ABSTRACT

The developmental toxicity of gasoline with TBA (tert butyl alcohol) vapor condensate (GTVC) was evaluated in 25 confirmed-mated female Crl:CD®(SD)IGSBR rats/exposure group at target concentrations of 0, 2000, 10,000, and 20,000 mg/m^3 in air. The animals were exposed daily for six hours from Gestation Day (GD) 5 through GD 20. There was evidence of maternal toxicity during the first half (GD 5-14) of the exposure period as indicated by statistically significant decreases in food consumption at the GD 5-8, GD 8-11, and GD 11-14 intervals for the 10,000 and 20,000 mg/m^3 target concentration groups. The extent of these early decreases in food consumption also produced statistically significant decreases in food consumption for the GD 5-20 interval in the 10,000 and 20,000 mg/m^3 target concentration groups and for the GD 0-21 interval in the 20,000 mg/m^3 target concentration group. Statistically significant dose-responsive decreases in body weight change also were evident in the 10,000 mg/m^3 and 20,000 mg/m^3 target concentration groups for the GD 5–8 interval and in the 20,000 mg/m^3 target concentration group at the GD 8-11 interval. Decreased body weight changes also occurred for the GD 5-21 and GD 0-21 intervals and the GD 0-21C interval when corrected for uterine weight in the 10,000 mg/m^3 and 20,000 mg/m^3 target concentration groups . Reduced body weight gain corresponded with statistically significant reduced body weights at GDs 8, 11, 14, 17, 20, and 21 for the 20,000 mg/m^3 target concentration group. However, the impact on late gestation body weight by the statistically significantly reduced gravid uterus weight in 20,000 mg/m^3 target concentration group is difficult to determine. There were no treatment-related statistically significant differences for uterine implantation data. There were statistically significant, non-dose responsive decreases in the number of corpora lutea in the 2000 and 20,000 mg/m^3 target concentration groups. Since ovulation occurred prior to exposure to the test substance, these decreases were not due to the test substance. There were also corresponding, non-dose responsive reductions in implantations per litter; these differences were not statistically significant when analyzed with corpora lutea as a covariate. Fetal body weight did not differ between groups when analyzed with litter size as a covariate or with both litter size and fetal sex as covariates; but, when mean corpora lutea count was an additional covariant along with litter size and fetal sex, mean fetal body weight was statistically reduced at 20,000 mg/m^3. Because of the complexity of this analysis and the confounding of the CL count and because no other statistically significant differences were noted in the fetal body weights with the other statistical tests, it is not clear whether exposure to GTVC at 20,000 mg/m^3 is directly linked with decreased fetal body weight. .There were no treatment-related statistically significant differences for external and visceral observations. There were statistically significant increases in fetuses with skeletal variations and the incidence of rudimentary lumbar ribs in the 20,000 mg/m^3 target concentration group. The increase in fetuses with skeletal variations was due to the incidence of rudimentary lumbar ribs. As rudimentary supernumerary ribs are often associated with maternal stress, this increase may be related to the reduced food consumption and reduced body weight changes observed in the dams. The No Adverse Effect Level for this study was 2000 mg/m^3 for maternal toxicity and 10,000 mg/m^3 for developmental toxicity (conservatively assuming that the minor developmental effects are adverse).

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FINAL REPORT

STUDY NUMBER: 171834

TEST SUBSTANCE: GASOLINE WITH TBA VAPOR CONDENSATE
(MRD-00-718)

WHOLE-BODY INHALATION DEVELOPMENTAL TOXICITY STUDY IN RATS
WITH GASOLINE WITH TBA VAPOR CONDENSATE (MRD-00-718)

PERFORMED FOR:

AMERICAN PETROLEUM INSTITUTE
1220 L Street Northwest
Washington, D.C. 20005-4070

PERFORMED AT:

EXXONMOBIL BIOMEDICAL SCIENCES, INC.
Laboratory Operations, Mammalian Toxicology Laboratory
1545 Route 22 East, P.O. Box 971
Annandale, New Jersey 08801-0971

09TP 52-EMBSI

STUDY COMPLETION DATE: October 8, 2009

APPROVAL SIGNATURES

for D. J. Devlin — 10/8/09

D. J. Devlin, Ph.D.
Director, Toxicology and Environmental Sciences

9/8/09 (AB) EDIT 10/8/09
Date

I hereby accept responsibility for the validity of these data and declare that to the best of my knowledge, the study contained herein was performed under my supervision in compliance with the EPA, United States Environmental Protection Agency, Good Laboratory Practices (GLP) Standards for Inhalation Exposure Health Effects Testing, 40CFR, Part 79.60, 1994 with the following exceptions.

The storage of the sorbent tubes collected for the detailed capillary/GC analysis was not documented. The tubes were stored in the necropsy freezer after sample collection until they were transferred to the Analytical Chemistry Group for analysis.

Water and feed analyses were not performed in a GLP compliant laboratory.

These minor deviations from the EPA Good Laboratory Practice Standards had no adverse effect on the integrity or results of the study.

G. W. Trimmer, B.A.
Study Director

8 Oct 09
Date

T.M. Gray, M.S., D.A.B.T.
Sponsor

8/11/2009
Date

PERSONNEL

Study Director:	G. W. Trimmer, B.A.
Sponsor:	American Petroleum Institute 1220 L Street Northwest Washington, D.C. 20005-4070
Sponsor Representative:	T. M. Gray, M.S., D.A.B.T.
Director, Laboratory Operations (Study Initiation through October 31, 2004)	J. J. Freeman, Ph.D., D.A.B.T.
Laboratory Coordinator (effective November 1, 2004):	G. W. Trimmer, B. A.
Toxicology and Animal Care Supervisor:	R. C. Forgash, B.S.
Compound Preparation Supervisor:	E. J. Febbo, M.S.
Analytical Chemistry Supervisor:	D. J. Letinski, M.S.
Quality Assurance/Archives Section Head (Study Initiation through February 28, 2005)	W. J. Bover, Ph.D.
Quality Assurance/Archives Supervisor (effective March 1, 2005):	R. Pristas, M.S.
Veterinarian:	R. L. Harris, D.V.M.
Reproductive Toxicology Consultant:	S. B. Harris, Ph.D.
Statistician:	M. J. Nicolich, Ph.D
Statistician Consultant:	G. Bukhbinder, Ph.D.

QUALITY ASSURANCE STATEMENT

STUDY NUMBER: 171834

TEST SUBSTANCE: MRD-00-718

STUDY SPONSOR: American Petroleum Institute

Listed below are the inspections performed by the Quality Assurance Unit of ExxonMobil Biomedical Sciences, Inc., the date(s) of inspection, and the date(s) findings were reported to the Study Director and Management.

Study Phase Inspected	Date(s) of Inspection	Reported to Study Director	Reported to Management
Protocol	05 Nov 01	05 Nov 01	06 Nov 01, 06,10 Sep 02
A.M. Viability Check	10 Sep 02	10 Sep 02	13,16 Sep 02
Animal Transfer	17 Sep 02	12 Sep 02	17,19 Sep 02
Animal Health/Sanitation/ Chamber Cleaning	24 Sep 02	25 Sep 02	27 Sep 02, 20 Oct 02
Sample Preparation/Sequence Setup (Analytical)	27 Sep 02, 21 Nov 02	21 Nov 02	22 Nov 01, 04 Dec 02
Processing Fetal Skeletons	14-16 Oct 02	16 Oct 02	01,08 Mar 07
First Review of Draft Report	04 Mar – 04 Apr 03	04 Apr 03	01,08 Mar 07
Second and Third Review of Draft Report; First and Second Review of Appendix K; Review Sponsor Comments	16,18,19 Jan 07 12,13,15 Feb 07	15 Feb 07	02,04 Apr 07
Fourth Review of Draft Report; Review Sponsor Comments	01 May 08	01 May 08	02 May 08
Fifth Review of Draft Report	17 Sep 08	19 Sep 08	23 Sep 08 07 Oct 08
Sixth Review of Draft Report	20 Jul 09	20 Jul 09	20-Jul 09 28 Jul 09

The final report accurately reflects the methods, procedures and observations documented in the raw data.

Robert Pristas

Robert Pristas, M.S.
Quality Assurance Unit Coordinator

2 Oct '09
Date

Section 1

SUMMARY

This study was conducted to evaluate the potential developmental toxicity of the test substance, Gasoline with TBA Vapor Condensate (GTVC). GTVC was administered via whole-body inhalation exposure to pregnant rats during the period of major organogenesis and fetal growth. GTVC was administered by whole-body inhalation exposure to 25 confirmed-mated Crl:CD®(SD)IGSBR female rats at target concentrations of 0 (air control) 2000, 10,000, and 20,000 mg/m^3 for six hours (plus the theoretical equilibration time) daily from Gestation Day (GD) 5 through GD 20. The Sponsor selected the exposure levels based upon safety considerations and previously conducted mammalian toxicity studies

Clinical observations were made daily during gestation. Body weight and food consumption measurements were made on GD 0, 5, 8, 11, 14, 17, 20, and 21. On GD 21 animals were sacrificed by CO_2 asphyxiation followed by exsanguination. The reproductive organs and the abdominal and thoracic cavities were examined grossly. Uterine weights with ovaries attached were recorded. Uterine contents were examined, and the numbers of live, dead and resorbed fetuses were recorded. All fetuses were weighed, sexed externally, and examined externally for gross malformations. Apparent non-gravid uteri were placed in 10% ammonium sulfide solution for confirmation of non-pregnancy status.

The viscera of approximately one-half of the fetuses of each litter were examined by fresh dissection. After these fetuses were examined, they were decapitated. The heads were preserved in Bouin's solution for at least two weeks, rinsed, and subsequently stored in 70% ethanol. The fetal heads were sectioned and examined with a dissecting microscope for the presence of abnormalities. The remaining fetuses judged to be alive at the C-section were eviscerated, processed for skeletal staining, stained for bone and cartilage, and examined for the presence of skeletal malformations and variations.

There was evidence of maternal toxicity during the first half (GD 5-14) of the exposure period as indicated by statistically significant decreases in food consumption at the GD 5-8, GD 8-11, and GD 11-14 intervals for the 10,000 and 20,000 mg/m^3 target concentration groups. The extent of these early decreases in food consumption also produced statistically significant decreases in food consumption for the GD 5-20 interval in the 10,000 and 20,000 mg/m^3 target concentration groups and for the GD 0-21 interval in the 20,000 mg/m^3 target concentration group.

Statistically significant dose-responsive decreases in body weight change also were evident in the 10,000 mg/m^3 and 20,000 mg/m^3 target concentration groups for the GD 5–8 interval and in the 20,000 mg/m^3 target concentration group at the GD 8-11 interval. Decreased body weight changes also occurred for the GD 5-21 and GD 0-21 intervals and the GD 0-21C interval when corrected for uterine weight in the 10,000 mg/m^3 and 20,000 mg/m^3 target concentration groups . Reduced body weight gain corresponded with statistically significant reduced body weights at GDs 8, 11, 14, 17, 20, and 21 for the 20,000 mg/m^3 target concentration group. However, the impact on late gestation body weight by the statistically significantly reduced gravid uterus weight in 20,000 mg/m^3 target concentration group is difficult to determine.

SUMMARY (CONT'D)

All dams survived to scheduled terminal sacrifice on GD 21. At the GD 21 cesarean section two 2000 mg/m^3 target concentration animals, two 10,000 mg/m^3 target concentration animals, and one 20,000 mg/m^3 target concentration animal were found to be not pregnant (*i.e*. no evidence of implantation sites).

All animals were free of clinical or postmortem observations attributable to treatment with GTVC.

There were no treatment-related statistically significant differences between the control and the GTVC treated groups for uterine implantation data or for external observations, and visceral observations on either a fetus or litter basis. There were statistically significant, non-dose responsive decreases in the number of corpora lutea in the 2000 and 20,000 mg/m^3 target concentration groups. Since ovulation occurred prior to exposure to the test substance, these decreases were not due to the test substance. There were also corresponding, non-dose responsive reductions in implantations per litter; these differences were not statistically significant when analyzed with corpora lutea counts as a covariate.

Fetal body weight did not differ between groups when analyzed with litter size as a covariate or with both litter size and fetal sex as covariates; but, when mean corpora lutea count was an additional covariant along with litter size and fetal sex, mean fetal body weight was statistically reduced at 20,000 mg/m^3. Because of the complexity of this analysis and the confounding of the CL count and because no other statistically significant differences were noted in the fetal body weights with the other statistical tests, it is not clear whether exposure to GTVC at 20,000 mg/m^3 is directly linked with decreased fetal body weight.

There were no treatment-related statistically significant differences for external and visceral observations. The only two fetal observations that were considered related to treatment were statistically significant increases in total fetuses with skeletal variations on a fetus basis and statistically significant increases in rudimentary lumbar ribs on a fetus basis in the 20,000 mg/m^3 target concentration group. As rudimentary supernumerary ribs may be associated with maternal stress, this increase may be related to the reductions in food consumption and body weight changes observed in the dams.

In conclusion, administration of gasoline with TBA condensate to rats by whole-body inhalation exposure during the period of organogenesis and fetal growth produced maternal toxicity during the period of dosing at the target concentrations of 10,000 and 20,000 mg/m^3 as indicated by decreased food consumption, decreased body weight change, and reduced body weight, and developmental effects at 20,000 mg/m^3.

Therefore, the No Observable Adverse Effect Level for maternal toxicity was the target concentration of 2000 mg/m^3 and the No Observable Adverse Effect Level for developmental toxicity in this study was established at the target concentration of 10,000 mg/m^3.

Section 2

INTRODUCTION

This study was conducted to evaluate the developmental toxicity of Gasoline with TBA Vapor Condensate (MRD-00-718) administered whole-body inhalation exposure to pregnant rats during the period of major organogenesis and fetal growth.

This study was conducted for the American Petroleum Institute, 1220 L Street Northwest, Washington, D.C. 20005-4070 (subsequently referred to as the Sponsor).

The study was conducted by ExxonMobil Biomedical Sciences, Inc. (EMBSI) Laboratory Operations, Mammalian Toxicology Laboratory, 1545 Route 22 East, P.O. Box 971, Annandale, New Jersey 08801-0971. The EMBSI Mammalian Toxicology Laboratory is accredited by the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC International).

STUDY INITIATION (PROTOCOL SIGNATURE DATE)

August 23, 2002

EXPERIMENTAL START DATE

August 31, 2002

EXPERIMENTAL TERMINATION DATE

November 22, 2002

INLIFE TEST PERIOD

August 26, 2002 to September 27, 2002

JUSTIFICATION FOR SELECTION OF TEST SYSTEM

The rat is one of the species required by the EPA for the developmental toxicity testing requirement of Section 211b of the Clean Air Act (EPA, 1994).

INTRODUCTION (CONT'D)

JUSTIFICATION OF DOSING ROUTE

Exposure by inhalation is a likely route of human exposure.

JUSTIFICATION OF DOSE SELECTION

The target high dose of 20,000 mg/m^3 was selected based on safety concerns as one-half of the Lower Explosive Limit. It was selected to provide a margin of safety for the laboratory staff yet achieve a high exposure concentration. The low dose target (2000 mg/m^3) was expected to produce a No Observable Adverse Effect Level (NOAEL) based on the results of previous subchronic and developmental studies conducted on this material, related materials, or some combination thereof. The mid dose (10,000 mg/m^3) was selected as the approximate mid point between the low and high doses to produce a dose response relationship, if one existed in this treatment range.

COMPLIANCE

This study was conducted to meet/exceed compliance with the following standards and requirements:

EPA, United States Environmental Protection Agency, Good Laboratory Practices (GLP) Standards for Inhalation Exposure Health Effects Testing. 79.60 CFR Vol. 59, No. 122, 27 June 1994.

EPA, United States Environmental Protection Agency, Vehicle Emissions Inhalation Exposure Guideline. 79.61.

Animal Welfare Act of 1966 (P.L. 89-544), as amended in 1970, 1976, and 1985. Code of Federal Regulations, Title 9 [Animals and Animal Products], Subchapter A - Animal Welfare Parts 1, 2, and 3.

This study was conducted in accord with the following guidelines and standards:

EPA, United States Environmental Protection Agency, Health Effects Test Guidelines OPPTS 870.3600 Inhalation Developmental Toxicity Study, Public Draft, June 1996.

EPA, United States Environmental Protection Agency, Health Effects Test Guidelines, OPPTS 870.3700, August 1998.

OECD, Organization for Economic Cooperation and Development, Guidelines for the Testing Chemicals, Proposal for Updating Guideline 414, Jan 2001.

Guide for the Care and Use of Laboratory Animals, Institute of Laboratory Animal Resources, Commission on Life Sciences, National Research Council, National Academy Press, Washington, D.C., 1996.

