	1.33	0.66	0.98
12687	367.	1.97	14.13	2.74	1.45	0.83	1.27
12689	391.	1.98	14.87	2.99	1.47	1.02	1.05
12698	302.	1.92	11.65	2.66	1.25	0.47	0.84
12704	366.	2.05	13.95	2.71	1.43	0.96	1.03
MEAN	380.	2.00	14.08	2.93	1.43	0.78	1.01
S.D.	39.8	0.054	1.117	0.272	0.137	0.169	0.175
S.E.	13.3	0.018	0.372	0.091	0.046	0.056	0.058
N	9	9	9	9	9	9	9

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 6

MALE GROUP: UNTREATED

ANIMAL	TESTES	EPIDID YMIDES	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12649	3.48	1.37	0.2381	0.0649	0.0118	0.0176
12654	4.51	1.51	0.1826	0.0637	0.0138	0.0228
12660	3.66	1.36	0.1918	0.0502	0.0161	0.0151
12668	3.29	1.36	0.2987	0.0628	0.0129	0.0208
12684	3.72	1.47	0.3957	0.0787	0.0171	0.0152
12686	3.06	1.27	0.2611	0.0761	0.0176	0.0200
12691	3.91	1.36	0.1855	0.0472	0.0118	0.0128
12694	3.72	1.44	0.2455	0.0627	0.0123	0.0141
12701	3.73	1.53	0.2274	0.0543	0.0137	0.0155
12703	3.28	1.50	0.4219	0.0852	0.0154	0.0205
MEAN	3.64	1.42	0.2648	0.0646	0.0143	0.0174
S.D.	0.403	0.085	0.08422	0.01238	0.00217	0.00338
S.E.	0.128	0.027	0.02663	0.00391	0.00068	0.00107
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 7

MALE GROUP: 0 MG/KG/DAY

ANIMAL	TESTES	EPIDID YMIDES	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12648	3.98	1.35	0.1773	0.0670	0.0180	0.0212
12650	3.74	1.49	0.3303	0.0677	0.0144	0.0179
12661	3.63	1.38	0.1147	0.0447	0.0138	0.0190
12675	3.80	1.47	0.2872	0.0706	0.0202	0.0322
12676	3.47	1.44	0.1770	0.0698	0.0149	0.0142
12679	3.54	1.49	0.2666	0.0681	0.0200	0.0221
12683	3.41	1.39	0.4733	0.0691	0.0187	0.0205
12693	3.51	1.34	0.2379	0.0508	0.0118	0.0163
12697	3.51	1.40	0.2565	0.0615	0.0146	0.0195
12700	3.82	1.42	0.2976	0.0664	0.0205	0.0139
MEAN	3.64	1.42	0.2618	0.0636	0.0167	0.0197
S.D.	0.185	0.055	0.09885	0.00882	0.00314	0.00521
S.E.	0.059	0.017	0.03126	0.00279	0.00099	0.00165
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 8

MALE GROUP: 100 MG/KG/DAY

ANIMAL	TESTES	EPIDID YMIDES	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12646	4.09	1.64	0.3004	0.0690	0.0172	0.0198
12655	3.79	1.45	0.2547	0.0630	0.0137	0.0212
12656	3.82	1.50	0.2235	0.0589	0.0149	0.0220
12659	3.47	1.30	0.2240	0.0814	0.0160	0.0204
12662	3.53	1.49	0.3306	0.0695	0.0164	0.0254
12664	3.86	1.52	0.1912	0.0568	0.0156	0.0219
12670	3.85	1.53	0.2509	0.0715	0.0174	0.0190
12682	3.33	1.37	0.2122	0.0606	0.0169	0.0113
12688	3.48	1.33	0.1910	0.0544	0.0147	0.0177
12695	3.67	1.50	0.2286	0.0607	0.0130	0.0172
MEAN	3.69	1.46	0.2407	0.0646	0.0156	0.0196
S.D.	0.233	0.103	0.04522	0.00819	0.00149	0.00375
S.E.	0.074	0.033	0.01430	0.00259	0.00047	0.00119
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 9

MALE GROUP: 450 MG/KG/DAY

ANIMAL	TESTES	EPIDID YMIDES	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12645	3.34	1.28	0.1818	0.0600	0.0106	0.0155
12652	3.78	1.38	0.2308	0.0872	0.0161	0.0243
12669	3.77	1.40	0.1186	0.0664	0.0116	0.0222
12671	3.78	1.29	0.1564	0.0631	0.0156	0.0200
12674	3.07	1.16	0.1535	0.0716	0.0139	0.0198
12677	3.75	1.45	0.1891	0.0696	0.0132	0.0198
12685	3.98	1.42	0.1535	0.0670	0.0145	0.0225
12690	3.89	1.39	0.1866	0.0753	0.0183	0.0229
12692	3.28	1.08	0.1300	0.0711	0.0129	0.0254
MEAN	3.63	1.32	0.1667	0.0701	0.0141	0.0214
S.D.	0.314	0.126	0.03419	0.00788	0.00237	0.00297
S.E.	0.105	0.042	0.01140	0.00263	0.00079	0.00099
N	9	9	9	9	9	9

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 10

MALE GROUP: 750 MG/KG/DAY

ANIMAL	TESTES	EPIDID YMIDES	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12666	3.70	1.18	0.0990	0.0618	0.0145	0.0222
12672	3.41	1.33	0.1024	0.0731	0.0155	0.0234
12673	3.41	1.30	0.1334	0.0784	0.0177	0.0219
12680	3.38	1.23	0.1427	0.0802	0.0145	0.0207
12681	3.74	1.35	0.0589	0.0576	0.0153	0.0189
12687	3.15	1.22	0.0685	0.0726	0.0170	0.0228
12689	3.25	1.27	0.1230	0.0732	0.0114	0.0226
12698	3.38	1.07	0.0420	0.0698	0.0132	0.0215
12704	3.96	1.23	0.1258	0.0771	0.0128	0.0199
MEAN	3.49	1.24	0.0995	0.0715	0.0147	0.0215
S.D.	0.259	0.085	0.03568	0.00751	0.00200	0.00146
S.E.	0.086	0.028	0.01189	0.00250	0.00067	0.00049
N	9	9	9	9	9	9