Section 3

MATERIALS AND METHODS

TEST SUBSTANCE

Substance Identification

EMBSI Identification:	MRD-00-718
Sponsor Identification:	Gasoline with TBA Vapor Condensate
Supplier:	Chevron Research and Technology Company
Lot #:	API 01-07
Description:	Colorless liquid
Storage Condition:	Ambient outdoor conditions under nitrogen

Date Received:	Container numbers[a]:	Expiration Date:
March 18, 2002	1A (1[b]), 2A (1[b]), 3A (1[b]), 4A (1[b])	March 18, 2007

[a] - Numbers in () are the Supplier's tank identification numbers
[b] - Large cylinder number

Characterization of the Test Substance

The stability, identity, strength, purity, and composition or other characteristics that appropriately identified the test substance was performed by the testing laboratory (EMBSI). Documentation is maintained at ExxonMobil Biomedical Sciences, Inc., Annandale, New Jersey. Characterization will be reported as part of EMBSI Study 167490. Additionally, Appendix J shows the stability of the test substance over the course of the exposure interval.

The documentation of methods of synthesis, fabrication, and/or derivation of the test fuel was the responsibility of the Sponsor. This was not completed when the study initiated, but is currently with the Sponsor.

TEST SUBSTANCE (CONT'D)

Analysis of Mixtures

Nominal Concentration. A nominal exposure concentration was calculated on a daily basis. The net weight of test substance used was determined and was divided by the total volume of air passing through the chamber to give the nominal concentration.

Analytical Concentration. The concentration of the test atmosphere in each chamber and the chamber room was determined approximately hourly during each exposure by on-line gas chromatography. The chamber concentrations were measured in the breathing zone of the rats. A backup analytical device (calibrated infrared vapor monitor) was also available. The hourly chromatographic analyses showed four of the major components of the test atmosphere and was used to assess the stability of the test substance over the duration of the study.

Additionally, a sorbent tube sample of the test atmosphere was collected by drawing a known volume of the test atmosphere from each chamber through a calibrated critical orifice once during each week of the study. These samples were stored in a freezer until after the end of the exposure phase of the study and then transferred to the analytical chemistry laboratory. The samples were desorbed and analyzed by the detailed capillary/GC method used for the initial characterization analysis of the liquid test substance. This analysis was done to determine component proportions of the test material atmosphere compared to the liquid test material.

Chamber Homogeneity. Distribution samples were drawn from twelve different points within the chamber at each exposure level during the validation of the exposure system for this study.

Particle Size Analysis. A particle size determination of the aerosol portion of the test atmosphere was conducted at least once during the chamber trials from the 20,000 mg/m^3 target concentration. The sample was taken using a multistage cascade impactor. Preweighed glass fiber filters were used to collect aerosol on each stage, which are associated with specific cutoff diameters for aerodynamic particle size in microns. Since minimal aerosol was present, no further calculations were performed for the aerodynamic diameter, geometric standard deviation, or the estimated percents of the aerosol less than or equal to 1, 10, and 15 microns in size.

Sample Retention

No retention samples were taken due to the practical and safety considerations of storing a mixed gas/liquid phase substance under pressure.

Carrier

Air

TEST SYSTEM

Test Animal

Species:	Rat
Strain/stock:	Crl:CD®(SD)IGSBR
Supplier:	Charles River Laboratories, Inc. Raleigh, North Carolina

Animal Receipt Information (Females)

Receipt Date:	August 13, 2002
Shipping Reference Number:	70258477

Quarantine and Acclimation Period

13 days; animals were checked for viability at least once daily.

Number and Sex

150 sexually mature virgin females

100 females were allocated to study groups after confirmation of mating; the additional 50 females were ordered to assure there would be 100 mated females and to make the mating as efficient as possible without exceeding the necropsy capacity of the laboratory.

50 sexually mature males (12 - 13 weeks old at the initiation of mating) received for mating purposes from a different colony than the females to assure they were not siblings. The males were received on August 13, 2002.

Age at Initiation of Gestation (Designated GD 0)

Females: Approximately 13 weeks

Weight at Initiation of Gestation (Designated GD 0)

Females: 231 to 295 grams

TEST SYSTEM (CONT'D)

Animal Identification

Individual ear tags and corresponding cage identification.

Selection

More animals than required for the conduct of the study were purchased and acclimated. Animals determined to be unsuitable for inclusion on this study because of poor health, outlying body weights, or other abnormalities were excluded from selection by the Study Director, and/or technical staff.

Feed

Certified Rodent Diet Meal 5002, *ad libitum*

Manufacturer:	PMI Nutrition International, LLC (formerly PMI Feeds, Inc.) Richmond, Indiana
Analysis:	Performed by PMI Nutrition International, LLC. Copies of the feed analyses are maintained in the EMBSI Toxicology Laboratory. The feed analyses were not conducted by a GLP-compliant laboratory.
Contaminants:	There were no known contaminants in the feed believed to have been present at levels that may have interfered with this study.

The availability of feed was checked daily for all animals. Animals were without food while in the exposure chambers.

Water

Automatic watering system, *ad libitum*

Supplier:	ExxonMobil Research and Engineering Clinton Facility De-ionized Water System.
Analysis:	Periodic analysis is the responsibility of the testing laboratory. A copy of the results is maintained at the testing laboratory. The analysis was not performed in a GLP-compliant laboratory.
Contaminants:	There were no known contaminants in the water believed to have been present at levels that may have interfered with this study.

The availability of water was checked daily for all animals. Animals were without water while in the exposure chambers.

TEST SYSTEM (CONT'D)

Housing

Room Number:	PE103
Chamber rooms:	PE102, PE110
Housing:	Single housed during the study period, except during mating.
Caging:	Suspended stainless steel and wire mesh with absorbent paper below cages.

Environmental Conditions

Animal Room

Temperature:	67.1 to 73.7 degrees Fahrenheit
Humidity:	34.7 to 66.7 percent relative humidity
Lighting:	Approximately 12 hours light (0600 to 1800 hours) and 12 hours dark (1800 to 0600 hours) by automatic timer.

Temperature was monitored at least twice daily and humidity was monitored at least once daily. Additionally, a non-validated computerized system monitored the temperature, humidity, and lighting continuously for alarm purposes.

Chambers

Temperature:	66 to 78 degrees Fahrenheit (see Protocol Exceptions and Appendix I)
Humidity:	45 to 95 percent relative humidity (see Protocol Exceptions and Appendix I)

Temperature and humidity were monitored continuously and recorded approximately every 30 minutes during the exposure.

Light Intensity

Animal Room Light Intensity:	7.31 to 11.8 foot-candles
Chamber Room Light Intensity:	31.2 to 43.7 foot-candles

Light intensity was measured three times during the study (the first day of exposures, during the second week of exposures and the last day of exposures) in both the animal room and the chamber room. Light intensity was measured in the animal room in a cage approximately three feet above the floor level. In the chamber room the light intensity was measured three feet above floor level in the approximate center of each generation room.

TEST SYSTEM (CONT'D)

Environmental Conditions (cont'd)

Chamber Noise Levels and Oxygen Levels

Noise Level: 70.8 to 82.9 db
Oxygen Level: 20.5 to 20.7%
The oxygen level and the noise level were measured in each exposure chamber on the first day of exposures, during the second week of exposures and on the last day of exposures.

EXPERIMENTAL DESIGN

Mating

On the initial scheduled mating day, females were placed in males' cages in a 1:1 (male:female) ratio. Males and females were paired based on sequential Physical Identification Numbers. A sufficient number of animals were co-housed in an attempt to produce an acceptable number of mated animals to accommodate lab scheduling. Mating was confirmed on the following morning by observation of a copulatory plug (vaginal). The day on which mating was confirmed was considered Day 0 of gestation (GD 0). After confirmation of mating, each mated female was returned to its own cage. New females then were placed in the males' cages until the required number of mated females was obtained by continuous cohabitation in consideration of lab scheduling. Mated females subsequently were assigned to dose groups by a computer generated body weight sorting program (WEIGHT) using the GD 0 body weights to ensure mean body weight was similar between all groups on GD 0.

Experimental Groups

Group Number	Number of Females per Group	Target Dose (mg/m^3)
1. (Carrier Control)	25	0
2. Low	25	2000
3. Intermediate	25	10,000
4. High	25	20,000

Administration of Test Substance and Exposure Schedule

The experimental and control animals were placed (whole body) into 1.0 M^3inhalation chambers that were operated under dynamic conditions. The exposure period was at least 6 hours per day. The test substance atmosphere generation system was started after the last animal was placed in the exposure chambers and the generation system was stopped six hours later. The animals remained in the chambers for at least an additional 23 minutes (theoretical equilibration time) while the test atmosphere cleared. The animals were exposed from GD 5 through GD 20.

The Chamber

The chambers used for exposure are stainless steel and glass and have a total volume of approximately 1.0 M^3. They operated at a flow rate (approximately 12 air changes/hour) sufficient to ensure timely equilibration. The flow of air through each chamber was monitored continuously using a calibrated flow measuring device and recorded approximately every 30 minutes. All chambers were maintained at a slight negative pressure. The pressure was monitored continuously and recorded approximately every 30 minutes.

EXPERIMENTAL DESIGN (CONT'D)

The Test Atmosphere

The control group was exposed to clean filtered air under conditions identical to those used for groups exposed to the test substance. The test substance was administered fully vaporized in the breathing air of the animals. The test atmosphere composition and concentration remained constant at each exposure level over the daily six-hour period. The daily mean exposure concentrations were within ± 10% of the target exposure levels with the exceptions listed in the Protocol Exceptions section.

Experimental Evaluation

Animals were examined for viability at least twice daily during the study. Body weights were taken prior to selection, and on GD 0, 5, 8, 11, 14, 17, 20, and 21. Food consumption was measured for mated females on GD 5, 8, 11, 14, 17, 20, and 21. A clinical examination was given to each female prior to selection, and daily during gestation. Additionally, group observations of the animals for mortality and obvious toxic signs while in the chambers were recorded at 15, 30, 45, and 60 minutes after initiation of the exposure and then hourly during each exposure.

Euthanasia and Cesarean Section

Euthanasia of the dams was by CO_2 asphyxiation followed by exsanguination. A gross necropsy was performed on all confirmed-mated females.

The fetuses were placed in a refrigerator to slow down and eventually terminate vital signs after the external examination and weighing.

Mated females were euthanized on GD 21. Body weights were recorded on the day of necropsy. Uterine weights with ovaries attached were recorded at the time of necropsy. Uterine contents were examined and the numbers and locations of implantation sites, early and late resorptions, live and dead (alive or dead *in utero*) fetuses were counted. Corpora lutea also were counted. The uteri of all apparently non-pregnant females were stained with 10% ammonium sulfide to confirm pregnancy status.

Evaluations of dams during cesarean section and subsequent fetal evaluations were conducted without knowledge of treatment group in order to minimize bias.

EXPERIMENTAL DESIGN (CONT'D)

Examination of Fetuses

Each fetus was weighed and examined externally for gross malformations and variations. Fetal sex was determined by external examination and confirmed internally only on those fetuses receiving visceral examinations.

The viscera of approximately one-half of the fetuses of each litter were examined by fresh dissection (Staples, 1974; Stuckhardt and Poppe, 1984). After these fetuses were examined, they were decapitated. The heads were preserved in Bouin's solution for at least two weeks, then rinsed and subsequently stored in 70% ethanol. Free-hand razor blade sections of the Bouin's-fixed fetal heads were examined for the presence of abnormalities. The remaining live fetuses (alive *in utero*) were eviscerated, processed by double staining with Alizarin red and Alcian blue, and examined for the presence of bone and cartilage malformations and ossification variations.

Fetal evaluations were conducted without knowledge of treatment group in order to minimize bias.

Tissue Preservation

Fetal heads were fixed in Bouin's solution and then preserved in ethanol. The fetal skeletons were preserved in glycerine with thymol after they were processed and stained.

Records

A copy of the protocol, final report, raw data, computer generated listings of raw data, supporting documentation, and tissue specimens were maintained in the EMBSI Toxicology Laboratory Archives until they were returned to the Sponsor's archives.

Statistical Analysis

Statistical evaluation of equality of means was done by an appropriate one way analysis of variance and a test for ordered response in the dose groups. First, Bartlett's Test was performed to determine if the dose groups had equal variance (Snedecor and Cochran, 1989). If the variances were equivalent, the hypothesis that there was no difference in response between the groups was tested using a standard one-way analysis of variance (Snedecor and Cochran, 1989). If the variances were equal, the testing was done using parametric methods, otherwise nonparametric techniques were used.

Continuous data was tested for statistical significance as follows: Where applicable, percentages were calculated and transformed by Cochran's transformation, followed by the arc sine transformation (Snedecor and Cochran, 1989). The raw percentages and the transformed percentages both were tested for statistical significance.

EXPERIMENTAL DESIGN (CONT'D)

Statistical Analysis (Cont'd)

For the parametric procedures, a standard one way ANOVA using the F distribution to assess significance was used (Snedecor and Cochran, 1989). If significant differences among the means were indicated, Dunnett's Test was used to determine which treatment groups differed significantly from control (Dunnett, 1964). In addition to the ANOVA, a standard regression analysis for linear response in the dose groups was performed. The regression also tested for linear lack of fit in the model.

For the nonparametric procedures, the test of equality of means was performed using the Kruskal-Wallis Test (Hollander and Wolfe, 1973). If significant differences among the means were indicated, Dunn's Summed Rank Test was used to determine which treatment groups differed significantly from the control (Hollander and Wolfe, 1973). In addition to the Kruskal-Wallis Test, Jonckheere's Test for monotonic trend in the dose response was performed.

Bartlett's Test for equal variance was conducted at the 1% level of significance. All other tests were conducted at the 5% and 1% level of significance. However, the 5% level of significance was considered statistically significant for these analyses. Lower levels of significance were reported as additional information.

The following data were not included in the statistical analyses:

- Gestation body weight and body weight change data for females that were not pregnant
- Gestation food consumption for females that were not pregnant

Means and standard deviations were calculated for animal, exposure and chamber environmental data. The coefficient of variation also was calculated when considered relevant for the exposure data.

Fetal body weight was analyzed by a mixed model analysis of variance that provided an accurate statistical model of the biology. The analysis used the litter as the basis for analysis and effectively used the litter size as a covariate. Two alternative models were used: one model considered exposure group, litter size and fetal sex as explanatory variables while the other model used these variables and included the corpora lutea (CL) as an additional covariate. The model considered dose group, litter size, and fetal sex as explanatory variables. If the overall effect of dose, or the dose by sex effect, was statistically significant the dose groups means were tested pairwise vs. the control group using least squares means. The least squares means allowed comparisons that accounted for differences in litter size and sex. The mathematical model was based on a paper by Chen, et al (1996). The analysis was run using SAS with code suggested in Little, et al (1997).

EXPERIMENTAL DESIGN (CONT'D)

Statistical Analysis (Cont'd)

The number of implants per dam, the litter size per dam, and the dam uterine weight were analyzed by a standard analysis of variance with CL as a covariate. When the overall effect of exposure, or the interactions of exposure with CL, was statistically significant the exposure groups' means were tested pairwise vs. the control group using least squares means (Snedecor and Cochran, 1989).

The analysis of anomalies (malformations or variations) was based on a Generalized Estimating Equation (GEE) application of the linearized model, Ryan (1992). The model used the litter as the basis for analysis and considered correlation among littermates by incorporating an estimated constant correlation and the litter size as a covariate. If the overall effect of dose, or the dose by sex effect, was statistically significant the dose groups were tested pairwise vs. the control group using least squares means. The least squares means allowed comparisons that accounted for differences in litter size. Three categories of anomalies were tested, and within each category specific anomalies also were tested. In addition to the category specific anomalies a series of combined analyses were performed within each category as applicable:

Combined Malformations and Variations for All Fetuses
Combined Malformations and Variations for Alive Fetuses
Combined Malformations and Variations for Dead Fetuses
Malformations for All Fetuses
Malformations for Alive Fetuses
Malformations for Dead Fetuses
Variations for All Fetuses
Variations for Alive Fetuses
Variations for Dead Fetuses
Combined – Delayed Ossification of the Sternabrae (hypoplastic/unossified)
Combined – Hypoplastic Vertebral Centra (bifid/dumbbell-shaped)

Section 4

RESULTS AND CONCLUSIONS/DISCUSSION

CLINICAL INLIFE OBSERVATIONS AND SURVIVAL

Survival Bar Graph: Appendix A
Incidence of Gestation Observations: Appendix B
Individual Gestation Observations: Appendix B

All dams survived to scheduled terminal sacrifice on GD 21. At the GD 21 cesarean section two 2000 mg/m^3 target concentration animals, two 10,000 mg/m^3 target concentration animals, and one 20,000 mg/m^3 target concentration animal were found to be not pregnant (*i.e*. no evidence of implantation sites).

There were no clinical signs indicative of maternal toxicity. All dams in all dose groups were free of observable abnormalities during the entire gestation period.

GESTATION BODY WEIGHT

Mean Gestation Body Weight and Body Weight Change: Appendix C
Individual Gestation Body Weight and Body Weight Change: Appendix C
Statistician's Report: Appendix K

Maternal toxicity was evident as statistically significant differences in mean gestation body weight and mean gestation body weight change in the 20,000 mg/m^3 target concentration group and the mean gestation body weight change in the 10,000 mg/m^3 target concentration group. Statistically significant decreases in body weight change were evident in the 10,000 mg/m^3 and 20,000 mg/m^3 target concentration groups for the GD 5–8 interval and in the 20,000 mg/m^3 target concentration group for the GD 8-11 interval. The extent of these decreases also produced statistically significant decreased body weight change for the GD 5-21 and GD 0-21 intervals for the 10,000 and 20,000 mg/m^3 target concentration groups. The reduced body weight gain also produced statistically significant reduced body weights at GDs 8, 11, 14, 17, 20, and 21 for the 20,000 mg/m^3 target concentration group. These changes appear related to reduced food consumption during the same intervals. However, the effect on late gestation body weight by the statistically significantly reduced gravid uterus weight in 20,000 mg/m^3 target concentration group is difficult to determine. Additionally, linear trends of decreasing mean body weight were detected in the treatment groups for GD 8, GD 11, GD 14, GD 17, GD 20, and GD 21 as well as the GD 21 weights corrected for the uterine weights (GD 21C). Linear trends or ordered responses to dose of decreasing mean body weight change also were detected in the treatment groups for the GD 5-8, GD8-11, GD 17-20, GD 5-21, GD 0-21, and GD 0 -21C intervals. Additional analyses were conducted on the uterine weight data that included CL (corpora lutea) count and a CL count by exposure interaction and indicated a statistically significant decrease in the mean uterine weight in the 20,000 mg/m^3 target exposure group when analyzed with a CL count by exposure interaction.

GESTATION FOOD CONSUMPTION

Mean Gestation Food Consumption: Appendix D
Individual Gestation Food Consumption: Appendix D

There was evidence of maternal toxicity during the first half (GD 5-14) of the exposure period as indicated by statistically significant decreases in food consumption at the GD 5-8, GD 8-11, and GD 11-14 intervals for the 10,000 and 20,000 mg/m^3 target concentration groups. The extent of these decreases also produced statistically significant decreases in food consumption at the GD 5-20 interval for the 10,000 and 20,000 mg/m^3 target concentration groups and at the GD 0-21 interval for the 20,000 mg/m^3 target concentration group. These decreases generally coincided with the previously noted decreases in body weight and body weight change. Additionally, linear trends or ordered responses to dose of decreasing mean food consumption were detected in the treatment groups for the GD 5-8, GD 8-11, GD 11-14, GD 5-20, and GD 0-21 intervals. There were no effects on gestation food consumption for the 2000 mg/m^3 target concentration group.

GROSS POSTMORTEM OBSERVATIONS

Incidence of Gross Postmortem Observations: Appendix E
Individual Gross Postmortem Observations: Appendix E

The gross postmortem examination of the dams revealed a uterus that exuded thin brown liquid for one 2000 mg/m^3 target concentration dam and dilated renal pelves and a calculus in the bladder for one 10,000 mg/m^3 target concentration dam. All other dams were free of grossly observable abnormalities.

UTERINE IMPLANTATION DATA

Mean Uterine Implantation Data: Appendix F
Individual Uterine Implantation Data: Appendix F
Statistician's Report: Appendix K

The uterine implantation data revealed a statistically significant decrease in the number of live male fetuses, implantation sites, and corpora lutea in the 2000 mg/m^3 target concentration group. There also was a statistically significant decrease in the number of corpora lutea in the 20,000 mg/m^3 group. The values and level of statistical significance are presented in Table 4-1. The mean number of corpora lutea was one – two less per litter than observed in the control group. These decreases were not considered related to treatment as ovulation and fertilization occurred prior to exposure to the test substance. The difference in mean number of corpora lutea per litter alone is sufficient to explain the difference in the mean number of implantations which occurred at the 2000 mg/m^3 target concentration group. There were no statistically significant decreases in the number of live fetuses or increases in the number of resorptions or dead fetuses. The statistical analyses indicated an ordered response to dose in the treatment groups for the number of implantation sites and the number of corpora lutea (increasing trend for both).

UTERINE IMPLANTATION DATA (CONT'D)

The statistical analyses also indicated that while there was no linear trend in the treated groups for the number of male fetuses, it also indicated that the linear trend test did not fit the data. As noted in the section on gestation body weight, there was a statistically significant decrease in uterine weight (including uterine contents and ovaries) at the 20,000 mg/m^3 target concentration. This decrease is attributable to two factors: (1) a treatment-related decrease in fetal body weight, which is discussed in the next section, and (2) a slight decrease (not treatment-related) in the litter size due to a reduced number of corpora lutea prior to exposure to the test material.

Table 4-1 - Mean Implantation Sites and Corpora Lutea

Target	Implantation sites	Corpora lutea
0 mg/m^3	15.68	16.32
2000 mg/m^3	13.30*	14.04*
10,000 mg/m^3	14.61	14.91
20,000 mg/m^3	14.71	15.13*

* - $p \leq 0.05$

FETAL BODY WEIGHT

Mean Fetal Body Weight: Appendix G
Individual Fetal Body Weight: Appendix G

Mean Fetal Body Weight: Appendix G
Individual Fetal Body Weight: Appendix G
Statistician's Report: Appendix K

There were no statistically significant differences in mean fetal body weight in either sex of any group when analyzed with litter size as a covariate and without allowing for CL count interaction. When the fetal weight data were analyzed using an exposure by CL count interaction, the mean fetal weight for the 20,000 mg/m^3 target exposure group was statistically significantly lower than the control group. Because of the complexities of the statistical analyses accounting for differences in CL count and because the magnitude of the difference in fetal body weight was small, it is not absolutely clear that the difference is directly related to exposure. However, in order to be conservative, the decrease in fetal body weight is interpreted as treatment-related at 20,000 mg/m^3. The mean fetal weights are presented in Table 4-2 and Table 4-3. Table 4-2 shows the mean fetal weight analysis without CL count interaction.

FETAL BODY WEIGHT (CONT'D)

Table 4-2
Mean Fetal Weight, the Least Squares Mean Fetal Weight not Considering CL Count

Exposure Group (mg/m^3)	n litters	n fetuses	observed fetus mean (gm)	Least squares fetus mean (gm)
0	25	385	5.29	5.32
2,000	23	302	5.33	5.29
10,000	23	327	5.29	5.29
20,000	24	345	5.13	5.16

The bodyweight analysis that included CL count and a CL by exposure interaction indicated a statistically significant difference in the mean fetal litter weights among the exposure groups and an exposure by CL count interaction ($p<0.0025$ and $p<0.0005$ respectively); the 20,000 mg/m^3 exposure group was different from the 0 exposure group ($p<0.02$). When the model as fit without the exposure by CL count interaction there was not a significant difference in fetal weights among the exposure groups ($p<0.14$). Table 4-2 shows the mean fetal weight and the least squares mean fetal weight with CL count interaction.

Table 4-3
Mean Fetal Weight, the Least Squares Mean Fetal Weight Considering CL Count

Exposure Group (mg/m^3)	n litters	n fetuses	n CL	observed fetus mean (gm)	Least squares fetus mean (gm) with CL^xexposure	Least squares fetus mean (gm) without CL^xexposure
0	25	385	16.3	5.29	5.31	5.31
2,000	23	302	14.0	5.33	5.36	5.30
10,000	23	327	14.9	5.29	5.26	5.29
20,000	24	345	15.1	5.13	5.15 *	5.16

* statistically significantly different from control, $p<0.02$

FETAL OBSERVATIONS

Incidence of Fetal Observations: Appendix H
Individual Fetal Observations: Appendix H
Statistician's Report: Appendix K

There were no statistically significant differences between the control and the treated groups for external and visceral variations and malformations.

External Observations

The external observations were limited to single or low incidences of stunted fetuses, edema of the head, malrotated hindpaw and protruding tongue. Single incidences of adactyly, cleft palate, ectrodactyly, hooked tail, microcephaly, and short tail were evident for Fetus 3 of Dam IGL911.

FETAL OBSERVATIONS (CONT'D)

Visceral Observations

Visceral observations were minimal and were limited to low incidences of umbilical artery arises from left side of the bladder and single incidences of malpositioned kidney and retinal fold.

Skeletal Observations

There were two statistically significant differences between the control and treated groups for the incidence of skeletal observations:

- A statistically significant increase in the incidence of rudimentary lumbar ribs in the 20,000 mg/m^3 target concentration group that produced a statistically significant increase in total fetuses with skeletal variations in the 20,000 mg/m^3 target concentration group.

The incidence of these findings and the historical control range for this parameter are presented in Table 4-3. While the incidence of total skeletal variations is statistically significantly increased when compared to the concurrent study control, it is only slightly greater than the upper end of the historical control range. As rudimentary supernumerary ribs may be associated with maternal stress, this increase may be related to the reduced food consumption and reduced body weight changes. The biological and developmental toxicological significance of the rudimentary supernumerary ribs are discussed further in the Discussion.

Table 4-4 - Percent Incidence of Total Skeletal Variations and Rudimentary Lumbar Ribs*

Observation	Target 0 mg/m^3	Target 2000 mg/m^3	Target 10,000 mg/m^3	Target 20,000 mg/m^3
Fetuses with skeletal variations	12.4	13.6	9.1	22.4
Litters with skeletal variations	60	56.5	56.5	83.3
Historical control range of fetuses with skeletal variations	5.1 - 21.6			
Historical control range of litters with skeletal variations	28.0 - 76			
Fetuses with rudimentary lumbar ribs	8.3	7.1	4.8	17.1
Litters with rudimentary lumbar ribs	48.0	34.8	30.4	66.7
Historical control range – Fetuses with rudimentary lumbar ribs	1.7 - 9.7			
Historical control range – Litters with rudimentary lumbar ribs	12.5 - 40.0			

* - (number of fetuses with observation/total number of fetuses observed) x 100

FETAL OBSERVATIONS (CONT'D)

Skeletal Observations (cont'd)

The other skeletal findings included dumbbell shaped thoracic vertebral anlage, and low incidences of unossified sternebrae, asymmetric sternebrae, hypoplastic sternebrae, short last thoracic rib, bifid thoracic vertebral centra, and malformed lumbar vertebral arch. Single incidences of bifid sternebrae, extra presacral vertebrae, malformed sacral vertebral arch, multiple malformed skull bones, fused sternebrae, multiple absent forepaw bones, multiple absent hindpaw bones, multiple malformed ribs, multiple malformed vertebrae, and fused ribs also were observed.

EXPOSURE DATA AND CHAMBER CONDITIONS

Summary of Exposure Data: Appendix I
Analytical Chemistry Report: Appendix J

The range of chamber concentrations for the exposure period as represented by the daily mean analytical data and nominal data of each day are listed in Table 4-5:

Table 4-5 - Mean Exposure Concentrations (Analytical and Nominal)

Target	2000 mg/m^3		10,000 mg/m^3		20,000 mg/m^3	
	Analytical	Nominal	Analytical	Nominal	Analytical	Nominal
Mean	2020	1874	10395	9883	20777	18549
S.D.	105.6	118.6	228.5	233.5	394.0	454.3
Minimum	1717	1683	9985	8976	19881	17335
Maximum	2144	2094	10882	10169	21534	19475

S.D. - Standard deviation

Satisfactory chamber uniformity was observed for the 12 points in the chamber that were analyzed. The range of concentrations for each chamber are listed in Table 4-6.

Table 4-6 - Summary of Chamber Uniformity

Target	2000 mg/m^3	10,000 mg/m^3	20,000 mg/m^3
Mean	1968	10362	20828
S.D.	47.3	370.4	433
CV (%)	2.4	3.6	2.1
Minimum	1910	9845	20415
Maximum	2038	10972	21990

S.D. - Standard deviation
CV - Coefficient of variation

The particle size determination for the control chamber and 20,000 mg/m^3 target concentration chamber detected particles at a level of 0.5 mg/m^3 for each chamber. These particles were judged to be ambient background particles (*e.g*. animal dander) and not from the generation of the test substance.

EXPOSURE DATA AND CHAMBER CONDITIONS

The relative distribution of hydrocarbons and oxygenate measured on the chamber characterization charcoal tubes that were collected each week of the exposures was in good agreement with that measured in the characterization of neat MRD-00-718 test substance.

The oxygen levels in the chambers ranged from 20.5 to 20.7% at the intervals when they were monitored. The noise level in the chambers ranged from 70.8 to 82.9 db. The light intensity in the chamber room ranged from 31.2 foot-candles to 43.7 foot candles.

DISCUSSION

There were signs of slight maternal toxicity, based on the body weight change and the food consumption data. The food consumption data indicated a statistically significant decrease from GD 5 through GD 14 in the 10,000 and 20,000 mg/m^3 target concentration groups. The body weight change data for these groups reflected the reduced food consumption for the GD 5-8 interval with statistically significant reductions. However, the body weight change data only shows a statistically significant decrease for the 20,000 mg/m^3 target concentration group at the GD 8-11 interval and no statistical significance in any group at the GD 11-14 interval. After GD 14 the food consumption and body weight change data were essentially the same as the control values, thus indicating that the animals had adapted to exposure to the test substance. However, the mean body weights of the 10,000 and 20,000 mg/m^3 target concentration groups continued to be depressed after GD 14 when compared to the control group due to the toxicity during GD 5 - 14.

There also were decreases in body weight, body weight change, and food consumption in the 2000 mg/m3 target concentration group that were not statistically significant. The decreases in body weight, body weight change, and food consumption were considered due to the reduced number of fetuses in the 2000 mg/m^{3}group. The mean uterine weight, the mean GD21 body weight corrected for the uterine weight, and the mean fetal body weight of the 2000 mg/m3 target concentration group support this conclusion. Additionally, the number of fetuses were not reduced due to maternal or fetal toxicity, but rather due to the number oocytes produced, fertilized, and implanted prior to exposure to the test substance. The implantation data for the 2000 mg/m3 target concentration group are discussed below.

There were no treatment-related statistically significant differences for uterine implantation data. There was a statistically significant decrease in the number of male fetuses in the 2000 mg/m3 target concentration group. However, this decrease was considered spurious as decreases in male fetuses were not evident in the 10,000 and 20,000 mg/m^3 target concentration groups and there was no increase in the number of dead or resorbed fetuses in the 2000 mg/m3 target concentration group that could account for this decrease. There also were decreases in the number of corpora lutea and implantation sites in the 2000 mg/m^3 target concentration group and corpora lutea in the 20,000 mg/m^3 target concentration group. However, these decreases were not considered treatment related as the number of corpora lutea was set at ovulation. Ovulation and implantation occurred prior to exposure of the animals to the test substance. Additionally, the pre-implantation loss for the 2000 mg/m^3 target concentration group was not statistically significantly different from the control group and was well within the historical control range of the laboratory. As the exposures to the test substance began after the number of corporal lutea and implantation sites were set, the decreases in these parameters were not related to treatment.

The fetal body weight data were subjected to three different statistical analyses. First the data were analyzed by a mixed model analysis of variance that provides an accurate statistical model of the biology. The analysis used the litter as the basis for analysis and effectively used the litter size as a covariate. Two alternative models were used: one model considered exposure group, litter size, and fetal sex as explanatory variables while the other model used these variables and included the corpora lutea (CL) as an additional covariate. The analyses with the CL by exposure interaction revealed that the fetal body weights were statistically significantly different from the control group in the 20,000 mg/m^3 exposure group.

DISCUSSION (CONT'D)

However, because of the complexity of this analysis and the confounding of the CL count it is not clear that exposure is directly linked with the decreased weights. No other statistically significant differences were noted in the fetal body weights with this test or the other statistical tests.

There were two related fetal observations that were statistically significantly different from the control. The first observation was an increased incidence of fetuses with skeletal variations in the 20,000 mg/m^3 target concentration group. While the incidence of total skeletal variations is statistically significantly increased when compared to the concurrent study control, it is only slightly greater than the upper end of the historical control range. The increase in fetuses with skeletal variations in the 20,000 mg/m^3 target concentration group was caused by the increased incidence of rudimentary lumbar ribs which is discussed next.

The second observation was an increased incidence of rudimentary lumbar ribs in the 20,000 mg/m^3 target concentration group. However, a statistically significant increase in the incidence of total fetuses with skeletal variations in the 20,000 mg/m^3 target group was not evident on a litter basis. Although these increased incidences were not within the historical range of this laboratory, variations in skeletal structure such as rudimentary ribs are so common that they are often regarded as alternative normal patterns and are not regarded as harmful developmental toxic effects (Harris and DeSesso, 1994; Kimmel and Wilson, 1973; Khera, 1981). Furthermore, rudimentary ribs are not considered biologically significant in the absence of other conventional signs of embryotoxicity, *i.e*. malformations, embryolethalityembryo lethality, or fetal weight reduction (Aliverti et al., 1979; Khera, 1981; Holson *et al*., 1976). However, evidence of reduced fetal body weight was observed in the 20,000 mg/m^3 target group. Rudimentary ribs have often been associated with maternal toxicity or stress (Harris and DeSesso, 1994; Kimmel and Wilson, 1973). Therefore, the developmental significance of rudimentary ribs in the high dose fetuses may be related to the transient maternal toxicity observed in the 20,000 mg/m^3 target concentration group during the early portion of the exposure phase of this study or it may be further evidence of developmental toxicity at this concentration.