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 11

FEMALE GROUP: UNTREATED

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN
12705	298.	1.88	9.67	2.09	1.24	0.68
12712	295.	1.92	8.37	2.02	1.23	0.56
12716	278.	1.88	8.05	1.85	1.10	0.56
12724	303.	2.03	8.42	2.16	1.14	0.61
12730	332.	1.99	9.40	2.14	1.30	0.66
12733	301.	1.93	7.45	2.06	1.15	0.68
12734	244.	1.90	7.11	1.82	1.15	0.52
12736	289.	1.92	7.64	2.16	1.20	0.56
12737	267.	1.90	6.97	2.06	0.96	0.56
12748	245.	1.87	6.45	1.89	1.04	0.53
MEAN	285.	1.92	7.95	2.03	1.15	0.59
S.D.	27.3	0.051	1.040	0.128	0.100	0.061
S.E.	8.6	0.016	0.329	0.040	0.032	0.019
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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FEMALE GROUP: 0 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN
12706	274.	1.88	7.85	1.99	1.05	0.62
12708	272.	2.02	8.24	2.36	1.12	0.57
12711	247.	1.82	7.53	1.76	1.09	0.56
12714	262.	1.99	8.92	2.38	1.28	0.61
12718	275.	1.94	7.74	2.04	1.01	0.60
12721	302.	1.91	8.75	2.19	1.13	0.57
12744	285.	1.96	8.01	2.27	1.08	0.62
12752	282.	1.94	11.34	2.34	1.21	0.55
12757	262.	1.92	8.14	2.19	1.12	0.74
12758	282.	1.99	7.20	1.95	1.12	0.48
MEAN	274.	1.94	8.37	2.15	1.12	0.59
S.D.	15.1	0.059	1.165	0.206	0.077	0.067
S.E.	4.8	0.019	0.368	0.065	0.024	0.021
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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FEMALE GROUP: 100 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN
12707	256.	1.90	9.12	2.38	1.05	0.52
12715	278.	2.04	8.48	1.81	1.03	0.60
12722	275.	1.86	9.60	2.00	1.18	0.61
12738	296.	1.98	9.28	2.16	1.09	0.62
12740	263.	1.82	8.40	1.89	1.02	0.57
12743	303.	2.01	8.80	2.00	1.06	0.76
12746	278.	1.92	8.42	1.96	1.30	0.61
12753	276.	2.05	8.88	1.88	1.12	0.65
12754	256.	1.81	8.52	2.04	0.95	0.59
12759	286.	1.84	8.93	2.12	1.24	0.55
MEAN	277.	1.92	8.84	2.02	1.10	0.61
S.D.	15.6	0.092	0.403	0.165	0.108	0.065
S.E.	4.9	0.029	0.127	0.052	0.034	0.021
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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FEMALE GROUP: 450 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN
12709	267.	1.96	9.49	2.19	1.03	0.59
12719	257.	2.07	10.01	2.17	1.15	0.66
12726	227.	1.88	7.54	1.65	0.95	0.53
12727	264.	2.03	10.34	2.08	1.21	0.47
12728	304.	2.00	11.60	2.36	1.27	0.57
12732	248.	1.84	9.58	2.03	1.21	0.49
12735	248.	1.88	8.28	2.00	0.88	0.44
12747	260.	1.87	10.29	2.04	0.98	0.49
12760	269.	1.93	9.92	1.83	1.15	0.62
12763	256.	1.95	8.72	1.79	1.02	0.53
MEAN	260.	1.94	9.58	2.01	1.09	0.54
S.D.	19.7	0.075	1.158	0.210	0.130	0.070
S.E.	6.2	0.024	0.366	0.066	0.041	0.022
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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FEMALE GROUP: 750 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN
12720	280.	1.79	10.89	1.94	1.11	0.54
12723	219.	1.85	8.35	1.83	0.84	0.46
12731	211.	1.74	8.85	1.81	0.94	0.49
12739	250.	1.89	10.76	2.03	1.17	0.55
12742	243.	1.83	10.26	1.86	1.15	0.65
12749	216.	1.75	9.25	1.81	1.10	0.61
12750	276.	1.93	12.05	2.19	1.21	0.64
12755	221.	1.91	9.29	1.81	1.01	0.47
12761	259.	1.88	10.87	2.22	1.12	0.69
12764	287.	1.96	12.79	2.36	1.22	0.80
MEAN	246.	1.85	10.34	1.99	1.09	0.59
S.D.	28.7	0.075	1.421	0.204	0.122	0.109
S.E.	9.1	0.024	0.449	0.064	0.039	0.034
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

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FEMALE GROUP: UNTREATED

ANIMAL	UTERUS	OVARIES/ OVIDUCTS	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12705	0.55	0.1258	0.3200	0.0750	0.0265	0.0148
12712	1.35	0.1256	0.3039	0.0696	0.0262	0.0141
12716	1.08	0.1121	0.3368	0.0779	0.0154	0.0136
12724	0.85	0.1210	0.2273	0.0842	0.0203	0.0147
12730	1.01	0.1211	0.3106	0.0982	0.0271	0.0217
12733	0.52	0.1269	0.2560	0.0772	0.0181	0.0163
12734	0.81	0.1107	0.2328	0.0695	0.0219	0.0101
12736	0.89	0.1246	0.1369	0.0709	0.0195	0.0172
12737	0.44	0.1331	0.1703	0.0570	0.0207	0.0142
12748	2.43	0.0977	0.2118	0.0734	0.0205	0.0198
MEAN	0.99	0.1199	0.2506	0.0753	0.0216	0.0157
S.D.	0.576	0.01029	0.06705	0.01074	0.00386	0.00330
S.E.	0.182	0.00326	0.02120	0.00340	0.00122	0.00104
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 17

FEMALE GROUP: 0 MG/KG/DAY

ANIMAL	UTERUS	OVARIES/ OVIDUCTS	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12706	1.46	0.1390	0.2828	0.0805	0.0210	0.0191
12708	0.62	0.1481	0.1898	0.0810	0.0248	0.0176
12711	0.42	0.1126	0.3002	0.0844	0.0171	0.0192
12714	1.32	0.1043	0.2206	0.0791	0.0293	0.0136
12718	0.58	0.1354	0.2590	0.0815	0.0168	0.0179
12721	1.09	0.1215	0.2281	0.0735	0.0166	0.0150
12744	1.37	0.1258	0.2630	0.0736	0.0155	0.0178
12752	0.85	0.0990	0.2150	0.0971	0.0342	0.0171
12757	2.05	0.0987	0.3150	0.0927	0.0208	0.0180
12758	1.29	0.1340	0.3346	0.0711	0.0225	0.0139
MEAN	1.11	0.1218	0.2608	0.0815	0.0219	0.0169
S.D.	0.496	0.01758	0.04744	0.00829	0.00610	0.00203
S.E.	0.157	0.00556	0.01500	0.00262	0.00193	0.00064
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 18

FEMALE GROUP: 100 MG/KG/DAY

ANIMAL	UTERUS	OVARIES/ OVIDUCTS	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12707	0.68	0.0937	0.1905	0.0805	0.0202	0.0136
12715	1.24	0.1280	0.1598	0.0728	0.0214	0.0152
12722	0.93	0.1099	0.2589	0.0784	0.0243	0.0208
12738	1.24	0.1473	0.2937	0.0852	0.0213	0.0190
12740	0.48	0.1435	0.1642	0.0626	0.0225	0.0126
12743	0.94	0.1393	0.3241	0.0706	0.0205	0.0163
12746	1.01	0.1275	0.3312	0.0668	0.0216	0.0173
12753	0.69	0.1726	0.2516	0.0822	0.0209	0.0157
12754	0.57	0.1319	0.2056	0.0661	0.0219	0.0127
12759	0.55	0.1388	0.2098	0.0691	0.0212	0.0169
MEAN	0.83	0.1333	0.2389	0.0734	0.0216	0.0160
S.D.	0.279	0.02132	0.06279	0.00769	0.00116	0.00266
S.E.	0.088	0.00674	0.01985	0.00243	0.00037	0.00084
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 19