There were no treatment-related statistically significant differences for external observations, and visceral observations in the fetuses on either a fetus or litter basis. Additionally, there were no statistically significant differences in the fetal body weights of either sex.

In conclusion, administration of gasoline with TBA condensate to rats by whole-body inhalation exposure during the period of organogenesis and fetal growth at target concentrations of 10,000 and 20,000 mg/m^3 caused maternal toxicity as indicated by decreased food consumption, decreased body weight, and decreased body weight change.

Therefore, the No Observable Adverse Effect Level for maternal toxicity was 2000 mg/m^3 target concentration and the No Observable Adverse Effect Level for developmental toxicity in this study was established at the target concentration of 10,000 mg/m^3 (conservatively assuming that the minor developmental effects are adverse).

PROTOCOL EXCEPTIONS

MEAN CHAMBER CONCENTRATION: The mean chamber concentration for the 2000 mg/m^3 target treatment group chamber was 1717 mg/m^3 on September 1, 2002. The mean chamber concentration for the 2000 mg/m^3 target treatment group chamber was 1738 mg/m^3 on September 17, 2002. These deviations were due to problems with the rotometer. Additionally, on September 16, 2002 the 3-hour concentration was 673 mg/m^3. However, this low concentration did not reduce the mean chamber concentration below the acceptable range. This low concentration probably was due to the same problem with the rotometer that occurred again on September 17, 2002.

CHAMBER TEMPERATURE AND HUMIDITY: Due to the method used to generate the test substance atmospheres, the chamber-room air was kept as cool as possible to keep the temperature in the 10,000 mg/m^3 and the 20,000 mg/m^3 target concentration chambers from exceeding the protocol-defined range. The cooler room air resulted in numerous instances of the mean temperature and humidity in the control chamber being outside the protocol-defined range. The decreased temperature also caused the temperature and humidity in the chambers to be outside the protocol-defined range on numerous occasions. The individual temperature and humidity deviations are noted in Appendix I as bold italicized values.

VIABILITY CHECK: One viability check was performed on September 2nd, 7th, and 8th 2002. The protocol requires that two viability checks be performed. All animals that were exposed on those days were observed after the exposure. The only animals that were not observed were those not being exposed.

These deviations had no adverse effect on the study results or integrity.

No other circumstances occurred that would have affected the quality or integrity of the data.

Section 5

LIST OF ABBREVIATIONS

STATISTICAL SYMBOLS AND ABBREVIATIONS

No difference	p≤0.05	p≤0.01	Statistical Statement
(PARAMETRIC)			
A-			No statistical difference among the means
	A	A+	Significant difference among the means
L-			No linear response to the dose levels
	L	L+	Response is linearly related to dose
	Q	Q+	Linear response shows lack of fit
	*	**	Mean significantly different from control mean
(NONPARAMETRIC)			
K-			No statistical difference among the means
	K	K+	Means differ significantly
J-			No ordered response to the dose levels
	J	J+	An ordered response to the dose levels
	*	**	Mean significantly different from control mean
NT			Data not tested

LIST OF ABBREVIATIONS

UTERINE IMPLANTATION DATA ABBREVIATIONS

ABBREVIATION	PARAMETER
Resorp	Resorptions (early and late)
Implants	Implantation sites
CL	Corpora Lutea
Preimplant	Pre implantation loss = (corpora lutea - implantation sites)/corpora lutea x 100
Postimplant	Post implantation loss = (implantation sites - total live)/implantation sites x 100
Mal	Fetuses with malformations
Var	Fetuses with variations
Affected	Resorptions + dead + malformations
F/I Tran	Fetuses/implantation sites transformed
R/I Tran	Resorptions/implantation sites transformed
D/I Tran	Dead/implantation sites transformed

FETAL EXTERNAL AND VISCERAL EXAMINATIONS

+ = No observable abnormalities
Stunted = Any fetus weighing less than 4.00 grams

Organs and tissues examined

External: General body size, contour, and integrity (e.g. head, spine, abdomen); limbs; digits; pinnae; eye bulges; palate/lip; tongue; snout/jaw; anogenital region; tail

Visceral: Urogenital system; adrenals; stomach; spleen; pancreas; thymus; large/small Intestines; liver; lungs; heart and associated major vessels; thyroid; trachea; Esophagus; brain ventricles (single free-hand razor section)

Malformations are permanent structural changes which may adversely affect survival, development, or function (EPA, 1991). Malformations are indicated by a capitalized footnote (e.g. "A").

Variations are a divergence beyond the usual range of structural constitution which may not adversely affect survival (EPA, 1991). Developmental variations are indicated by a lower case footnote (e.g. "a").

Observations are anomalies that generally are non-specific anomalies such as stunted, pale coloration or discoloration of tissues, etc. They are indicated by an asterisk (e.g. "*").

Clarification of location of supernumerary ribs (L1 vs T14)

Supernumerary ribs were classified as occurring at L1 if the number of presacral vertebrae was 26. If an extra presacral vertebra was present and a supernumerary rib was present, the location was recorded as T14.

Section 6

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APPENDIX A - SURVIVAL BAR GRAPH
TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER		GD: 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGL897	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL899	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL874	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL857	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL865	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL876	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL880	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL894	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL902	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL891	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL901	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL904	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL910	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL933	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL956	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL920	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL931	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL953	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL869	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL921	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL928	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL952	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL957	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL988	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL969	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P

APPENDIX A - SURVIVAL BAR GRAPH
TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER		GD: 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGL889	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL893	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL885	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL890	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL863	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL878	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL882	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL911	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL868	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL912	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL913	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL925	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL944	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=N
IGL871	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL922	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL951	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL859	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL943	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL948	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL974	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL888	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL976	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL923	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL924	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL905	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=N

APPENDIX A - SURVIVAL BAR GRAPH
TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER		GD: 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGL870	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL875	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL862	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL858	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL883	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL896	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL906	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL861	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL903	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL914	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL918	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL907	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL909	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL946	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL954	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL955	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL934	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL973	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=N
IGL881	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL917	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL940	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL963	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL983	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=N
IGL972	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL895	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P

APPENDIX A - SURVIVAL BAR GRAPH
TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER		GD: 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGL866	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL892	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL864	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL872	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL873	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL879	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL884	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL886	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL915	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=N
IGL867	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL898	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL929	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL877	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL937	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL950	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL958	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL945	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL967	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL959	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL962	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL949	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL916	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL938	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL961	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGL970	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P

NOTE: GD - GESTATION DAY N - NOT PREGNANT P - PREGNANT = - 24 HOURS

APPENDIX B - GESTATION OBSERVATIONS
(INCIDENCE OF GESTATION OBSERVATIONS BY TARGET DOSE)

GESTATION DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
SURVIVORS (A)																						
0 MG/M^3	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
2000 MG/M^3	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
10,000 MG/M^3	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
20,000 MG/M^3	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
NO OBSERVABLE ABNORMALITIES																						
0 MG/M^3	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
2000 MG/M^3	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
10,000 MG/M^3	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
20,000 MG/M^3	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24

NOTE: (A) - TOTALS DO NOT INCLUDE NON-PREGNANT ANIMALS

APPENDIX B - GESTATION OBSERVATIONS
(INDIVIDUAL GESTATION OBSERVATIONS BY TARGET DOSE)
DOSE: 0 MG/M^3

ANIMAL NUMBER	OBSERVATION	DAY:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGL897																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL899																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL874																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL857																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL865																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL876																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL880																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL894																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL902																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL891																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL901																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL904																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL910																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

APPENDIX B - GESTATION OBSERVATIONS
(INDIVIDUAL GESTATION OBSERVATIONS BY TARGET DOSE)
DOSE: 0 MG/M^3 (CONT'D)

ANIMAL NUMBER	OBSERVATION	DAY:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGL933																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL956																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL920																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL931																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL953																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL869																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL921																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL928																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL952																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL957																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL988																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL969																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

APPENDIX B - GESTATION OBSERVATIONS
(INDIVIDUAL GESTATION OBSERVATIONS BY TARGET DOSE)
DOSE: 2000 MG/M^3

ANIMAL NUMBER	OBSERVATION	DAY:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGL889																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL893																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL885																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL890																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL863																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL878																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL882																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL911																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL868																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL912																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL913																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL925																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL944NP																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

APPENDIX B - GESTATION OBSERVATIONS
(INDIVIDUAL GESTATION OBSERVATIONS BY TARGET DOSE)
DOSE: 2000 MG/M^3 (CONT'D)

ANIMAL NUMBER	OBSERVATION	DAY:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGL871																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL922																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL951																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL859																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL943																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL948																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL974																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL888																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL976																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL923																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL924																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL905NP																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

APPENDIX B - GESTATION OBSERVATIONS
(INDIVIDUAL GESTATION OBSERVATIONS BY TARGET DOSE)
DOSE: 10,000 MG/M^3

ANIMAL NUMBER	OBSERVATION	DAY:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGL870																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL875																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL862																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL858																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL883																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL896																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL906																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL861																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL903																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL914																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL918																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL907																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL909																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

APPENDIX B - GESTATION OBSERVATIONS
(INDIVIDUAL GESTATION OBSERVATIONS BY TARGET DOSE)
DOSE: 10,000 MG/M^3 (CONT'D)

ANIMAL NUMBER	OBSERVATION	DAY:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGL946																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL954																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL955																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL934																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL973NP																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL881																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL917																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL940																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL963																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL983NP																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL972																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL895																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

APPENDIX B - GESTATION OBSERVATIONS
(INDIVIDUAL GESTATION OBSERVATIONS BY TARGET DOSE)
DOSE: 20,000 MG/M^3

ANIMAL NUMBER	OBSERVATION	DAY:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGL866																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL892																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL864																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL872																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL873																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL879																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL884																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL886																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL915NP																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL867																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL898																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL929																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL877																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

APPENDIX B - GESTATION OBSERVATIONS
(INDIVIDUAL GESTATION OBSERVATIONS BY TARGET DOSE)
DOSE: 20,000 MG/M^3 (CONT'D)

ANIMAL NUMBER	OBSERVATION	DAY:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGL937																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL950																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL958																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL945																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL967																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL959																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL962																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL949																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL916																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL938																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL961																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGL970																								
	NO OBSERVABLE ABNORMALITIES		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

APPENDIX C - GESTATION BODY WEIGHT AND BODY WEIGHT CHANGE
(MEAN GESTATION BODY WEIGHT AND BODY WEIGHT CHANGE BY TARGET DOSE)
(GRAMS)

	GD 0	GD 5	GD 8	GD 11	GD 14	GD 17	GD 20	GD 21	UTERUS	GD 21C
FEMALE	A-L-	A-L-	AL+	A+L+	A+L+	AL+	AL+	AL+	K+J+	AL+
0 MG/M^3										
MEAN	260.6	293.2	302.9	316.7	330.0	360.1	409.4	428.4	114.3	314.2
STD.DEV.	16.7	18.8	20.3	21.5	23.7	25.8	30.9	33.2	13.0	23.0
(N)	25	25	25	25	25	25	25	25	25	25
2000 MG/M^3										
MEAN	261.0	291.3	299.5	311.3	324.1	351.7	394.6	413.5	100.6	312.9
STD.DEV.	14.0	16.7	16.6	19.9	20.6	21.8	29.3	31.5	25.1	17.7
(N)	23	23	23	23	23	23	23	23	23	23
10,000 MG/M^3										
MEAN	260.3	290.4	294.5	305.6	316.9	346.0	390.9	410.4	105.5	304.9
STD.DEV.	15.8	14.3	15.5	16.6	18.6	19.3	23.0	24.8	10.7	17.8
(N)	23	23	23	23	23	23	23	23	23	23
20,000 MG/M^3			*	**	**	*	*	*	**	
MEAN	260.4	288.9	288.9	298.2	309.9	340.0	385.5	404.3	104.1	300.2
STD.DEV.	14.3	13.0	14.7	15.2	15.9	18.0	20.7	22.4	10.7	19.1
(N)	24	24	24	24	24	24	24	24	24	24

APPENDIX C - GESTATION BODY WEIGHT AND BODY WEIGHT CHANGE
(MEAN GESTATION BODY WEIGHT AND BODY WEIGHT CHANGE BY TARGET DOSE)
(GRAMS)

	GD 0-5	GD 5-8	GD 8-11	GD 11-14	GD 14-17	GD 17-20	GD 20-21	GD 5-21	GD 0-21	GD 0-21C
FEMALE	A-L-	K+J+	A+L+	A-L-	A-L-	K-J	A-L-	A+L+	K+J+	A+L+
0 MG/M^3										
MEAN	32.5	9.8	13.8	13.2	30.2	49.3	19.0	135.3	167.8	53.5
STD.DEV.	8.5	6.1	4.4	4.1	5.3	6.9	4.4	20.3	23.2	15.6
(N)	25	25	25	25	25	25	25	25	25	25
2000 MG/M^3										
MEAN	30.2	8.3	11.8	12.8	27.6	42.9	18.9	122.3	152.5	51.9
STD.DEV.	8.5	5.2	5.1	3.5	9.4	12.0	5.9	25.4	29.1	13.3
(N)	23	23	23	23	23	23	23	23	23	23
10,000 MG/M^3		*						*	*	
MEAN	30.0	4.1	11.1	11.3	29.1	45.0	19.5	120.0	150.0	44.6
STD.DEV.	6.1	3.0	3.1	5.0	5.8	6.3	5.8	13.0	14.8	12.2
(N)	23	23	23	23	23	23	23	23	23	23
20,000 MG/M^3		**	**					**	**	**
MEAN	28.5	0	9.3	11.8	30.1	45.5	18.8	115.4	143.8	39.8
STD.DEV.	6.1	5.9	3.6	5.4	5.7	6.4	4.6	15.7	15.4	13.9
(N)	24	24	24	24	24	24	24	24	24	24

NOTE:
GD - GESTATION DAY
21C (DAY 21 CORRECTED) = DAY 21 BODY WEIGHT - UTERINE WEIGHT

APPENDIX C - GESTATION BODY WEIGHT AND BODY WEIGHT CHANGE
(INDIVIDUAL GESTATION BODY WEIGHT BY TARGET DOSE)
(GRAMS)
DOSE: 0 MG/M^3

ANIMAL NUMBER	GD 0	GD 5	GD 8	GD 11	GD 14	GD 17	GD 20	GD 21	GD 21C	UTERINE WEIGHT
IGL897	267	299	301	327	339	375	431	451	318	133
IGL899	237	279	283	292	303	324	370	386	286	100
IGL874	261	297	315	335	354	380	442	467	342	125
IGL857	250	284	288	298	313	344	398	419	298	121
IGL865	238	267	287	303	313	345	400	419	308	111
IGL876	247	274	278	294	308	336	378	394	296	98
IGL880	261	304	318	330	342	373	422	441	320	121
IGL894	249	278	287	303	318	353	410	435	318	117
IGL902	270	313	322	339	357	387	438	454	342	112
IGL891	275	320	326	335	346	381	432	450	330	120
IGL901	263	295	308	323	337	374	424	445	325	120
IGL904	295	346	359	377	400	435	500	522	376	146
IGL910	252	288	300	312	324	353	401	415	297	118
IGL933	250	281	294	302	308	341	383	405	313	92
IGL956	260	287	301	313	326	362	400	415	310	105
IGL920	238	282	293	312	325	347	394	413	300	113
IGL931	234	258	254	267	278	303	336	345	256	89
IGL953	293	317	323	336	349	378	429	457	323	134
IGL869	257	282	287	293	309	332	379	395	293	102
IGL921	269	299	303	312	325	352	395	414	303	111
IGL928	281	307	322	334	354	382	429	443	334	109
IGL952	267	302	313	326	332	357	405	423	316	107
IGL957	284	303	307	324	339	367	418	434	314	120
IGL988	252	284	301	314	320	349	400	420	302	118
IGL969	266	283	303	317	330	373	421	449	334	115

APPENDIX C - GESTATION BODY WEIGHT AND BODY WEIGHT CHANGE
(INDIVIDUAL GESTATION BODY WEIGHT)
(GRAMS)
TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER	GD 0	GD 5	GD 8	GD 11	GD 14	GD 17	GD 20	GD 21	GD 21C	UTERINE WEIGHT
IGL889	276	309	324	345	360	380	442	457	345	112
IGL893	281	323	327	347	356	385	443	457	328	129
IGL885	254	273	283	288	295	312	366	387	279	108
IGL890	275	307	313	321	339	370	415	439	326	113
IGL863	274	305	308	319	334	361	410	437	323	114
IGL878	269	313	313	334	349	385	431	456	338	118
IGL882	248	280	286	296	311	344	387	411	297	114
IGL911	235	282	284	295	311	352	392	406	292	114
IGL868	259	290	302	309	323	364	413	436	326	110
IGL912	246	274	285	297	310	340	390	403	295	108
IGL913	265	285	295	305	321	343	379	405	318	87
IGL925	244	278	285	297	309	339	380	403	308	95
IGL944 NP	241	269	271	272	271	284	292	293	NP	2
IGL871	237	265	266	267	279	324	361	384	295	89
IGL922	269	300	315	327	340	375	418	440	328	112
IGL951	264	288	298	306	320	352	397	411	299	112
IGL859	270	289	294	301	315	336	374	394	300	94
IGL943	250	265	287	306	319	350	403	422	320	102
IGL948	257	301	313	329	345	376	425	445	327	118
IGL974	273	296	307	317	324	328	333	337	320	17
IGL888	268	294	301	312	319	340	389	413	299	114
IGL976	261	288	291	307	312	328	349	359	317	42
IGL923	245	273	282	292	306	326	361	377	287	90
IGL924	284	321	330	343	357	379	418	432	330	102
IGL905 NP	286	304	309	306	299	310	312	310	NP	2