FEMALE GROUP: 450 MG/KG/DAY

ANIMAL	UTERUS	OVARIES/ OVIDUCTS	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12709	1.16	0.1517	0.1940	0.0774	0.0222	0.0226
12719	0.46	0.1212	0.1261	0.0860	0.0219	0.0184
12726	0.44	0.1270	0.1880	0.0727	0.0161	0.0222
12727	0.61	0.0823	0.1527	0.0798	0.0230	0.0198
12728	0.51	0.1651	0.1658	0.0818	0.0210	0.0205
12732	0.87	0.1410	0.2461	0.0704	0.0198	0.0140
12735	0.49	0.1306	0.1556	0.0706	0.0169	0.0142
12747	1.26	0.1103	0.1718	0.0968	0.0203	0.0180
12760	0.59	0.1318	0.1854	0.0825	0.0161	0.0131
12763	1.05	0.0991	0.0787	0.0831	0.0184	0.0104
MEAN	0.74	0.1260	0.1664	0.0801	0.0196	0.0173
S.D.	0.313	0.02443	0.04421	0.00801	0.00257	0.00416
S.E.	0.099	0.00773	0.01398	0.00253	0.00081	0.00132
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A17
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS AND FINAL BODY WEIGHTS [G]

PAGE 20

FEMALE GROUP: 750 MG/KG/DAY

ANIMAL	UTERUS	OVARIES/ OVIDUCTS	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12720	0.49	0.1211	0.0893	0.0730	0.0188	0.0199
12723	0.82	0.1248	0.1015	0.0824	0.0163	0.0161
12731	0.45	0.1009	0.0765	0.0713	0.0107	0.0223
12739	0.48	0.1284	0.1118	0.0759	0.0200	0.0203
12742	0.47	0.1384	0.1409	0.1026	0.0170	0.0228
12749	1.04	0.1054	0.1303	0.0707	0.0120	0.0142
12750	0.91	0.1700	0.1399	0.0937	0.0213	0.0210
12755	0.53	0.1143	0.0772	0.0921	0.0149	0.0185
12761	0.55	0.1272	0.1547	0.1050	0.0217	0.0180
12764	0.74	0.1546	0.1635	0.0999	0.0219	0.0199
MEAN	0.65	0.1285	0.1186	0.0867	0.0175	0.0193
S.D.	0.213	0.02126	0.03178	0.01356	0.00400	0.00268
S.E.	0.067	0.00672	0.01005	0.00429	0.00127	0.00085
N	10	10	10	10	10	10

POFBWv4.29
10/13/2011

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

PAGE 1

MALE GROUP: UNTREATED

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN	PROS TATE
12649	526.	0.418	2.591	0.591	0.367	0.158	0.194
12654	481.	0.480	2.287	0.688	0.335	0.154	0.243
12660	412.	0.515	2.485	0.755	0.347	0.167	0.252
12668	443.	0.458	2.623	0.720	0.391	0.163	0.217
12684	528.	0.417	2.869	0.693	0.400	0.199	0.282
12686	572.	0.374	2.451	0.565	0.276	0.175	0.222
12691	408.	0.498	2.409	0.662	0.314	0.140	0.199
12694	463.	0.469	2.488	0.704	0.363	0.199	0.214
12701	535.	0.383	3.024	0.621	0.372	0.176	0.163
12703	471.	0.465	2.805	0.654	0.329	0.231	0.255
MEAN	484.	0.448	2.603	0.665	0.349	0.176	0.224
S.D.	55.1	0.0475	0.2303	0.0592	0.0372	0.0269	0.0350
S.E.	17.4	0.0150	0.0728	0.0187	0.0118	0.0085	0.0111
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
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TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
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	HEART	SPLEEN	PROS TATE
12648	471.	0.429	2.563	0.749	0.397	0.185	0.236
12650	438.	0.489	2.763	0.756	0.381	0.162	0.265
12661	439.	0.483	3.000	0.711	0.360	0.200	0.221
12675	522.	0.412	2.713	0.757	0.333	0.174	0.153
12676	453.	0.486	2.536	0.746	0.355	0.159	0.263
12679	486.	0.457	2.698	0.675	0.372	0.195	0.167
12683	525.	0.432	2.613	0.775	0.318	0.200	0.187
12693	399.	0.524	2.749	0.784	0.331	0.185	0.221
12697	451.	0.459	2.459	0.707	0.355	0.184	0.246
12700	491.	0.428	2.430	0.697	0.381	0.196	0.261
MEAN	468.	0.460	2.652	0.736	0.358	0.184	0.222
S.D.	39.5	0.0352	0.1693	0.0361	0.0253	0.0149	0.0405
S.E.	12.5	0.0111	0.0535	0.0114	0.0080	0.0047	0.0128
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

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TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

PAGE 3

MALE GROUP: 100 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN	PROS TATE
12646	452.	0.485	3.179	0.748	0.440	0.168	0.248
12655	442.	0.455	2.661	0.679	0.312	0.156	0.224
12656	453.	0.497	3.015	0.713	0.347	0.190	0.219
12659	526.	0.390	2.568	0.683	0.376	0.184	0.177
12662	495.	0.432	3.093	0.741	0.362	0.166	0.248
12664	503.	0.429	2.531	0.662	0.320	0.147	0.211
12670	525.	0.419	2.731	0.783	0.356	0.179	0.215
12682	481.	0.445	2.649	0.682	0.328	0.183	0.206
12688	349.	0.567	2.831	0.900	0.444	0.178	0.390
12695	479.	0.470	2.557	0.653	0.322	0.180	0.207
MEAN	471.	0.459	2.782	0.724	0.361	0.173	0.234
S.D.	51.8	0.0496	0.2370	0.0743	0.0475	0.0135	0.0584
S.E.	16.4	0.0157	0.0749	0.0235	0.0150	0.0043	0.0185
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

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TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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MALE GROUP: 450 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN	PROS TATE
12645	396.	0.508	3.116	0.793	0.364	0.162	0.273
12652	524.	0.385	3.076	0.865	0.336	0.214	0.198
12669	412.	0.519	3.396	0.769	0.386	0.201	0.316
12671	437.	0.481	3.208	0.767	0.307	0.206	0.307
12674	434.	0.477	2.975	0.696	0.396	0.173	0.237
12677	487.	0.452	3.511	0.739	0.384	0.185	0.148
12685	453.	0.488	3.128	0.804	0.419	0.166	0.236
12690	494.	0.445	3.488	0.781	0.399	0.223	0.223
12692	429.	0.490	3.580	0.720	0.366	0.212	0.270
MEAN	452.	0.472	3.275	0.770	0.373	0.193	0.245
S.D.	41.8	0.0400	0.2208	0.0495	0.0346	0.0227	0.0529
S.E.	13.9	0.0133	0.0736	0.0165	0.0115	0.0076	0.0176
N	9	9	9	9	9	9	9

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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MALE GROUP: 750 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN	PROS TATE
12666	352.	0.565	3.759	0.747	0.384	0.205	0.202
12672	394.	0.533	3.574	0.741	0.348	0.201	0.297
12673	439.	0.465	3.446	0.713	0.394	0.155	0.260
12680	418.	0.471	3.665	0.773	0.361	0.213	0.213
12681	393.	0.514	3.649	0.863	0.338	0.168	0.249
12687	367.	0.537	3.850	0.747	0.395	0.226	0.346
12689	391.	0.506	3.803	0.765	0.376	0.261	0.269
12698	302.	0.636	3.858	0.881	0.414	0.156	0.278
12704	366.	0.560	3.811	0.740	0.391	0.262	0.281
MEAN	380.	0.532	3.713	0.774	0.378	0.205	0.266
S.D.	39.8	0.0523	0.1399	0.0578	0.0245	0.0407	0.0433
S.E.	13.3	0.0174	0.0466	0.0193	0.0082	0.0136	0.0144
N	9	9	9	9	9	9	9