APPENDIX C - GESTATION BODY WEIGHT AND BODY WEIGHT CHANGE
(INDIVIDUAL GESTATION BODY WEIGHT)
(GRAMS)
TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER	GD 0	GD 5	GD 8	GD 11	GD 14	GD 17	GD 20	GD 21	GD 21C	UTERINE WEIGHT
IGL870	256	288	295	304	315	330	376	402	312	90
IGL875	241	282	288	299	318	344	394	419	304	115
IGL862	237	272	276	283	292	319	366	374	286	88
IGL858	255	288	295	306	324	359	402	424	316	108
IGL883	259	293	296	312	322	353	394	421	312	109
IGL896	267	300	306	319	333	367	411	428	321	107
IGL906	244	277	276	283	286	323	360	385	278	107
IGL861	263	296	304	311	326	356	399	417	310	107
IGL903	269	296	301	311	325	357	412	426	311	115
IGL914	255	285	286	296	298	333	380	401	293	108
IGL918	254	282	281	285	296	328	366	387	286	101
IGL907	279	303	305	315	331	356	413	435	319	116
IGL909	284	311	313	323	334	370	419	437	322	115
IGL946	256	284	285	295	310	342	392	399	293	106
IGL954	286	307	314	324	342	368	418	444	329	115
IGL955	233	265	264	277	289	315	353	372	279	93
IGL934	251	272	276	287	299	331	374	382	276	106
IGL973 NP	263	301	309	316	298	302	299	301	NP	2
IGL881	267	294	300	316	322	359	408	426	316	110
IGL917	270	299	306	320	335	362	413	434	319	115
IGL940	239	263	269	283	284	303	335	351	274	77
IGL963	274	303	311	327	336	363	401	422	321	101
IGL983 NP	271	295	294	296	292	282	274	276	NP	2
IGL972	259	306	312	325	336	363	400	425	329	96
IGL895	290	313	315	328	335	356	405	428	307	121

APPENDIX C - GESTATION BODY WEIGHT AND BODY WEIGHT CHANGE
(INDIVIDUAL GESTATION BODY WEIGHT)
(GRAMS)
TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER	GD 0	GD 5	GD 8	GD 11	GD 14	GD 17	GD 20	GD 21	GD 21C	UTERINE WEIGHT
IGL866	258	284	280	292	301	323	372	393	295	98
IGL892	254	292	290	307	318	344	393	409	298	111
IGL864	234	276	268	273	275	296	336	348	262	86
IGL872	231	265	261	267	285	315	359	373	265	108
IGL873	256	286	286	298	308	330	371	398	300	98
IGL879	269	302	291	301	315	350	393	399	267	132
IGL884	258	278	276	286	297	326	364	383	294	89
IGL886	272	302	302	313	333	359	396	416	318	98
IGL915 NP	266	303	303	305	288	291	294	294	NP	2
IGL867	262	295	293	298	311	351	406	431	306	125
IGL898	270	296	311	318	329	365	412	437	329	108
IGL929	265	289	297	298	312	340	386	403	296	107
IGL877	266	287	284	293	310	348	389	411	298	113
IGL937	238	265	261	269	283	316	369	385	281	104
IGL950	262	287	282	291	308	334	367	387	288	99
IGL958	272	288	294	302	312	346	394	416	311	105
IGL945	289	314	318	329	330	364	406	430	324	106
IGL967	266	300	303	317	332	370	426	446	332	114
IGL959	290	318	312	316	333	359	415	429	325	104
IGL962	252	284	283	291	300	321	370	388	292	96
IGL949	253	287	293	302	309	342	389	410	306	104
IGL916	246	273	275	290	303	338	376	396	309	87
IGL938	265	290	289	299	298	331	372	389	295	94
IGL961	263	295	296	308	326	351	405	423	316	107
IGL970	259	280	289	298	310	341	385	402	297	105

APPENDIX C - GESTATION BODY WEIGHT AND BODY WEIGHT CHANGE
(INDIVIDUAL GESTATION BODY WEIGHT CHANGE)
(GRAMS)
TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER	GD 0-5	GD 5-8	GD 8-11	GD 11-14	GD 14-17	GD 17-20	GD 20-21	GD 5-21	GD 0-21	GD 0-21C
IGL897	32	2	26	12	36	56	20	152	184	51
IGL899	42	4	9	11	21	46	16	107	149	49
IGL874	36	18	20	19	26	62	25	170	206	81
IGL857	34	4	10	15	31	54	21	135	169	48
IGL865	29	20	16	10	32	55	19	152	181	70
IGL876	27	4	16	14	28	42	16	120	147	49
IGL880	43	14	12	12	31	49	19	137	180	59
IGL894	29	9	16	15	35	57	25	157	186	69
IGL902	43	9	17	18	30	51	16	141	184	72
IGL891	45	6	9	11	35	51	18	130	175	55
IGL901	32	13	15	14	37	50	21	150	182	62
IGL904	51	13	18	23	35	65	22	176	227	81
IGL910	36	12	12	12	29	48	14	127	163	45
IGL933	31	13	8	6	33	42	22	124	155	63
IGL956	27	14	12	13	36	38	15	128	155	50
IGL920	44	11	19	13	22	47	19	131	175	62
IGL931	24	-4	13	11	25	33	9	87	111	22
IGL953	24	6	13	13	29	51	28	140	164	30
IGL869	25	5	6	16	23	47	16	113	138	36
IGL921	30	4	9	13	27	43	19	115	145	34
IGL928	26	15	12	20	28	47	14	136	162	53
IGL952	35	11	13	6	25	48	18	121	156	49
IGL957	19	4	17	15	28	51	16	131	150	30
IGL988	32	17	13	6	29	51	20	136	168	50
IGL969	17	20	14	13	43	48	28	166	183	68

APPENDIX C - GESTATION BODY WEIGHT AND BODY WEIGHT CHANGE
(INDIVIDUAL GESTATION BODY WEIGHT CHANGE)
(GRAMS)
TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER	GD 0-5	GD 5-8	GD 8-11	GD 11-14	GD 14-17	GD 17-20	GD 20-21	GD 5-21	GD 0-21	GD 0-21C
IGL889	33	15	21	15	20	62	15	148	181	69
IGL893	42	4	20	9	29	58	14	134	176	47
IGL885	19	10	5	7	17	54	21	114	133	25
IGL890	32	6	8	18	31	45	24	132	164	51
IGL863	31	3	11	15	27	49	27	132	163	49
IGL878	44	0	21	15	36	46	25	143	187	69
IGL882	32	6	10	15	33	43	24	131	163	49
IGL911	47	2	11	16	41	40	14	124	171	57
IGL868	31	12	7	14	41	49	23	146	177	67
IGL912	28	11	12	13	30	50	13	129	157	49
IGL913	20	10	10	16	22	36	26	120	140	53
IGL925	34	7	12	12	30	41	23	125	159	64
IGL944 NP	28	2	1	-1	13	8	1	24	52	NP
IGL871	28	1	1	12	45	37	23	119	147	58
IGL922	31	15	12	13	35	43	22	140	171	59
IGL951	24	10	8	14	32	45	14	123	147	35
IGL859	19	5	7	14	21	38	20	105	124	30
IGL943	15	22	19	13	31	53	19	157	172	70
IGL948	44	12	16	16	31	49	20	144	188	70
IGL974	23	11	10	7	4	5	4	41	64	47
IGL888	26	7	11	7	21	49	24	119	145	31
IGL976	27	3	16	5	16	21	10	71	98	56
IGL923	28	9	10	14	20	35	16	104	132	42
IGL924	37	9	13	14	22	39	14	111	148	46
IGL905 NP	18	5	-3	-7	11	2	-2	6	24	NP

APPENDIX C - GESTATION BODY WEIGHT AND BODY WEIGHT CHANGE
(INDIVIDUAL GESTATION BODY WEIGHT CHANGE)
(GRAMS)
TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER	GD 0-5	GD 5-8	GD 8-11	GD 11-14	GD 14-17	GD 17-20	GD 20-21	GD 5-21	GD 0-21	GD 0-21C
IGL870	32	7	9	11	15	46	26	114	146	56
IGL875	41	6	11	19	26	50	25	137	178	63
IGL862	35	4	7	9	27	47	8	102	137	49
IGL858	33	7	11	18	35	43	22	136	169	61
IGL883	34	3	16	10	31	41	27	128	162	53
IGL896	33	6	13	14	34	44	17	128	161	54
IGL906	33	-1	7	3	37	37	25	108	141	34
IGL861	33	8	7	15	30	43	18	121	154	47
IGL903	27	5	10	14	32	55	14	130	157	42
IGL914	30	1	10	2	35	47	21	116	146	38
IGL918	28	-1	4	11	32	38	21	105	133	32
IGL907	24	2	10	16	25	57	22	132	156	40
IGL909	27	2	10	11	36	49	18	126	153	38
IGL946	28	1	10	15	32	50	7	115	143	37
IGL954	21	7	10	18	26	50	26	137	158	43
IGL955	32	-1	13	12	26	38	19	107	139	46
IGL934	21	4	11	12	32	43	8	110	131	25
IGL973 NP	38	8	7	-18	4	-3	2	0	38	NP
IGL881	27	6	16	6	37	49	18	132	159	49
IGL917	29	7	14	15	27	51	21	135	164	49
IGL940	24	6	14	1	19	32	16	88	112	35
IGL963	29	8	16	9	27	38	21	119	148	47
IGL983 NP	24	-1	2	-4	-10	-8	2	-19	5	NP
IGL972	47	6	13	11	27	37	25	119	166	70
IGL895	23	2	13	7	21	49	23	115	138	17

APPENDIX C - GESTATION BODY WEIGHT AND BODY WEIGHT CHANGE
(INDIVIDUAL GESTATION BODY WEIGHT CHANGE)
(GRAMS)
TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER	GD 0-5	GD 5-8	GD 8-11	GD 11-14	GD 14-17	GD 17-20	GD 20-21	GD 5-21	GD 0-21	GD 0-21C
IGL866	26	-4	12	9	22	49	21	109	135	37
IGL892	38	-2	17	11	26	49	16	117	155	44
IGL864	42	-8	5	2	21	40	12	72	114	28
IGL872	34	-4	6	18	30	44	14	108	142	34
IGL873	30	0	12	10	22	41	27	112	142	44
IGL879	33	-11	10	14	35	43	6	97	130	-2
IGL884	20	-2	10	11	29	38	19	105	125	36
IGL886	30	0	11	20	26	37	20	114	144	46
IGL915 NP	37	0	2	-17	3	3	0	-9	28	NP
IGL867	33	-2	5	13	40	55	25	136	169	44
IGL898	26	15	7	11	36	47	25	141	167	59
IGL929	24	8	1	14	28	46	17	114	138	31
IGL877	21	-3	9	17	38	41	22	124	145	32
IGL937	27	-4	8	14	33	53	16	120	147	43
IGL950	25	-5	9	17	26	33	20	100	125	26
IGL958	16	6	8	10	34	48	22	128	144	39
IGL945	25	4	11	1	34	42	24	116	141	35
IGL967	34	3	14	15	38	56	20	146	180	66
IGL959	28	-6	4	17	26	56	14	111	139	35
IGL962	32	-1	8	9	21	49	18	104	136	40
IGL949	34	6	9	7	33	47	21	123	157	53
IGL916	27	2	15	13	35	38	20	123	150	63
IGL938	25	-1	10	-1	33	41	17	99	124	30
IGL961	32	1	12	18	25	54	18	128	160	53
IGL970	21	9	9	12	31	44	17	122	143	38

NOTE: NP - ANIMAL NOT PREGNANT GD - GESTATION DAY
21C (DAY 21 CORRECTED) = DAY 21 BODY WEIGHT - UTERINE WEIGHT

APPENDIX D - GESTATION FOOD CONSUMPTION
(MEAN GESTATION FOOD CONSUMPTION BY TARGET DOSE)
(SEE LIST OF ABBREVIATIONS FOR STATISTICAL SYMBOLS)
(GRAMS)

	GD 0-5	GD 5-8	GD 8-11	GD 11-14	GD 14-17	GD 17-20	GD 20-21	GD 5-20	GD 0-21
FEMALE	A-L-	A+L+	K+J+	A+L+	A-L-	A-L-	A-L-	A+L+	K+J+
0 MG/M^3									
MEAN	117.3	71.6	71.3	71.1	72.9	77.8	23.9	364.8	505.9
STD.DEV.	13.0	8.2	9.3	8.5	7.8	7.5	3.3	37.7	50.5
(N)	25	25	25	25	25	25	25	25	25
2000 MG/M^3									
MEAN	116.1	70.6	68.9	70.5	74.3	76.0	23.8	360.3	500.5
STD.DEV.	11.2	6.6	6.7	6.0	11.3	5.9	3.0	28.6	40.2
(N)	23	23	23	23	23	23	22	23	22
10,000 MG/M^3		*	*	*				*	
MEAN	116.0	65.6	64.1	65.1	68.8	73.7	23.6	337	476.5
STD.DEV.	10.6	6.1	5.8	6.4	6.2	6.4	3.0	28.3	39.6
(N)	23	23	22	22	23	23	23	22	22
20,000 MG/M^3		**	**	**				**	**
MEAN	114.7	60.3	60.0	63.5	70.3	76.5	23.2	330.6	468.5
STD.DEV.	9.4	4.6	4.6	4.6	6.5	6.7	3.8	20.8	23.5
(N)	24	24	24	24	24	24	24	24	24

NOTE: GD - GESTATION DAY

APPENDIX D - GESTATION FOOD CONSUMPTION
(INDIVIDUAL GESTATION FOOD CONSUMPTION)
(GRAMS)
TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER	GD 0-5	GD 5-8	GD 8-11	GD 11-14	GD 14-17	GD 17-20	GD 20-21
IGL897	115	66	72	67	76	84	26
IGL899	114	70	63	60	65	67	21
IGL874	116	78	77	75	75	81	27
IGL857	109	65	69	69	73	77	24
IGL865	101	71	80	66	70	75	23
IGL876	118	68	66	74	76	79	23
IGL880	130	87	87	80	81	83	25
IGL894	107	67	62	73	74	80	29
IGL902	133	83	85	81	78	80	26
IGL891	126	72	70	73	69	80	21
IGL901	111	69	69	69	72	84	23
IGL904	154	91	92	98	95	98	29
IGL910	122	75	65	72	68	73	19
IGL933	102	65	61	64	66	75	26
IGL956	114	67	69	72	74	76	23
IGL920	127	77	73	72	69	75	20
IGL931	93	52	52	52	56	56	16
IGL953	126	72	66	72	66	77	24
IGL869	111	62	61	61	62	70	22
IGL921	139	80	84	74	83	80	24
IGL928	112	69	72	76	76	76	22
IGL952	117	73	76	68	72	80	24
IGL957	115	65	67	69	71	76	22
IGL988	115	75	78	66	71	76	27
IGL969	105	71	67	75	84	88	31

APPENDIX D - GESTATION FOOD CONSUMPTION
(INDIVIDUAL GESTATION FOOD CONSUMPTION)
(GRAMS)
TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER	GD 0-5	GD 5-8	GD 8-11	GD 11-14	GD 14-17	GD 17-20	GD 20-21
IGL889	123	77	78	74	77	83	25
IGL893	133	79	79	74	79	77	24
IGL885	110	63	64	57	53	66	22
IGL890	130	73	70	75	77	79	27
IGL863	123	73	70	78	74	77	26
IGL878	134	73	74	76	83	82	26
IGL882	104	65	63	65	73	71	23
IGL911	127	74	76	75	89	86	25
IGL868	122	76	69	73	73	80	24
IGL912	107	69	66	70	68	78	21
IGL913	109	69	68	71	69	69	26
IGL925	112	69	67	71	75	76	25
IGL944 NP	100	61	61	58	62	62	22
IGL871	107	57	56	65	110	74	S
IGL922	127	78	76	77	79	79	27
IGL951	108	67	63	72	74	75	23
IGL859	105	66	58	65	64	73	21
IGL943	98	71	69	74	72	83	24
IGL948	125	79	75	72	86	85	26
IGL974	111	72	71	74	67	70	22
IGL888	111	64	64	62	64	71	23
IGL976	110	62	66	60	63	66	28
IGL923	101	64	62	64	63	69	14
IGL924	133	84	81	78	76	79	22
IGL905 NP	117	73	68	59	66	71	20