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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MALE GROUP: UNTREATED

ANIMAL	TESTES	EPIDID YMIDES	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12649	0.662	0.260	0.045	0.012	0.002	0.003
12654	0.938	0.314	0.038	0.013	0.003	0.005
12660	0.888	0.330	0.047	0.012	0.004	0.004
12668	0.743	0.307	0.067	0.014	0.003	0.005
12684	0.705	0.278	0.075	0.015	0.003	0.003
12686	0.535	0.222	0.046	0.013	0.003	0.003
12691	0.958	0.333	0.045	0.012	0.003	0.003
12694	0.803	0.311	0.053	0.014	0.003	0.003
12701	0.697	0.286	0.043	0.010	0.003	0.003
12703	0.696	0.318	0.090	0.018	0.003	0.004
MEAN	0.763	0.296	0.055	0.013	0.003	0.004
S.D.	0.1337	0.0348	0.0168	0.0021	0.0005	0.0008
S.E.	0.0423	0.0110	0.0053	0.0007	0.0001	0.0003
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
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TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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MALE GROUP: 0 MG/KG/DAY

ANIMAL	TESTES	EPIDID YMIDES	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROID S /PARATHY
12648	0.845	0.287	0.038	0.014	0.004	0.005
12650	0.854	0.340	0.075	0.015	0.003	0.004
12661	0.827	0.314	0.026	0.010	0.003	0.004
12675	0.728	0.282	0.055	0.014	0.004	0.006
12676	0.766	0.318	0.039	0.015	0.003	0.003
12679	0.728	0.307	0.055	0.014	0.004	0.005
12683	0.650	0.265	0.090	0.013	0.004	0.004
12693	0.880	0.336	0.060	0.013	0.003	0.004
12697	0.778	0.310	0.057	0.014	0.003	0.004
12700	0.778	0.289	0.061	0.014	0.004	0.003
MEAN	0.783	0.305	0.056	0.014	0.004	0.004
S.D.	0.0702	0.0241	0.0185	0.0015	0.0004	0.0009
S.E.	0.0222	0.0076	0.0059	0.0005	0.0001	0.0003
N	10	10	10	10	10	10

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TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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MALE GROUP: 100 MG/KG/DAY

ANIMAL	TESTES	EPIDID YMIDES	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROID S /PARATHY
12646	0.905	0.363	0.066	0.015	0.004	0.004
12655	0.857	0.328	0.058	0.014	0.003	0.005
12656	0.843	0.331	0.049	0.013	0.003	0.005
12659	0.660	0.247	0.043	0.015	0.003	0.004
12662	0.713	0.301	0.067	0.014	0.003	0.005
12664	0.767	0.302	0.038	0.011	0.003	0.004
12670	0.733	0.291	0.048	0.014	0.003	0.004
12682	0.692	0.285	0.044	0.013	0.004	0.002
12688	0.997	0.381	0.055	0.016	0.004	0.005
12695	0.766	0.313	0.048	0.013	0.003	0.004
MEAN	0.793	0.314	0.052	0.014	0.003	0.004
S.D.	0.1055	0.0388	0.0097	0.0014	0.0004	0.0009
S.E.	0.0333	0.0123	0.0031	0.0004	0.0001	0.0003
N	10	10	10	10	10	10

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TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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MALE GROUP: 450 MG/KG/DAY

ANIMAL	TESTES	EPIDID YMIDES	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROID S/PARATHY
12645	0.843	0.323	0.046	0.015	0.003	0.004
12652	0.721	0.263	0.044	0.017	0.003	0.005
12669	0.915	0.340	0.029	0.016	0.003	0.005
12671	0.865	0.295	0.036	0.014	0.004	0.005
12674	0.707	0.267	0.035	0.016	0.003	0.005
12677	0.770	0.298	0.039	0.014	0.003	0.004
12685	0.879	0.313	0.034	0.015	0.003	0.005
12690	0.787	0.281	0.038	0.015	0.004	0.005
12692	0.765	0.252	0.030	0.017	0.003	0.006
MEAN	0.806	0.293	0.037	0.016	0.003	0.005
S.D.	0.0727	0.0294	0.0057	0.0009	0.0004	0.0006
S.E.	0.0242	0.0098	0.0019	0.0003	0.0001	0.0002
N	9	9	9	9	9	9

PROJECT NO.:WIL-402024
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TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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MALE GROUP: 750 MG/KG/DAY

ANIMAL	TESTES	EPIDID YMIDES	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROID S/PARATHY
12666	1.051	0.335	0.028	0.018	0.004	0.006
12672	0.865	0.338	0.026	0.019	0.004	0.006
12673	0.777	0.296	0.030	0.018	0.004	0.005
12680	0.809	0.294	0.034	0.019	0.003	0.005
12681	0.952	0.344	0.015	0.015	0.004	0.005
12687	0.858	0.332	0.019	0.020	0.005	0.006
12689	0.831	0.325	0.031	0.019	0.003	0.006
12698	1.119	0.354	0.014	0.023	0.004	0.007
12704	1.082	0.336	0.034	0.021	0.003	0.005
MEAN	0.927	0.328	0.026	0.019	0.004	0.006
S.D.	0.1281	0.0204	0.0080	0.0024	0.0005	0.0007
S.E.	0.0427	0.0068	0.0027	0.0008	0.0002	0.0002
N	9	9	9	9	9	9

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TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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FEMALE GROUP: UNTREATED

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN
12705	298.	0.631	3.245	0.701	0.416	0.228
12712	295.	0.651	2.837	0.685	0.417	0.190
12716	278.	0.676	2.896	0.665	0.396	0.201
12724	303.	0.670	2.779	0.713	0.376	0.201
12730	332.	0.599	2.831	0.645	0.392	0.199
12733	301.	0.641	2.475	0.684	0.382	0.226
12734	244.	0.779	2.914	0.746	0.471	0.213
12736	289.	0.664	2.644	0.747	0.415	0.194
12737	267.	0.712	2.610	0.772	0.360	0.210
12748	245.	0.763	2.633	0.771	0.424	0.216
MEAN	285.	0.679	2.786	0.713	0.405	0.208
S.D.	27.3	0.0570	0.2147	0.0445	0.0313	0.0130
S.E.	8.6	0.0180	0.0679	0.0141	0.0099	0.0041
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
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TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
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	HEART	SPLEEN
12706	274.	0.686	2.865	0.726	0.383	0.226
12708	272.	0.743	3.029	0.868	0.412	0.210
12711	247.	0.737	3.049	0.713	0.441	0.227
12714	262.	0.760	3.405	0.908	0.489	0.233
12718	275.	0.705	2.815	0.742	0.367	0.218
12721	302.	0.632	2.897	0.725	0.374	0.189
12744	285.	0.688	2.811	0.796	0.379	0.218
12752	282.	0.688	4.021	0.830	0.429	0.195
12757	262.	0.733	3.107	0.836	0.427	0.282
12758	282.	0.706	2.553	0.691	0.397	0.170
MEAN	274.	0.708	3.055	0.784	0.410	0.217
S.D.	15.1	0.0370	0.4068	0.0743	0.0377	0.0303
S.E.	4.8	0.0117	0.1287	0.0235	0.0119	0.0096
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
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TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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FEMALE GROUP: 100 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN
12707	256.	0.742	3.563	0.930	0.410	0.203
12715	278.	0.734	3.050	0.651	0.371	0.216
12722	275.	0.676	3.491	0.727	0.429	0.222
12738	296.	0.669	3.135	0.730	0.368	0.209
12740	263.	0.692	3.194	0.719	0.388	0.217
12743	303.	0.663	2.904	0.660	0.350	0.251
12746	278.	0.691	3.029	0.705	0.468	0.219
12753	276.	0.743	3.217	0.681	0.406	0.236
12754	256.	0.707	3.328	0.797	0.371	0.230
12759	286.	0.643	3.122	0.741	0.434	0.192
MEAN	277.	0.696	3.203	0.734	0.399	0.220
S.D.	15.6	0.0348	0.2060	0.0807	0.0366	0.0166
S.E.	4.9	0.0110	0.0652	0.0255	0.0116	0.0053
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

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TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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FEMALE GROUP: 450 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN
12709	267.	0.734	3.554	0.820	0.386	0.221
12719	257.	0.805	3.895	0.844	0.447	0.257
12726	227.	0.828	3.322	0.727	0.419	0.233
12727	264.	0.769	3.917	0.788	0.458	0.178
12728	304.	0.658	3.816	0.776	0.418	0.188
12732	248.	0.742	3.863	0.819	0.488	0.198
12735	248.	0.758	3.339	0.806	0.355	0.177
12747	260.	0.719	3.958	0.785	0.377	0.188
12760	269.	0.717	3.688	0.680	0.428	0.230
12763	256.	0.762	3.406	0.699	0.398	0.207
MEAN	260.	0.749	3.676	0.774	0.417	0.208
S.D.	19.7	0.0478	0.2509	0.0548	0.0402	0.0268
S.E.	6.2	0.0151	0.0794	0.0173	0.0127	0.0085
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

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FEMALE GROUP: 750 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN	LIVER	KIDNEYS	HEART	SPLEEN
12720	280.	0.639	3.889	0.693	0.396	0.193
12723	219.	0.845	3.813	0.836	0.384	0.210
12731	211.	0.825	4.194	0.858	0.445	0.232
12739	250.	0.756	4.304	0.812	0.468	0.220
12742	243.	0.753	4.222	0.765	0.473	0.267
12749	216.	0.810	4.282	0.838	0.509	0.282
12750	276.	0.699	4.366	0.793	0.438	0.232
12755	221.	0.864	4.204	0.819	0.457	0.213
12761	259.	0.726	4.197	0.857	0.432	0.266
12764	287.	0.683	4.456	0.822	0.425	0.279
MEAN	246.	0.760	4.193	0.809	0.443	0.239
S.D.	28.7	0.0747	0.1993	0.0496	0.0370	0.0319
S.E.	9.1	0.0236	0.0630	0.0157	0.0117	0.0101
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

PAGE 16

FEMALE GROUP: UNTREATED

ANIMAL	UTERUS	OVARIES/ OVIDUCTS	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12705	0.185	0.042	0.107	0.025	0.009	0.005
12712	0.458	0.043	0.103	0.024	0.009	0.005
12716	0.388	0.040	0.121	0.028	0.006	0.005
12724	0.281	0.040	0.075	0.028	0.007	0.005
12730	0.304	0.036	0.094	0.030	0.008	0.007
12733	0.173	0.042	0.085	0.026	0.006	0.005
12734	0.332	0.045	0.095	0.028	0.009	0.004
12736	0.308	0.043	0.047	0.025	0.007	0.006
12737	0.165	0.050	0.064	0.021	0.008	0.005
12748	0.992	0.040	0.086	0.030	0.008	0.008
MEAN	0.358	0.042	0.088	0.026	0.008	0.006
S.D.	0.2418	0.0036	0.0216	0.0028	0.0013	0.0012
S.E.	0.0765	0.0011	0.0068	0.0009	0.0004	0.0004
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

PAGE 17

FEMALE GROUP: 0 MG/KG/DAY

ANIMAL	UTERUS	OVARIES/ OVIDUCTS	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12706	0.533	0.051	0.103	0.029	0.008	0.007
12708	0.228	0.054	0.070	0.030	0.009	0.006
12711	0.170	0.046	0.122	0.034	0.007	0.008
12714	0.504	0.040	0.084	0.030	0.011	0.005
12718	0.211	0.049	0.094	0.030	0.006	0.007
12721	0.361	0.040	0.076	0.024	0.005	0.005
12744	0.481	0.044	0.092	0.026	0.005	0.006
12752	0.301	0.035	0.076	0.034	0.012	0.006
12757	0.782	0.038	0.120	0.035	0.008	0.007
12758	0.457	0.048	0.119	0.025	0.008	0.005
MEAN	0.403	0.044	0.096	0.030	0.008	0.006
S.D.	0.1868	0.0062	0.0196	0.0039	0.0023	0.0010
S.E.	0.0591	0.0020	0.0062	0.0012	0.0007	0.0003
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

PAGE 18

FEMALE GROUP: 100 MG/KG/DAY

ANIMAL	UTERUS	OVARIES/ OVIDUCTS	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12707	0.266	0.037	0.074	0.031	0.008	0.005
12715	0.446	0.046	0.057	0.026	0.008	0.005
12722	0.338	0.040	0.094	0.029	0.009	0.008
12738	0.419	0.050	0.099	0.029	0.007	0.006
12740	0.183	0.055	0.062	0.024	0.009	0.005
12743	0.310	0.046	0.107	0.023	0.007	0.005
12746	0.363	0.046	0.119	0.024	0.008	0.006
12753	0.250	0.063	0.091	0.030	0.008	0.006
12754	0.223	0.052	0.080	0.026	0.009	0.005
12759	0.192	0.049	0.073	0.024	0.007	0.006
MEAN	0.299	0.048	0.086	0.027	0.008	0.006
S.D.	0.0920	0.0073	0.0197	0.0029	0.0007	0.0009
S.E.	0.0291	0.0023	0.0062	0.0009	0.0002	0.0003
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

PAGE 19

FEMALE GROUP: 450 MG/KG/DAY

ANIMAL	UTERUS	OVARIES/ OVIDUCTS	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12709	0.434	0.057	0.073	0.029	0.008	0.008
12719	0.179	0.047	0.049	0.033	0.009	0.007
12726	0.194	0.056	0.083	0.032	0.007	0.010
12727	0.231	0.031	0.058	0.030	0.009	0.008
12728	0.168	0.054	0.055	0.027	0.007	0.007
12732	0.351	0.057	0.099	0.028	0.008	0.006
12735	0.198	0.053	0.063	0.028	0.007	0.006
12747	0.485	0.042	0.066	0.037	0.008	0.007
12760	0.219	0.049	0.069	0.031	0.006	0.005
12763	0.410	0.039	0.031	0.032	0.007	0.004
MEAN	0.287	0.049	0.064	0.031	0.008	0.007
S.D.	0.1203	0.0087	0.0187	0.0030	0.0009	0.0017
S.E.	0.0380	0.0027	0.0059	0.0010	0.0003	0.0005
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A18
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WTS. RELATIVE TO FINAL BODY WTS. [G/100 G]