APPENDIX D - GESTATION FOOD CONSUMPTION
(INDIVIDUAL GESTATION FOOD CONSUMPTION)
(GRAMS)
TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER	GD 0-5	GD 5-8	GD 8-11	GD 11-14	GD 14-17	GD 17-20	GD 20-21
IGL870	110	67	63	62	64	69	28
IGL875	111	71	67	68	71	71	22
IGL862	107	58	59	59	68	72	21
IGL858	116	68	N	N	72	76	24
IGL883	122	68	69	67	71	74	26
IGL896	124	77	76	81	84	85	27
IGL906	113	62	62	58	69	69	22
IGL861	113	63	60	70	68	73	24
IGL903	117	69	65	71	77	84	22
IGL914	113	59	57	58	63	67	22
IGL918	107	56	55	60	60	66	20
IGL907	119	71	69	68	71	76	26
IGL909	116	62	66	64	69	75	23
IGL946	105	60	56	60	66	71	19
IGL954	137	73	70	71	74	81	30
IGL955	91	56	57	56	58	60	21
IGL934	104	58	58	61	65	69	18
IGL973 NP	109	71	68	55	54	47	19
IGL881	128	66	68	66	74	79	24
IGL917	115	65	66	71	72	84	26
IGL940	110	64	61	56	62	66	21
IGL963	125	71	72	72	76	78	27
IGL983 NP	106	59	56	50	39	40	15
IGL972	135	75	71	69	60	76	26
IGL895	129	70	64	65	68	74	24

APPENDIX D - GESTATION FOOD CONSUMPTION
(INDIVIDUAL GESTATION FOOD CONSUMPTION)
(GRAMS)
TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER	GD 0-5	GD 5-8	GD 8-11	GD 11-14	GD 14-17	GD 17-20	GD 20-21
IGL866	108	62	58	57	67	68	20
IGL892	124	64	66	63	71	72	19
IGL864	94	63	64	57	56	69	21
IGL872	139	50	53	58	66	71	18
IGL873	112	60	59	57	60	68	25
IGL879	130	62	61	65	74	67	11
IGL884	107	58	59	65	68	76	26
IGL886	120	68	64	67	72	75	25
IGL915 NP	127	66	62	48	53	51	19
IGL867	120	56	54	64	72	80	24
IGL898	119	65	63	66	75	85	25
IGL929	114	60	55	66	70	79	20
IGL877	106	54	61	66	78	77	24
IGL937	105	53	53	58	65	74	25
IGL950	115	53	51	62	69	69	20
IGL958	112	60	60	63	73	81	27
IGL945	124	64	59	62	62	70	24
IGL967	114	62	63	68	81	92	29
IGL959	117	59	58	61	65	81	23
IGL962	110	66	60	69	68	76	24
IGL949	112	66	62	62	69	79	25
IGL916	107	59	63	69	75	85	27
IGL938	117	58	58	57	69	73	23
IGL961	121	60	68	73	82	83	27
IGL970	105	65	68	69	81	86	24

NOTE: GD – GESTATION DAY NP – NOT PREGNANT
S – NOT MEASURED DUE TO EXCESS SPILLAGE N – NOT MEASURED DUE TO OVERSIGHT

APPENDIX E - GROSS POSTMORTEM OBSERVATIONS
(INCIDENCE OF GROSS POSTMORTEM OBSERVATIONS)

	FEMALES			
TARGET	0 MG/M^3	2000MG/M^3	10,000 MG/M^3	20,000 MG/M^3
TOTAL AT TERMINAL SACRIFICE (A)	25	25	25	25
NO OBSERVABLE ABNORMALITIES	25	24	24	25
UTERUS: Exuded thin brown liquid	0	1	0	0
KIDNEY: Dilated renal pelvis	0	0	1	0
URINARY BLADDER: White, hard object	0	0	1	0
NO EVIDENCE OF UTERINE IMPLANTATION SITES	0	2	2	1

APPENDIX E - GROSS POSTMORTEM OBSERVATIONS (INDIVIDUAL GROSS POSTMORTEM OBSERVATIONS)

TARGET DOSE: 0 MG/M^3

IGL897F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL899F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL874F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL857F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL865F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL876F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL880F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL894F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL902F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL891F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL901F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL904F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL910F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL933F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL956F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL920F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL931F - ALL TISSUES AND ORGANS: No observable abnormalities

APPENDIX E - GROSS POSTMORTEM OBSERVATIONS (INDIVIDUAL GROSS POSTMORTEM OBSERVATIONS)

TARGET DOSE: 0 MG/M^3 (CONT'D)

IGL953F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL869F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL921F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL928F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL952F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL957F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL988F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL969F - ALL TISSUES AND ORGANS: No observable abnormalities.

APPENDIX E - GROSS POSTMORTEM OBSERVATIONS (INDIVIDUAL GROSS POSTMORTEM OBSERVATIONS)

TARGET DOSE: 2000 MG/M^3

IGL889F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL893F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL885F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL890F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL863F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL878F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL882F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL911F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL868F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL912F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL913F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL925F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL944F - ALL TISSUES AND ORGANS: No observable abnormalities.
NOTE: No evidence of uterine implantation sites.

IGL871F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL922F - ALL TISSUES AND ORGANS: No observable abnormalities

APPENDIX E - GROSS POSTMORTEM OBSERVATIONS (INDIVIDUAL GROSS POSTMORTEM OBSERVATIONS)

TARGET DOSE: 2000 MG/M^3 (CONT'D)

IGL951F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL859F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL943F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL948F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL974F - UTERUS: Exuded moderate amount of thin brown liquid.

IGL888F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL976F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL923F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL924F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL905F - ALL TISSUES AND ORGANS: No observable abnormalities.
NOTE: No evidence of uterine implantation sites.

APPENDIX E - GROSS POSTMORTEM OBSERVATIONS (INDIVIDUAL GROSS POSTMORTEM OBSERVATIONS)

TARGET DOSE: 10,000 MG/M^3

IGL870F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL875F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL862F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL858F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL883F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL896F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL906F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL861F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL903F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL914F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL918F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL907F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL909F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL946F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL954F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL955F - ALL TISSUES AND ORGANS: No observable abnormalities.

APPENDIX E - GROSS POSTMORTEM OBSERVATIONS
(INDIVIDUAL GROSS POSTMORTEM OBSERVATIONS)

TARGET DOSE: 10000 MG/M^3 (CONT'D)

IGL934F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL973F - ALL TISSUES AND ORGANS: No observable abnormalities.
NOTE: No evidence of uterine implantation sites.

IGL881F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL917F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL940F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL963F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL983F - ALL TISSUES AND ORGANS: No observable abnormalities.
NOTE: No evidence of uterine implantation sites.

IGL972F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL895F - KIDNEY: Dilated renal pelvis, Both.
URINARY BLADDER: Object in bladder, 1.0 x 0.9 x 0.7 cm, white, hard.

APPENDIX E - GROSS POSTMORTEM OBSERVATIONS (INDIVIDUAL GROSS POSTMORTEM OBSERVATIONS)

TARGET DOSE: 20,000 MG/M^3

IGL866F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL892F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL864F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL872F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL873F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL879F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL884F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL886F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL915F - ALL TISSUES AND ORGANS: No observable abnormalities.
NOTE: No evidence of uterine implantation sites.

IGL867F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL898F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL929F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL877F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL937F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL950F - ALL TISSUES AND ORGANS: No observable abnormalities.

APPENDIX E - GROSS POSTMORTEM OBSERVATIONS (INDIVIDUAL GROSS POSTMORTEM OBSERVATIONS)

TARGET DOSE: 20,000 MG/M^3 (CONT'D)

IGL958F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL945F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL967F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL959F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL962F - ALL TISSUES AND ORGANS: No observable abnormalities

IGL949F - ALL TISSUES AND ORGANS: No observable abnormalities

IGL916F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL938F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL961F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGL970F - ALL TISSUES AND ORGANS: No observable abnormalities.

APPENDIX F - UTERINE IMPLANTATION DATA
(MEAN UTERINE IMPLANTATION DATA BY TARGET DOSE)
(SEE LIST OF ABBREVIATIONS FOR STATISTICAL SYMBOLS AND ABBREVIATIONS)

FEMALE	Total Live K-J-	Male Fetuses A+L-Q+	Female Fetuses A-L-	Resorptions A-L-	Implantation Sites KJ	Corpora Lutea KJ+	Total Dead K-J-	Fetuses/ Implantation A-L-	Resorptions/ Implantation A-L-
0 MG/M^3									
MEAN	15.36	7.84	7.52	0.28	15.68	16.32	0.04	0.98	0.02
STD.DEV.	1.78	2.1	2.18	0.61	1.82	1.99	0.2	0.04	0.04
(N)	25	25	25	25	25	25	25	25	25
2000 MG/M^3		**			*	*			
MEAN	13.13	5.91	7.22	0.17	13.30	14.04	0	0.99	0.01
STD.DEV.	3.62	2.37	2.68	0.49	3.66	3.54	0	0.03	0.03
(N)	23	23	23	23	23	23	23	23	23
10,000 MG/M^3									
MEAN	14.22	7.13	7.09	0.39	14.61	14.91	0	0.97	0.03
STD.DEV.	1.98	2.14	2.27	0.58	1.8	1.78	0	0.05	0.05
(N)	23	23	23	23	23	23	23	23	23
20,000 MG/M^3						*			
MEAN	14.38	6.42	7.96	0.29	14.71	15.13	0	0.98	0.02
STD.DEV.	2.12	1.53	2.07	0.55	2.07	2.66	0	0.04	0.04
(N)	24	24	24	24	24	24	24	24	24

APPENDIX F - UTERINE IMPLANTATION DATA
(MEAN UTERINE IMPLANTATION DATA BY TARGET DOSE)
(SEE LIST OF ABBREVIATIONS FOR STATISTICAL SYMBOLS AND ABBREVIATIONS)

	Dead/ Implantation	F/I Tran	R/I Tran	D/I Tran	% Preimplant Loss	% Postimplant Loss	Total Malformations	Total Variations	Total Affected
FEMALE	K-J-	A-L-	A-L-	K-J-	K-J-	A-L-	K-J-	AL-	A-L-
0 MG/M^3									
MEAN	0	80.49092	9.2078	7.594	3.7	1.9	0.12	1.0	0.4
STD.DEV.	0	4.194734	4.05511	1.6	5.3	3.8	0.44	1.2	0.7
(N)	25	25	25	25	25	25	25	25	25
2000 MG/M^3									
MEAN	0	79.880609	10.119957	8.843	5.4	1.2	0.17	1.0	0.3
STD.DEV.	0	5.653898	5.653812	4.763	11.2	3.4	0.83	1.0	1.1
(N)	23	23	23	23	23	23	23	23	23
10,000 MG/M^3									
MEAN	0	79.428044	10.572435	7.562	2.0	2.8	0.13	0.7	0.5
STD.DEV.	0	4.716547	4.716461	0.501	3.2	4.6	0.46	0.7	0.8
(N)	23	23	23	23	23	23	23	23	23
20,000 MG/M^3									
MEAN	0	79.9575	9.704375	7.542	2.3	2.3	0.08	1.6	0.4
STD.DEV.	0	4.151503	3.962848	0.503	4.1	3.8	0.28	1.2	0.6
(N)	24	24	24	24	24	24	24	24	24

APPENDIX F - UTERINE IMPLANTATION DATA
(INDIVIDUAL UTERINE IMPLANTATION DATA)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)
TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER	Live	Male	Female	Resorp	Implants	CL	Dead	Mal	Var
IGL897	18	11	7	0	18	18	0	0	2
IGL899	14	7	7	1	15	16	0	0	0
IGL874	17	11	6	0	17	17	0	0	1
IGL857	16	6	10	0	16	16	0	0	0
IGL865	15	4	11	0	15	15	0	1	2
IGL876	14	9	5	0	15	15	1	0	0
IGL880	15	9	6	0	15	16	0	0	1
IGL894	15	7	8	0	15	17	0	0	1
IGL902	15	7	8	2	17	17	0	0	1
IGL891	17	10	7	1	18	18	0	0	2
IGL901	17	5	12	1	18	22	0	0	0
IGL904	19	12	7	0	19	19	0	0	0
IGL910	15	8	7	0	15	16	0	0	1
IGL933	11	6	5	0	11	12	0	0	1
IGL956	14	9	5	0	14	14	0	0	1
IGL920	16	6	10	0	16	18	0	0	0
IGL931	13	9	4	0	13	14	0	0	2
IGL953	18	10	8	0	18	18	0	0	5
IGL869	14	8	6	0	14	16	0	0	0
IGL921	15	6	9	0	15	15	0	0	0
IGL928	14	8	6	0	14	14	0	0	2
IGL952	14	8	6	2	16	17	0	0	0
IGL957	16	4	12	0	16	16	0	0	1
IGL988	15	8	7	0	15	15	0	2	2
IGL969	17	8	9	0	17	17	0	0	0

APPENDIX F - UTERINE IMPLANTATION DATA
(INDIVIDUAL UTERINE IMPLANTATION DATA)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)
TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER	F/I Tran	R/I Tran	D/I Tran
IGL897	83.232	6.768	6.7681
IGL899	75.037	14.963	7.4176
IGL874	83.035	6.965	6.9653
IGL857	82.82	7.181	7.1808
IGL865	82.583	7.418	7.4176
IGL876	75.037	7.418	14.9633
IGL880	82.583	7.418	7.4176
IGL894	82.583	7.418	7.4176
IGL902	69.941	20.06	6.9653
IGL891	76.367	13.633	6.7681
IGL901	76.367	13.633	6.7681
IGL904	83.414	6.587	6.5868
IGL910	82.583	7.418	7.4176
IGL933	81.33	8.671	8.6708
IGL956	82.321	7.679	7.6795
IGL920	82.82	7.181	7.1808
IGL931	82.029	7.971	7.9712
IGL953	83.232	6.768	6.7681
IGL869	82.321	7.679	7.6795
IGL921	82.583	7.418	7.4176
IGL928	82.321	7.679	7.6795
IGL952	69.296	20.705	7.1808
IGL957	82.82	7.181	7.1808
IGL988	82.583	7.418	7.4176
IGL969	83.035	6.965	6.9653

APPENDIX F - UTERINE IMPLANTATION DATA
(INDIVIDUAL UTERINE IMPLANTATION DATA)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)
TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER	Live	Male	Female	Resorp	Implants	CL	Dead	Mal	Var
IGL889	14	8	6	0	14	14	0	0	1
IGL893	17	9	8	0	17	17	0	0	2
IGL885	14	6	8	0	14	14	0	0	0
IGL890	15	8	7	0	15	16	0	0	0
IGL863	16	3	13	0	16	16	0	0	3
IGL878	16	11	5	0	16	18	0	0	3
IGL882	16	6	10	0	16	16	0	0	0
IGL911	14	5	9	1	15	15	0	4	3
IGL868	14	6	8	0	14	14	0	0	0
IGL912	15	8	7	0	15	15	0	0	1
IGL913	11	5	6	0	11	11	0	0	0
IGL925	13	6	7	0	13	13	0	0	0
IGL944 NP									
IGL871	11	8	3	0	11	12	0	0	1
IGL922	15	7	8	0	15	18	0	0	0
IGL951	15	7	8	0	15	16	0	0	0
IGL859	12	6	6	2	14	14	0	0	1
IGL943	13	5	8	0	13	13	0	0	1
IGL948	15	7	8	1	16	16	0	0	2
IGL974	1	0	1	0	1	1	0	0	1
IGL888	15	5	10	0	15	16	0	0	0
IGL976	5	3	2	0	5	10	0	0	1
IGL923	12	4	8	0	12	12	0	0	1
IGL924	13	3	10	0	13	16	0	0	1
IGL905 NP									

APPENDIX F - UTERINE IMPLANTATION DATA
(INDIVIDUAL UTERINE IMPLANTATION DATA)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)
TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER	F/I Tran	R/I Tran	D/I Tran
IGL889	82.321	7.679	7.6795
IGL893	83.035	6.965	6.9653
IGL885	82.321	7.679	7.6795
IGL890	82.583	7.418	7.4176
IGL863	82.820	7.181	7.1808
IGL878	82.820	7.181	7.1808
IGL882	82.820	7.181	7.1808
IGL911	75.037	14.963	7.4176
IGL868	82.321	7.679	7.6795
IGL912	82.583	7.418	7.4176
IGL913	81.330	8.671	8.6708
IGL925	82.029	7.971	7.9712
IGL944 NP			
IGL871	81.330	8.671	8.6708
IGL922	82.583	7.418	7.4176
IGL951	82.583	7.418	7.4176
IGL859	67.793	22.208	7.6795
IGL943	82.029	7.971	7.9712
IGL948	75.523	14.478	7.1808
IGL974	60.000	30.000	30.0002
IGL888	82.583	7.418	7.4176
IGL976	77.079	12.921	12.921
IGL923	81.702	8.299	8.299
IGL924	82.029	7.971	7.9712
IGL905 NP			

APPENDIX F - UTERINE IMPLANTATION DATA
(INDIVIDUAL UTERINE IMPLANTATION DATA)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)
TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER	Live	Male	Female	Resorp	Implants	CL	Dead	Mal	Var
IGL870	12	6	6	1	13	13	0	0	0
IGL875	16	11	5	0	16	16	0	0	0
IGL862	11	4	7	0	11	12	0	0	0
IGL858	15	6	9	1	16	16	0	0	0
IGL883	16	5	11	1	17	17	0	2	1
IGL896	14	10	4	1	15	15	0	1	2
IGL906	14	7	7	1	15	16	0	0	1
IGL861	14	5	9	0	14	15	0	0	1
IGL903	16	7	9	0	16	16	0	0	2
IGL914	14	8	6	1	15	16	0	0	1
IGL918	14	9	5	0	14	14	0	0	1
IGL907	16	6	10	0	16	17	0	0	1
IGL909	16	6	10	0	16	16	0	0	0
IGL946	15	10	5	0	15	15	0	0	0
IGL954	15	6	9	0	15	16	0	0	2
IGL955	13	5	8	0	13	14	0	0	1
IGL934	14	10	4	0	14	14	0	0	0
IGL973 NP									
IGL881	14	4	10	1	15	15	0	0	1
IGL917	16	8	8	0	16	16	0	0	0
IGL940	9	6	3	2	11	11	0	0	1
IGL963	13	7	6	0	13	13	0	0	1
IGL983 NP									
IGL972	12	7	5	0	12	12	0	0	0
IGL895	18	11	7	0	18	18	0	0	0

APPENDIX F - UTERINE IMPLANTATION DATA
(INDIVIDUAL UTERINE IMPLANTATION DATA)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)
TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER	F/I Tran	R/I Tran	D/I Tran
IGL870	73.898	16.102	7.9712
IGL875	82.820	7.181	7.1808
IGL862	81.330	8.671	8.6708
IGL858	75.523	14.478	7.1808
IGL883	75.964	14.036	6.9653
IGL896	75.037	14.963	7.4176
IGL906	75.037	14.963	7.4176
IGL861	82.321	7.679	7.6795
IGL903	82.820	7.181	7.1808
IGL914	75.037	14.963	7.4176
IGL918	82.321	7.679	7.6795
IGL907	82.820	7.181	7.1808
IGL909	82.820	7.181	7.1808
IGL946	82.583	7.418	7.4176
IGL954	82.583	7.418	7.4176
IGL955	82.029	7.971	7.9712
IGL934	82.321	7.679	7.6795
IGL973 NP			
IGL881	75.037	14.963	7.4176
IGL917	82.820	7.181	7.1808
IGL940	64.761	25.240	8.6708
IGL963	82.029	7.971	7.9712
IGL983 NP			
IGL972	81.702	8.299	8.299
IGL895	83.232	6.768	6.7681

APPENDIX F - UTERINE IMPLANTATION DATA
(INDIVIDUAL UTERINE IMPLANTATION DATA)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)
TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER	Live	Male	Female	Resorp	Implants	CL	Dead	Mal	Var
IGL866	12	5	7	0	12	12	0	1	1
IGL892	15	9	6	0	15	15	0	0	1
IGL864	12	8	4	0	12	12	0	0	1
IGL872	16	5	11	0	16	16	0	0	2
IGL873	13	4	9	0	13	14	0	0	1
IGL879	21	9	12	0	21	25	0	0	2
IGL884	12	7	5	0	12	13	0	0	2
IGL886	13	8	5	1	14	15	0	0	3
IGL915 NP									
IGL867	17	7	10	1	18	19	0	0	1
IGL898	16	7	9	0	16	16	0	0	0
IGL929	15	8	7	0	15	15	0	0	1
IGL877	16	8	8	0	16	16	0	0	1
IGL937	15	7	8	0	15	15	0	0	1
IGL950	14	6	8	0	14	14	0	0	3
IGL958	15	5	10	0	15	16	0	0	0
IGL945	15	4	11	0	15	15	0	0	1
IGL967	15	7	8	2	17	17	0	0	0
IGL959	13	6	7	1	14	14	0	0	3
IGL962	13	7	6	1	14	15	0	0	4
IGL949	14	4	10	0	14	14	0	0	4
IGL916	11	5	6	1	12	12	0	0	1
IGL938	12	5	7	0	13	13	0	1	3
IGL961	15	7	8	0	15	15	0	0	0
IGL970	15	6	9	0	15	15	0	0	2

APPENDIX F - UTERINE IMPLANTATION DATA
(INDIVIDUAL UTERINE IMPLANTATION DATA)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)
TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER	F/I Tran	R/I Tran	D/I Tran
IGL866	81.702	8.299	8.299
IGL892	82.583	7.418	7.4176
IGL864	81.702	8.299	8.299
IGL872	82.820	7.181	7.1808
IGL873	82.029	7.971	7.9712
IGL879	83.737	6.264	6.264
IGL884	81.702	8.299	8.299
IGL886	74.499	15.501	7.6795
IGL915 NP			
IGL867	76.367	13.633	6.7681
IGL898	82.820	7.181	7.1808
IGL929	82.583	7.418	7.4176
IGL877	82.820	7.181	7.1808
IGL937	82.583	7.418	7.4176
IGL950	82.321	7.679	7.6795
IGL958	82.583	7.418	7.4176
IGL945	82.583	7.418	7.4176
IGL967	69.941	20.06	6.9653
IGL959	74.499	15.501	7.6795
IGL962	74.499	15.501	7.6795
IGL949	82.321	7.679	7.6795
IGL916	73.222	16.779	8.299
IGL938	73.898	7.971	7.9712
IGL961	82.583	7.418	7.4176
IGL970	82.583	7.418	7.4176

NOTE: NP - ANIMAL NOT PREGNANT

APPENDIX G - FETAL BODY WEIGHTS

MEAN FETAL WEIGHT AND LEAST SQUARES MEAN FETAL WEIGHT

Exposure Group (mg/m^3)	n litters	n fetuses	observed fetus mean (gm)	Least squares fetus mean (gm)
0	25	385	5.29	5.32
2,000	23	302	5.33	5.29
10,000	23	327	5.29	5.29
20,000	24	345	5.13	5.16

MEAN FETAL BODY WEIGHTS BY SEX

	MALES	FEMALES
0 MG/M^3		
MEAN	5.40	5.17
STD. DEV.	0.43	0.42
(N)	25	25
2000 MG/M^3		
MEAN	5.50	5.19
STD. DEV.	0.35	0.38
(N)	22	23
10,000 MG/M^3		
MEAN	5.41	5.17
STD. DEV.	0.44	0.33
(N)	23	23
20,000 MG/M^3		
MEAN	5.29	5.01
STD. DEV.	0.46	0.37
(N)	24	24

APPENDIX G - INDIVIDUAL AND MEAN FETAL BODY WEIGHT AND LITTER WEIGHTS (GRAMS)
TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER	SEX												Litter Weights Litter		Fetus Weight Males	Fetus Weight Females
IGL897	M	5.21	5.11	5.33	5.36	5.42	6.31	5.29	5.22	5.34	5.38	5.33	95.02	Mean	5.39	5.10
IGL897	F	4.94	4.94	5.20	5.43	4.91	5.20	5.10						S.D.	0.32	0.19
IGL899	M	5.11	5.73	5.61	4.77	5.29	5.05	5.11					70.89	Mean	5.24	4.89
IGL899	F	5.08	4.59	4.85	4.99	4.82	4.88	5.01						S.D.	0.33	0.16
IGL874	M	5.35	5.84	5.46	5.64	5.34	5.69	5.96	5.59	5.22	5.72	5.04	91.92	Mean	5.53	5.18
IGL874	F	5.24	5.47	5.24	5.05	4.88	5.19							S.D.	0.28	0.20
IGL857	M	5.70	5.41	5.94	5.49	5.54	5.93						88.57	Mean	5.67	5.46
IGL857	F	5.24	5.32	5.21	5.30	5.32	5.38	5.80	5.70	5.81	5.48			S.D.	0.23	0.23
IGL865	M	5.31	5.61	5.41	4.90								76.16	Mean	5.31	4.99
IGL865	F	4.84	4.74	4.98	5.16	4.84	5.39	4.98	5.07	4.72	5.22	4.99		S.D.	0.30	0.21
IGL876	M	3.77	3.99	4.97	4.91	5.08	5.12	5.33	4.61	5.18			69.38	Mean	4.77	4.40
IGL876	F	4.76	1.96	4.72	4.69	5.08	5.21							S.D.	0.55	1.22
IGL880	M	5.80	6.03	6.08	5.48	5.57	5.64	6.11	5.99	6.11			87.14	Mean	5.87	5.72
IGL880	F	5.49	5.49	5.52	5.83	6.12	5.88							S.D.	0.25	0.26
IGL894	M	5.79	5.90	6.04	5.81	6.02	5.99	5.86					84.81	Mean	5.92	5.43
IGL894	F	5.51	5.66	5.47	5.17	5.48	5.62	5.11	5.38					S.D.	0.10	0.20
IGL902	M	5.41	5.66	5.80	5.51	5.44	5.21	4.73					79.53	Mean	5.39	5.22
IGL902	F	5.01	5.30	5.41	5.07	5.24	5.11	5.27	5.36					S.D.	0.35	0.14
IGL891	M	5.26	5.15	5.07	5.02	4.87	5.01	5.00	4.87	5.22	5.38		85.76	Mean	5.09	4.99
IGL891	F	4.80	5.08	5.26	5.20	4.73	4.96	4.88						S.D.	0.17	0.20
IGL901	M	5.38	5.12	5.01	5.41	5.38							87.14	Mean	5.26	5.07
IGL901	F	5.11	4.90	4.99	5.09	5.16	5.03	5.14	5.13	5.34	5.03	4.99	4.93	S.D.	0.18	0.12
IGL904	M	5.75	5.63	5.43	5.82	5.64	5.20	5.43	4.70	5.57	5.23	5.33	5.29	102.59	Mean	5.42	5.37
IGL904	F	5.00	5.48	5.69	5.44	5.42	5.43	5.11						S.D.	0.30	0.23
IGL910	M	4.94	5.65	5.43	5.45	5.82	5.58	5.86	5.99				81.94	Mean	5.59	5.32
IGL910	F	4.98	5.30	5.78	5.18	5.55	5.20	5.23						S.D.	0.33	0.27
IGL933	M	5.59	5.84	6.22	5.82	6.42	6.01						64.28	Mean	5.98	5.68
IGL933	F	5.49	5.67	5.55	5.93	5.74								S.D.	0.30	0.17
IGL956	M	5.68	5.46	5.70	5.76	4.05	5.88	5.57	5.33	5.38			75.84	Mean	5.42	5.41
IGL956	F	5.75	5.28	5.57	5.52	4.91								S.D.	0.55	0.32

APPENDIX G - INDIVIDUAL AND MEAN FETAL BODY WEIGHT AND LITTER WEIGHTS (GRAMS)
TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER	SEX													Litter Weights Litter		Fetus Weight Males	Fetus Weight Females
IGL920	M	5.70	5.44	4.97	5.60	5.73	5.23							82.39	Mean	5.45	4.97
IGL920	F	4.59	5.18	4.85	5.12	4.90	5.13	5.30	4.44	5.29	4.92				S.D.	0.30	0.29
IGL931	M	4.88	5.16	5.16	5.47	4.97	4.77	5.11	4.91	4.80				64.44	Mean	5.03	4.80
IGL931	F	4.29	4.78	5.33	4.81										S.D.	0.22	0.42
IGL953	M	5.30	5.50	5.59	5.49	5.92	5.75	5.25	5.39	5.31	5.19			94.66	Mean	5.47	5.00
IGL953	F	4.75	4.78	4.89	5.00	5.15	5.28	5.42	4.70						S.D.	0.23	0.26
IGL869	M	5.32	5.17	5.18	5.25	5.15	5.73	5.72	5.70					72.70	Mean	5.40	4.91
IGL869	F	4.99	5.09	4.99	4.60	4.77	5.04								S.D.	0.27	0.19
IGL921	M	5.31	5.33	5.47	5.33	5.46	5.27							77.92	Mean	5.36	5.08
IGL921	F	5.48	5.22	4.98	4.79	4.91	5.12	4.90	4.91	5.44					S.D.	0.08	0.25
IGL928	M	5.15	4.40	5.00	5.35	5.29	5.53	5.84	5.38					73.50	Mean	5.24	5.26
IGL928	F	5.11	5.09	5.61	5.22	5.15	5.38								S.D.	0.42	0.20
IGL952	M	5.31	5.80	5.58	5.16	5.44	5.50	5.31	5.46					75.03	Mean	5.45	5.25
IGL952	F	4.84	5.45	5.12	5.20	5.41	5.45								S.D.	0.19	0.24
IGL957	M	5.54	5.87	5.82	5.60									86.24	Mean	5.71	5.28
IGL957	F	5.04	5.22	5.27	5.19	5.15	5.13	5.85	5.97	5.29	5.19	5.17	4.94		S.D.	0.16	0.31
IGL988	M	5.76	5.63	5.94	3.76	5.73	5.99	6.46	5.74					85.34	Mean	5.63	5.76
IGL988	F	5.35	5.77	5.84	5.50	6.39	5.76	5.72							S.D.	0.80	0.33
IGL969	M	4.78	4.91	4.92	4.98	4.99	4.84	4.92	5.05					82.50	Mean	4.92	4.79
IGL969	F	4.39	4.59	5.17	4.48	5.20	4.62	4.94	4.87	4.85					S.D.	0.09	0.29

NOTE: NP- NOT PREGNANT

APPENDIX G - INDIVIDUAL AND MEAN FETAL BODY WEIGHT AND LITTER WEIGHTS (GRAMS)
TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER	SEX														Litter Weights Litter		Fetus Weight Males	Fetus Weight Females
IGL889	M	5.89	5.99	5.76	6.14	5.70	5.93	5.48	5.84						78.76	Mean	5.84	5.34
IGL889	F	4.86	5.53	5.74	5.83	4.86	5.21									S.D.	0.20	0.43
IGL893	M	6.08	5.89	4.56	5.76	6.07	5.45	5.36	5.72	5.46					93.84	Mean	5.59	5.44
IGL893	F	5.64	5.47	4.96	5.34	5.38	5.57	5.67	5.46							S.D.	0.47	0.23
IGL885	M	5.81	5.60	5.92	5.59	4.59	5.41								76.56	Mean	5.49	5.46
IGL885	F	5.78	5.59	5.05	5.36	5.72	5.67	5.05	5.42							S.D.	0.47	0.29
IGL890	M	5.47	5.39	5.63	5.73	5.68	5.97	5.55	5.56						81.50	Mean	5.62	5.22
IGL890	F	5.54	5.35	5.55	5.04	5.02	4.70	5.32								S.D.	0.18	0.31
IGL863	M	5.30	5.73	5.48											81.63	Mean	5.50	5.01
IGL863	F	5.00	5.34	5.08	4.77	5.33	4.86	5.19	5.04	5.02	4.91	4.92	4.84	4.82		S.D.	0.22	0.19
IGL878	M	5.34	5.74	5.39	5.77	5.17	5.42	5.13	5.58	5.29	5.60	5.97			85.51	Mean	5.49	5.02
IGL878	F	4.84	5.46	5.07	5.02	4.72										S.D.	0.26	0.28
IGL882	M	5.38	5.59	5.03	5.18	5.52	5.28								80.82	Mean	5.33	4.88
IGL882	F	5.05	5.11	4.80	5.06	4.72	4.91	4.57	4.61	5.14	4.87					S.D.	0.21	0.21
IGL911	M	5.07	5.45	5.47	5.63	5.50									71.88	Mean	5.42	4.97
IGL911	F	5.21	5.51	2.65	5.39	5.39	5.27	5.12	4.91	5.31						S.D.	0.21	0.89
IGL868	M	5.18	5.37	5.58	5.77	5.12	5.46								71.66	Mean	5.41	4.90
IGL868	F	5.45	5.15	5.16	5.22	4.40	4.82	4.32	4.66							S.D.	0.24	0.41
IGL912	M	5.25	5.18	5.58	5.43	5.11	5.18	5.28	5.22						76.83	Mean	5.28	4.94
IGL912	F	4.53	5.28	4.85	5.01	4.95	5.13	4.85								S.D.	0.15	0.24
IGL913	M	5.72	5.72	5.99	5.27	5.62									60.64	Mean	5.66	5.39
IGL913	F	5.09	5.65	5.57	5.12	5.16	5.73									S.D.	0.26	0.29
IGL925	M	5.50	5.39	5.52	5.52	5.57	5.00								68.75	Mean	5.42	5.18
IGL925	F	5.13	5.37	5.06	5.20	5.49	5.06	4.94								S.D.	0.21	0.19
IGL944 NP																		
IGL944NP																		
IGL871	M	5.44	5.22	5.07	6.02	5.45	5.74	5.60	5.25						59.16	Mean	5.47	5.12
IGL871	F	5.05	5.30	5.02												S.D.	0.31	0.15
IGL922	M	5.51	5.50	5.79	5.56	5.76	5.50	5.78							81.86	Mean	5.63	5.31
IGL922	F	5.11	5.32	5.18	5.08	5.45	5.36	5.31	5.65							S.D.	0.14	0.19