PAGE 20

FEMALE GROUP: 750 MG/KG/DAY

ANIMAL	UTERUS	OVARIES/ OVIDUCTS	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12720	0.175	0.043	0.032	0.026	0.007	0.007
12723	0.374	0.057	0.046	0.038	0.007	0.007
12731	0.213	0.048	0.036	0.034	0.005	0.011
12739	0.192	0.051	0.045	0.030	0.008	0.008
12742	0.193	0.057	0.058	0.042	0.007	0.009
12749	0.481	0.049	0.060	0.033	0.006	0.007
12750	0.330	0.062	0.051	0.034	0.008	0.008
12755	0.240	0.052	0.035	0.042	0.007	0.008
12761	0.212	0.049	0.060	0.041	0.008	0.007
12764	0.258	0.054	0.057	0.035	0.008	0.007
MEAN	0.267	0.052	0.048	0.035	0.007	0.008
S.D.	0.0987	0.0054	0.0108	0.0052	0.0011	0.0013
S.E.	0.0312	0.0017	0.0034	0.0016	0.0003	0.0004
N	10	10	10	10	10	10

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PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 1

MALE GROUP: UNTREATED

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	HEART	SPLEEN	PROS TATE
12649	526.	2.20	619.545	141.364	87.727	37.727	46.364
12654	481.	2.31	476.191	143.290	69.697	32.035	50.649
12660	412.	2.12	483.019	146.698	67.453	32.547	49.057
12668	443.	2.03	572.414	157.143	85.222	35.468	47.291
12684	528.	2.20	688.636	166.364	95.909	47.727	67.727
12686	572.	2.14	655.140	150.935	73.832	46.729	59.346
12691	408.	2.03	484.236	133.005	63.054	28.079	39.901
12694	463.	2.17	530.876	150.230	77.419	42.396	45.622
12701	535.	2.05	789.268	161.951	97.073	45.854	42.439
12703	471.	2.19	603.196	140.639	70.776	49.772	54.795
MEAN	484.	2.14	590.252	149.162	78.816	39.833	50.319
S.D.	55.1	0.089	102.2607	10.3413	12.0096	7.6523	8.3251
S.E.	17.4	0.028	32.3377	3.2702	3.7978	2.4199	2.6326
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 2

MALE GROUP: 0 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	HEART	SPLEEN	PROS TATE
12648	471.	2.02	597.525	174.752	92.574	43.069	54.950
12650	438.	2.14	565.421	154.673	78.037	33.178	54.206
12661	439.	2.12	621.227	147.170	74.528	41.509	45.755
12675	522.	2.15	658.605	183.721	80.930	42.326	37.209
12676	453.	2.20	522.273	153.636	73.182	32.727	54.091
12679	486.	2.22	590.541	147.748	81.532	42.793	36.486
12683	525.	2.27	604.405	179.295	73.568	46.256	43.172
12693	399.	2.09	524.880	149.761	63.158	35.407	42.105
12697	451.	2.07	535.749	154.106	77.295	40.097	53.623
12700	491.	2.10	568.095	162.857	89.048	45.714	60.952
MEAN	468.	2.14	578.872	160.772	78.385	40.308	48.255
S.D.	39.5	0.075	44.1745	13.6545	8.3648	4.9023	8.3981
S.E.	12.5	0.024	13.9692	4.3179	2.6452	1.5502	2.6557
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 3

MALE GROUP: 100 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	HEART	SPLEEN	PROS TATE
12646	452.	2.19	656.164	154.338	90.868	34.703	51.142
12655	442.	2.01	585.075	149.254	68.657	34.328	49.254
12656	453.	2.25	607.111	143.556	69.778	38.222	44.000
12659	526.	2.05	659.024	175.122	96.585	47.317	45.366
12662	495.	2.14	715.421	171.495	83.645	38.318	57.477
12664	503.	2.16	589.352	154.167	74.537	34.259	49.074
12670	525.	2.20	651.818	186.818	85.000	42.727	51.364
12682	481.	2.14	595.327	153.271	73.832	41.121	46.262
12688	349.	1.98	498.990	158.586	78.283	31.313	68.687
12695	479.	2.25	544.444	139.111	68.444	38.222	44.000
MEAN	471.	2.14	610.273	158.572	78.963	38.053	50.662
S.D.	51.8	0.095	62.6171	14.8894	9.7652	4.7390	7.5479
S.E.	16.4	0.030	19.8013	4.7084	3.0880	1.4986	2.3869
N	10	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 4

MALE GROUP: 450 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	HEART	SPLEEN	PROS TATE
12645	396.	2.01	613.930	156.219	71.642	31.841	53.731
12652	524.	2.02	798.020	224.257	87.129	55.446	51.485
12669	412.	2.14	653.738	148.131	74.299	38.785	60.748
12671	437.	2.10	667.619	159.524	63.810	42.857	63.810
12674	434.	2.07	623.672	145.894	83.092	36.232	49.758
12677	487.	2.20	777.273	163.636	85.000	40.909	32.727
12685	453.	2.21	641.176	164.706	85.973	33.937	48.416
12690	494.	2.20	783.182	175.455	89.545	50.000	50.000
12692	429.	2.10	731.429	147.143	74.762	43.333	55.238
MEAN	452.	2.12	698.893	164.996	79.472	41.482	51.768
S.D.	41.8	0.076	73.6188	24.2340	8.6717	7.5656	8.8215
S.E.	13.9	0.025	24.5396	8.0780	2.8906	2.5219	2.9405
N	9	9	9	9	9	9	9

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 5

MALE GROUP: 750 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	HEART	SPLEEN	PROS TATE
12666	352.	1.99	664.824	132.161	67.839	36.181	35.678
12672	394.	2.10	670.476	139.048	65.238	37.619	55.714
12673	439.	2.04	741.667	153.431	84.804	33.333	55.882
12680	418.	1.97	777.665	163.959	76.650	45.178	45.178
12681	393.	2.02	709.901	167.822	65.842	32.673	48.515
12687	367.	1.97	717.259	139.086	73.604	42.132	64.467
12689	391.	1.98	751.010	151.010	74.242	51.515	53.030
12698	302.	1.92	606.771	138.542	65.104	24.479	43.750
12704	366.	2.05	680.488	132.195	69.756	46.829	50.244
MEAN	380.	2.00	702.229	146.362	71.453	38.882	50.273
S.D.	39.8	0.054	52.3242	13.2841	6.5576	8.3563	8.3273
S.E.	13.3	0.018	17.4414	4.4280	2.1859	2.7854	2.7758
N	9	9	9	9	9	9	9

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 6

MALE GROUP: UNTREATED

ANIMAL	TESTES	EPIDID YMIDES	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12649	158.182	62.273	10.823	2.950	0.536	0.800
12654	195.238	65.368	7.905	2.758	0.597	0.987
12660	172.642	64.151	9.047	2.368	0.759	0.712
12668	162.069	66.995	14.714	3.094	0.635	1.025
12684	169.091	66.818	17.986	3.577	0.777	0.691
12686	142.991	59.346	12.201	3.556	0.822	0.935
12691	192.611	66.995	9.138	2.325	0.581	0.631
12694	171.429	66.359	11.313	2.889	0.567	0.650
12701	181.951	74.634	11.093	2.649	0.668	0.756
12703	149.772	68.493	19.265	3.890	0.703	0.936
MEAN	169.597	66.143	12.349	3.006	0.665	0.812
S.D.	17.1287	4.0184	3.8176	0.5266	0.0980	0.1466
S.E.	5.4166	1.2707	1.2072	0.1665	0.0310	0.0464
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 7

MALE GROUP: 0 MG/KG/DAY

ANIMAL	TESTES	EPIDID YMIDES	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROID S /PARATHY
12648	197.030	66.832	8.777	3.317	0.891	1.050
12650	174.766	69.626	15.435	3.164	0.673	0.836
12661	171.226	65.094	5.410	2.108	0.651	0.896
12675	176.744	68.372	13.358	3.284	0.940	1.498
12676	157.727	65.455	8.045	3.173	0.677	0.645
12679	159.459	67.117	12.009	3.068	0.901	0.995
12683	150.220	61.233	20.850	3.044	0.824	0.903
12693	167.943	64.115	11.383	2.431	0.565	0.780
12697	169.565	67.633	12.391	2.971	0.705	0.942
12700	181.905	67.619	14.171	3.162	0.976	0.662
MEAN	170.659	66.310	12.183	2.972	0.780	0.921
S.D.	13.3128	2.4138	4.2990	0.3919	0.1428	0.2419
S.E.	4.2099	0.7633	1.3594	0.1239	0.0452	0.0765
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 8

MALE GROUP: 100 MG/KG/DAY

ANIMAL	TESTES	EPIDID YMIDES	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12646	186.758	74.886	13.717	3.151	0.785	0.904
12655	188.557	72.139	12.672	3.134	0.682	1.055
12656	169.778	66.667	9.933	2.618	0.662	0.978
12659	169.268	63.415	10.927	3.971	0.780	0.995
12662	164.953	69.626	15.449	3.248	0.766	1.187
12664	178.704	70.370	8.852	2.630	0.722	1.014
12670	175.000	69.545	11.405	3.250	0.791	0.864
12682	155.607	64.019	9.916	2.832	0.790	0.528
12688	175.758	67.172	9.646	2.747	0.742	0.894
12695	163.111	66.667	10.160	2.698	0.578	0.764
MEAN	172.749	68.451	11.268	3.028	0.730	0.918
S.D.	10.3503	3.5635	2.0786	0.4171	0.0703	0.1793
S.E.	3.2731	1.1269	0.6573	0.1319	0.0222	0.0567
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 9

MALE GROUP: 450 MG/KG/DAY

ANIMAL	TESTES	EPIDID YMIDES	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12645	166.169	63.682	9.045	2.985	0.527	0.771
12652	187.129	68.317	11.426	4.317	0.797	1.203
12669	176.168	65.421	5.542	3.103	0.542	1.037
12671	180.000	61.429	7.448	3.005	0.743	0.952
12674	148.309	56.039	7.415	3.459	0.671	0.957
12677	170.455	65.909	8.595	3.164	0.600	0.900
12685	180.090	64.253	6.946	3.032	0.656	1.018
12690	176.818	63.182	8.482	3.423	0.832	1.041
12692	156.190	51.429	6.190	3.386	0.614	1.210
MEAN	171.259	62.184	7.899	3.319	0.665	1.010
S.D.	12.4577	5.2856	1.7463	0.4175	0.1074	0.1389
S.E.	4.1526	1.7619	0.5821	0.1392	0.0358	0.0463
N	9	9	9	9	9	9

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 10

MALE GROUP: 750 MG/KG/DAY

ANIMAL	TESTES	EPIDID YMIDES	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12666	185.930	59.296	4.975	3.106	0.729	1.116
12672	162.381	63.333	4.876	3.481	0.738	1.114
12673	167.157	63.725	6.539	3.843	0.868	1.074
12680	171.574	62.437	7.244	4.071	0.736	1.051
12681	185.149	66.832	2.916	2.851	0.757	0.936
12687	159.898	61.929	3.477	3.685	0.863	1.157
12689	164.141	64.141	6.212	3.697	0.576	1.141
12698	176.042	55.729	2.188	3.635	0.688	1.120
12704	193.171	60.000	6.137	3.761	0.624	0.971
MEAN	173.938	61.936	4.951	3.570	0.731	1.076
S.D.	11.8428	3.2303	1.7583	0.3768	0.0963	0.0767
S.E.	3.9476	1.0768	0.5861	0.1256	0.0321	0.0256
N	9	9	9	9	9	9

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 11

FEMALE GROUP: UNTREATED

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	HEART	SPLEEN
12705	298.	1.88	514.362	111.170	65.957	36.170
12712	295.	1.92	435.938	105.208	64.063	29.167
12716	278.	1.88	428.191	98.404	58.511	29.787
12724	303.	2.03	414.778	106.404	56.158	30.049
12730	332.	1.99	472.362	107.538	65.327	33.166
12733	301.	1.93	386.010	106.736	59.585	35.233
12734	244.	1.90	374.211	95.789	60.526	27.368
12736	289.	1.92	397.917	112.500	62.500	29.167
12737	267.	1.90	366.842	108.421	50.526	29.474
12748	245.	1.87	344.920	101.070	55.615	28.342
MEAN	285.	1.92	413.553	105.324	59.877	30.792
S.D.	27.3	0.051	51.4037	5.3772	4.8634	2.9924
S.E.	8.6	0.016	16.2553	1.7004	1.5379	0.9463
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 12

FEMALE GROUP: 0 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	HEART	SPLEEN
12706	274.	1.88	417.553	105.851	55.851	32.979
12708	272.	2.02	407.921	116.832	55.446	28.218
12711	247.	1.82	413.736	96.703	59.890	30.769
12714	262.	1.99	448.241	119.598	64.322	30.653
12718	275.	1.94	398.969	105.155	52.062	30.928
12721	302.	1.91	458.115	114.660	59.162	29.843
12744	285.	1.96	408.673	115.816	55.102	31.633
12752	282.	1.94	584.536	120.619	62.371	28.351
12757	262.	1.92	423.958	114.063	58.333	38.542
12758	282.	1.99	361.809	97.990	56.281	24.121
MEAN	274.	1.94	432.351	110.729	57.882	30.604
S.D.	15.1	0.059	59.5917	8.6924	3.6776	3.7002
S.E.	4.8	0.019	18.8445	2.7488	1.1630	1.1701
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 13

FEMALE GROUP: 100 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	HEART	SPLEEN
12707	256.	1.90	480.000	125.263	55.263	27.368
12715	278.	2.04	415.686	88.725	50.490	29.412
12722	275.	1.86	516.129	107.527	63.441	32.796
12738	296.	1.98	468.687	109.091	55.051	31.313
12740	263.	1.82	461.538	103.846	56.044	31.319
12743	303.	2.01	437.811	99.502	52.736	37.811
12746	278.	1.92	438.542	102.083	67.708	31.771
12753	276.	2.05	433.171	91.707	54.634	31.707
12754	256.	1.81	470.718	112.707	52.486	32.597
12759	286.	1.84	485.326	115.217	67.391	29.891
MEAN	277.	1.92	460.761	105.567	57.524	31.598
S.D.	15.6	0.092	29.8424	10.9337	6.2862	2.7247
S.E.	4.9	0.029	9.4370	3.4575	1.9879	0.8616
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

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FEMALE GROUP: 450 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	HEART	SPLEEN
12709	267.	1.96	484.184	111.735	52.551	30.102
12719	257.	2.07	483.575	104.831	55.556	31.884
12726	227.	1.88	401.064	87.766	50.532	28.191
12727	264.	2.03	509.360	102.463	59.606	23.153
12728	304.	2.00	580.000	118.000	63.500	28.500
12732	248.	1.84	520.652	110.326	65.761	26.630
12735	248.	1.88	440.426	106.383	46.809	23.404
12747	260.	1.87	550.267	109.091	52.406	26.203
12760	269.	1.93	513.990	94.819	59.585	32.124
12763	256.	1.95	447.180	91.795	52.308	27.179
MEAN	260.	1.94	493.070	103.721	55.861	27.737
S.D.	19.7	0.075	53.5452	9.5831	6.0573	3.1003
S.E.	6.2	0.024	16.9325	3.0304	1.9155	0.9804
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 15

FEMALE GROUP: 750 MG/KG/DAY

ANIMAL	FBW(G)	BRAIN WT (GRAMS)	LIVER	KIDNEYS	HEART	SPLEEN
12720	280.	1.79	608.380	108.380	62.011	30.168
12723	219.	1.85	451.351	98.919	45.405	24.865
12731	211.	1.74	508.621	104.023	54.023	28.161
12739	250.	1.89	569.312	107.407	61.905	29.101
12742	243.	1.83	560.656	101.639	62.842	35.519
12749	216.	1.75	528.571	103.429	62.857	34.857
12750	276.	1.93	624.352	113.472	62.694	33.161
12755	221.	1.91	486.387	94.764	52.880	24.607
12761	259.	1.88	578.191	118.085	59.574	36.702
12764	287.	1.96	652.551	120.408	62.245	40.816
MEAN	246.	1.85	556.837	107.053	58.644	31.796
S.D.	28.7	0.075	63.4355	8.2459	5.9388	5.3060
S.E.	9.1	0.024	20.0601	2.6076	1.8780	1.6779
N	10	10	10	10	10	10

FBW = FINAL BODY WEIGHT

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

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FEMALE GROUP: UNTREATED

ANIMAL	UTERUS	OVARIES/ OVIDUCTS	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12705	29.255	6.691	17.021	3.989	1.410	0.787
12712	70.313	6.542	15.828	3.625	1.365	0.734
12716	57.447	5.963	17.915	4.144	0.819	0.723
12724	41.872	5.961	11.197	4.148	1.000	0.724
12730	50.754	6.085	15.608	4.935	1.362	1.090
12733	26.943	6.575	13.264	4.000	0.938	0.845
12734	42.632	5.826	12.253	3.658	1.153	0.532
12736	46.354	6.490	7.130	3.693	1.016	0.896
12737	23.158	7.005	8.963	3.000	1.089	0.747
12748	129.947	5.225	11.326	3.925	1.096	1.059
MEAN	51.867	6.236	13.051	3.912	1.125	0.814
S.D.	30.9862	0.5202	3.5360	0.4939	0.1982	0.1671
S.E.	9.7987	0.1645	1.1182	0.1562	0.0627	0.0529
N	10	10	10	10	10	10

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SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 17

FEMALE GROUP: 0 MG/KG/DAY

ANIMAL	UTERUS	OVARIES/ OVIDUCTS	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12706	77.660	7.394	15.043	4.282	1.117	1.016
12708	30.693	7.332	9.396	4.010	1.228	0.871
12711	23.077	6.187	16.495	4.637	0.940	1.055
12714	66.332	5.241	11.085	3.975	1.472	0.683
12718	29.897	6.979	13.351	4.201	0.866	0.923
12721	57.068	6.361	11.942	3.848	0.869	0.785
12744	69.898	6.418	13.418	3.755	0.791	0.908
12752	43.814	5.103	11.082	5.005	1.763	0.881
12757	106.771	5.141	16.406	4.828	1.083	0.938
12758	64.824	6.734	16.814	3.573	1.131	0.698
MEAN	57.003	6.289	13.503	4.211	1.126	0.876
S.D.	25.7550	0.8716	2.6193	0.4763	0.3016	0.1229
S.E.	8.1444	0.2756	0.8283	0.1506	0.0954	0.0389
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 18

FEMALE GROUP: 100 MG/KG/DAY

ANIMAL	UTERUS	OVARIES/ OVIDUCTS	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12707	35.789	4.932	10.026	4.237	1.063	0.716
12715	60.784	6.275	7.833	3.569	1.049	0.745
12722	50.000	5.909	13.919	4.215	1.306	1.118
12738	62.626	7.439	14.833	4.303	1.076	0.960
12740	26.374	7.885	9.022	3.440	1.236	0.692
12743	46.766	6.930	16.124	3.512	1.020	0.811
12746	52.604	6.641	17.250	3.479	1.125	0.901
12753	33.659	8.420	12.273	4.010	1.020	0.766
12754	31.492	7.287	11.359	3.652	1.210	0.702
12759	29.891	7.543	11.402	3.755	1.152	0.918
MEAN	42.999	6.926	12.404	3.817	1.126	0.833
S.D.	13.2366	1.0243	3.0843	0.3416	0.0986	0.1385
S.E.	4.1858	0.3239	0.9754	0.1080	0.0312	0.0438
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 19

FEMALE GROUP: 450 MG/KG/DAY

ANIMAL	UTERUS	OVARIES/ OVIDUCTS	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12709	59.184	7.740	9.898	3.949	1.133	1.153
12719	22.222	5.855	6.092	4.155	1.058	0.889
12726	23.404	6.755	10.000	3.867	0.856	1.181
12727	30.049	4.054	7.522	3.931	1.133	0.975
12728	25.500	8.255	8.290	4.090	1.050	1.025
12732	47.283	7.663	13.375	3.826	1.076	0.761
12735	26.064	6.947	8.277	3.755	0.899	0.755
12747	67.380	5.898	9.187	5.176	1.086	0.963
12760	30.570	6.829	9.606	4.275	0.834	0.679
12763	53.846	5.082	4.036	4.262	0.944	0.533
MEAN	38.550	6.508	8.628	4.129	1.007	0.891
S.D.	16.7507	1.2958	2.5006	0.4096	0.1132	0.2086
S.E.	5.2970	0.4098	0.7908	0.1295	0.0358	0.0660
N	10	10	10	10	10	10

PROJECT NO.:WIL-402024
SPONSOR:AMERICAN PETROLEUM

TABLE A19
90-DAY RAT DERMAL STUDY OF DISTILLATES, LIGHT CATALYTIC CRACKED
INDIVIDUAL ORGAN WEIGHTS RELATIVE TO BRAIN WEIGHTS [G/100 G]

PAGE 20

FEMALE GROUP: 750 MG/KG/DAY

ANIMAL	UTERUS	OVARIES/ OVIDUCTS	THYMUS	ADRENAL GLANDS	PITU ITARY	THYROIDES /PARATHY
12720	27.374	6.765	4.989	4.078	1.050	1.112
12723	44.324	6.746	5.486	4.454	0.881	0.870
12731	25.862	5.799	4.397	4.098	0.615	1.282
12739	25.397	6.794	5.915	4.016	1.058	1.074
12742	25.683	7.563	7.699	5.607	0.929	1.246
12749	59.429	6.023	7.446	4.040	0.686	0.811
12750	47.150	8.808	7.249	4.855	1.104	1.088
12755	27.749	5.984	4.042	4.822	0.780	0.969
12761	29.255	6.766	8.229	5.585	1.154	0.957
12764	37.755	7.888	8.342	5.097	1.117	1.015
MEAN	34.998	6.914	6.379	4.665	0.937	1.042
S.D.	11.7624	0.9396	1.6072	0.6239	0.1914	0.1504
S.E.	3.7196	0.2971	0.5082	0.1973	0.0605	0.0475
N	10	10	10	10	10	10

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