APPENDIX G - INDIVIDUAL AND MEAN FETAL BODY WEIGHT AND LITTER WEIGHTS (GRAMS)
TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER	SEX											Litter Weights Litter		Fetus Weight Males	Fetus Weight Females
IGL951	M	5.49	5.19	5.49	5.66	5.33	5.35	5.56				80.74	Mean	5.44	5.33
IGL951	F	5.30	5.51	5.30	5.59	5.34	5.31	5.28	5.04				S.D.	0.16	0.16
IGL859	M	5.64	5.75	5.66	6.06	5.58	5.38					66.02	Mean	5.68	5.33
IGL859	F	5.51	5.46	5.24	5.57	5.27	4.90						S.D.	0.22	0.25
IGL943	M	5.52	5.64	4.67	5.39	5.20						68.12	Mean	5.28	5.21
IGL943	F	5.31	5.27	5.38	5.34	5.02	5.14	5.05	5.19				S.D.	0.38	0.13
IGL948	M	5.79	5.83	6.39	5.61	5.85	6.08	5.36				86.40	Mean	5.84	5.69
IGL948	F	5.26	5.61	5.85	5.52	5.95	5.84	5.87	5.59				S.D.	0.33	0.23
IGL974	M											4.66	Mean		4.66
IGL974	F	4.66											S.D.		
IGL888	M	5.00	5.76	5.38	5.22	6.02						80.85	Mean	5.48	5.35
IGL888	F	5.41	5.32	5.85	5.44	5.29	4.86	5.13	5.31	5.43	5.43		S.D.	0.41	0.25
IGL976	M	5.32	5.15	4.79								25.45	Mean	5.09	5.10
IGL976	F	5.09	5.10										S.D.	0.27	0.01
IGL923	M	5.72	5.32	3.81	5.63							60.72	Mean	5.12	5.03
IGL923	F	4.94	5.39	5.02	5.19	5.05	5.34	5.46	3.85				S.D.	0.89	0.51
IGL924	M	5.59	5.42	4.78								67.67	Mean	5.26	5.19
IGL924	F	5.40	5.32	5.40	5.21	5.16	4.47	5.00	5.33	5.44	5.15		S.D.	0.43	0.29
IGL905 NP															
IGL905 NP															

NOTE: NP- NOT PREGNANT

APPENDIX G - INDIVIDUAL AND MEAN FETAL BODY WEIGHT AND LITTER WEIGHTS (GRAMS)
TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER	SEX												Litter Weights Litter		Fetus Weight Males	Fetus Weight Females
IGL870	M	5.64	5.42	5.57	5.38	5.15	5.55						63.34	Mean	5.45	5.11
IGL870	F	5.03	4.90	5.24	5.17	5.07	5.22							S.D.	0.18	0.13
IGL875	M	5.08	5.23	5.64	5.39	5.00	5.23	5.72	5.38	5.42	5.39	4.84	83.52	Mean	5.30	5.04
IGL875	F	5.04	5.18	4.94	4.88	5.16								S.D.	0.26	0.13
IGL862	M	5.30	6.05	5.86	6.06								61.86	Mean	5.82	5.51
IGL862	F	5.66	5.42	5.66	5.71	5.30	5.42	5.42						S.D.	0.36	0.16
IGL858	M	4.97	4.65	5.10	5.03	5.40	5.03						74.46	Mean	5.03	4.92
IGL858	F	5.00	4.77	4.79	4.78	4.77	4.96	5.24	4.90	5.07				S.D.	0.24	0.16
IGL883	M	4.88	4.99	5.21	4.76	5.02							78.10	Mean	4.97	4.84
IGL883	F	4.49	4.79	4.81	4.73	4.85	4.73	5.17	5.11	4.97	4.59	5.00		S.D.	0.17	0.21
IGL896	M	5.41	5.32	5.26	5.54	5.72	5.51	5.27	5.48	5.91	5.65		75.99	Mean	5.51	5.23
IGL896	F	5.16	5.29	5.11	5.36									S.D.	0.21	0.12
IGL906	M	5.56	5.60	5.98	5.44	5.43	5.67	5.88					77.22	Mean	5.65	5.38
IGL906	F	5.49	5.26	5.66	5.12	5.57	5.47	5.09						S.D.	0.21	0.22
IGL861	M	5.72	5.08	5.33	5.37	2.55							73.26	Mean	4.81	5.47
IGL861	F	5.04	5.38	5.80	5.75	5.09	5.42	5.64	5.39	5.70				S.D.	1.28	0.28
IGL903	M	5.52	5.52	5.38	5.57	5.32	5.19	5.39					83.52	Mean	5.41	5.07
IGL903	F	5.07	5.12	5.01	5.27	5.10	4.94	5.00	4.87	5.25				S.D.	0.13	0.13
IGL914	M	5.18	5.44	5.82	5.71	5.80	5.53	5.79	5.46				76.84	Mean	5.59	5.35
IGL914	F	5.22	5.26	5.50	5.30	5.39	5.44							S.D.	0.23	0.11
IGL918	M	5.63	5.79	5.44	5.18	5.65	5.39	5.12	5.10	5.55			74.17	Mean	5.43	5.06
IGL918	F	4.52	5.38	5.29	4.97	5.16								S.D.	0.25	0.34
IGL907	M	6.18	5.36	5.77	5.24	5.58	5.72						85.71	Mean	5.64	5.19
IGL907	F	5.04	5.60	5.09	5.19	5.37	5.03	4.98	4.99	5.14	5.43			S.D.	0.33	0.21
IGL909	M	4.36	5.06	5.17	5.66	5.58	4.94						81.48	Mean	5.13	5.07
IGL909	F	4.59	5.12	5.22	4.99	5.24	5.19	5.50	4.72	5.04	5.10			S.D.	0.47	0.26
IGL946	M	5.35	5.09	5.38	5.04	5.63	5.43	5.49	5.24	4.90	5.36		77.80	Mean	5.29	4.98
IGL946	F	5.22	5.08	4.82	4.61	5.16								S.D.	0.22	0.26
IGL954	M	6.11	5.58	5.83	6.07	5.83	5.27						82.44	Mean	5.78	5.31
IGL954	F	5.44	5.50	5.51	5.38	3.45	5.55	5.80	5.49	5.63				S.D.	0.32	0.71

APPENDIX G - INDIVIDUAL AND MEAN FETAL BODY WEIGHT AND LITTER WEIGHTS (GRAMS)
TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER	SEX												Litter Weights Litter		Fetus Weight Males	Fetus Weight Females
IGL955	M	5.43	4.81	5.40	5.44	5.67							67.58	Mean	5.35	5.10
IGL955	F	5.02	5.28	4.82	5.12	4.72	4.89	5.33	5.65					S.D.	0.32	0.31
IGL934	M	5.33	5.81	5.76	5.45	5.77	5.20	4.98	5.41	5.49	5.79		75.30	Mean	5.50	5.08
IGL934	F	4.90	5.16	5.42	4.83									S.D.	0.28	0.27
IGL973 NP																
IGL973 NP																
IGL881	M	5.53	5.73	5.19	5.29								75.29	Mean	5.44	5.36
IGL881	F	4.89	5.05	5.70	5.84	5.29	5.52	5.46	5.26	5.29	5.25			S.D.	0.24	0.28
IGL917	M	4.94	4.93	4.60	4.81	5.08	5.03	5.37	4.95				77.94	Mean	4.96	4.78
IGL917	F	4.48	4.95	4.96	4.98	4.77	5.02	4.49	4.58					S.D.	0.22	0.23
IGL940	M	5.78	5.92	5.83	6.18	5.95	6.17						53.40	Mean	5.97	5.86
IGL940	F	5.75	5.89	5.93										S.D.	0.17	0.09
IGL963	M	5.83	5.82	5.64	5.43	5.57	5.52	5.92					72.02	Mean	5.68	5.38
IGL963	F	5.45	5.46	5.20	5.46	5.39	5.33							S.D.	0.18	0.10
IGL983 NP																
IGL983 NP																
IGL972	M	5.43	5.78	5.93	5.49	5.69	5.37	5.80					66.02	Mean	5.64	5.31
IGL972	F	5.31	5.49	5.19	5.24	5.30								S.D.	0.21	0.11
IGL895	M	4.94	5.02	5.14	5.20	5.85	5.53	5.69	5.54	5.64	4.88	3.42	92.67	Mean	5.17	5.12
IGL895	F	5.15	4.92	5.22	4.90	5.34	5.21	5.08						S.D.	0.67	0.16

NOTE: NP- NOT PREGNANT

APPENDIX G - INDIVIDUAL AND MEAN FETAL BODY WEIGHT AND LITTER WEIGHTS (GRAMS)
TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER	SEX													Litter Weights Litter		Fetus Weight Males	Fetus Weight Females
IGL866	M	6.04	6.29	6.19	6.06	5.80								69.71	Mean	6.08	5.62
IGL866	F	5.58	6.00	5.61	5.88	4.79	5.89	5.58							S.D.	0.18	0.40
IGL892	M	5.56	5.37	5.46	5.29	5.64	5.29	5.25	5.30	5.42				78.99	Mean	5.40	5.07
IGL892	F	4.55	5.73	5.06	5.03	5.06	4.98								S.D.	0.13	0.38
IGL864	M	5.00	5.24	4.98	5.38	5.46	5.17	5.35	5.58					62.27	Mean	5.27	5.03
IGL864	F	5.17	5.05	5.10	4.79										S.D.	0.21	0.17
IGL872	M	4.86	4.84	4.99	4.67	3.53								74.02	Mean	4.58	4.65
IGL872	F	4.32	4.72	4.73	4.66	4.73	4.30	4.70	4.39	5.08	4.88	4.62			S.D.	0.60	0.24
IGL873	M	5.55	5.77	5.45	5.86									70.15	Mean	5.66	5.28
IGL873	F	5.27	5.21	5.16	5.36	5.37	5.70	5.16	5.28	5.01					S.D.	0.19	0.19
IGL879	M	4.68	4.87	4.91	5.09	5.10	5.02	4.73	4.58	4.66				96.13	Mean	4.85	4.37
IGL879	F	4.18	4.20	4.70	4.31	4.61	4.35	4.08	4.35	4.53	4.44	4.32	4.42		S.D.	0.20	0.18
IGL884	M	5.38	5.57	5.32	5.86	5.87	5.56	5.63						65.27	Mean	5.60	5.22
IGL884	F	5.24	5.44	4.87	5.48	5.05									S.D.	0.21	0.26
IGL886	M	5.37	5.12	5.44	5.47	5.23	6.00	5.78	5.26					69.68	Mean	5.46	5.20
IGL886	F	5.24	5.07	5.41	5.03	5.26									S.D.	0.30	0.15
IGL915 NP																	
IGL915 NP																	
IGL867	M	5.52	5.49	5.30	5.41	5.37	5.61	5.25						87.97	Mean	5.42	5.00
IGL867	F	4.03	5.33	5.23	5.32	4.82	4.95	5.24	4.98	4.96	5.16				S.D.	0.13	0.38
IGL898	M	3.86	4.95	5.35	5.38	5.06	5.30	4.99						77.98	Mean	4.98	4.79
IGL898	F	4.78	4.43	4.76	4.77	4.74	4.59	4.91	5.00	5.11					S.D.	0.53	0.20
IGL929	M	5.15	4.94	4.93	5.31	5.29	3.98	5.77	5.19					74.25	Mean	5.07	4.81
IGL929	F	5.00	4.96	4.88	4.52	4.97	4.66	4.70							S.D.	0.51	0.19
IGL877	M	5.14	4.99	5.19	5.00	4.98	5.07	5.13	5.09					79.87	Mean	5.07	4.91
IGL877	F	5.18	4.74	5.17	4.73	5.15	4.62	4.99	4.70						S.D.	0.08	0.24
IGL937	M	5.58	4.74	5.06	4.34	5.21	4.89	4.83						74.00	Mean	4.95	4.92
IGL937	F	4.85	4.74	4.90	4.69	5.33	5.10	5.03	4.71						S.D.	0.39	0.22
IGL950	M	5.32	5.52	5.91	5.41	5.58	5.53							73.98	Mean	5.55	5.09
IGL950	F	5.00	5.39	4.97	5.18	5.09	5.06	5.17	4.85						S.D.	0.20	0.16

APPENDIX G - INDIVIDUAL AND MEAN FETAL BODY WEIGHT AND LITTER WEIGHTS (GRAMS)
TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER	SEX											Litter Weights Litter		Fetus Weight Males	Fetus Weight Females
IGL958	M	4.78	5.64	4.99	4.95	5.19						74.73	Mean	5.11	4.92
IGL958	F	4.42	4.97	4.88	4.82	4.89	5.25	5.12	5.35	4.82	4.66		S.D.	0.33	0.27
IGL945	M	4.98	5.45	5.46	5.52							77.07	Mean	5.35	5.06
IGL945	F	5.28	5.30	4.89	5.31	5.19	5.19	4.88	4.93	4.72	5.19	4.78	S.D.	0.25	0.22
IGL967	M	5.50	6.08	5.96	5.18	5.62	5.55	5.47				81.81	Mean	5.62	5.31
IGL967	F	5.13	5.36	5.30	5.37	5.13	5.37	5.25	5.54				S.D.	0.31	0.14
IGL959	M	5.55	6.09	6.09	5.54	5.82	5.30					72.74	Mean	5.73	5.48
IGL959	F	5.28	5.76	5.72	5.53	5.58	5.16	5.32					S.D.	0.32	0.23
IGL962	M	4.45	3.14	5.20	4.82	5.19	5.49	5.06				62.04	Mean	4.76	4.78
IGL962	F	4.61	4.54	5.06	4.97	4.45	5.06						S.D.	0.79	0.28
IGL949	M	5.47	5.39	5.76	5.15							71.89	Mean	5.44	5.01
IGL949	F	5.08	4.87	5.21	5.16	4.49	4.82	5.08	5.11	5.16	5.14		S.D.	0.25	0.22
IGL916	M	5.58	5.95	6.25	5.87	5.33						60.32	Mean	5.80	5.22
IGL916	F	5.06	5.46	5.15	4.46	5.46	5.75						S.D.	0.35	0.45
IGL938	M	5.82	5.61	5.57	5.63	5.74						66.70	Mean	5.67	5.48
IGL938	F	5.69	5.28	5.43	5.40	5.77	5.62	5.14					S.D.	0.10	0.23
IGL961	M	5.43	4.93	5.52	5.22	5.11	4.87	5.06				75.29	Mean	5.16	4.89
IGL961	F	4.62	4.80	4.59	5.09	4.79	5.09	4.98	5.19				S.D.	0.24	0.23
IGL970	M	4.95	5.04	5.34	5.05	5.20	4.94					74.00	Mean	5.09	4.83
IGL970	F	4.88	4.90	4.83	4.79	4.84	4.77	4.98	4.88	4.61			S.D.	0.16	0.10

NOTE: NP- NOT PREGNANT

APPENDIX H - FETAL OBSERVATIONS
(INCIDENCE OF FETAL OBSERVATIONS)

TARGET DOSE:	0 MG/M^3	2000 MG/M^3	10,000 MG/M^3	20,000 MG/M^3
TOTAL FETUSES WITH EXTERNAL VARIATIONS	0/385	2/302	0/327	0/345
TOTAL LITTERS WITH EXTERNAL VARIATIONS	[0/25]	[2/23]	[0/23]	[0/24]
TOTAL FETUSES WITH EXTERNAL MALFORMATIONS	1/385	2/302	2/327	0/345
TOTAL LITTERS WITH EXTERNAL MALFORMATIONS	[1/25]	[1/23]	[1/23]	[0/24]
TOTAL FETUSES WITH VISCERAL VARIATIONS	1/192	0/151	1/162	0/175
TOTAL LITTERS WITH VISCERAL VARIATIONS	[1/25]	[0/23]	[1/23]	[0/24]
TOTAL FETUSES WITH VISCERAL MALFORMATIONS	0/192	1/151	0/162	1/175
TOTAL LITTERS WITH VISCERAL MALFORMATIONS	[0/25]	[1/23]	[0/23]	[1/24]
TOTAL FETUSES WITH SKELETAL VARIATIONS	24/193	21/153	15/165	38/170
TOTAL LITTERS WITH SKELETAL VARIATIONS	[15/25]	[13/23]	[13/23]	[20/24]
TOTAL FETUSES WITH SKELETAL MALFORMATIONS	2/193	1/153	1/165	1/170
TOTAL LITTERS WITH SKELETAL MALFORMATIONS	[2/25]	[1/23]	[1/23]	[1/24]
EXTERNAL EXAMINATIONS				
- TOTAL FETUSES EXAMINED:	385	302	327	345
- TOTAL LITTERS EXAMINED:	[25]	[23]	[23]	[24]
INDIVIDUAL EXTERNAL OBSERVATIONS				
STUNTED (<4.0 grams)	4	3	3	4
	[2]	[2]	[3]	[4]
EDEMA HEAD	0	1	0	0
	[0]	[1]	[0]	[0]

APPENDIX H - FETAL OBSERVATIONS
(INCIDENCE OF FETAL OBSERVATIONS)

TARGET DOSE:	0 MG/M^3	2000 MG/M^3	10,000 MG/M^3	20,000 MG/M^3
INDIVIDUAL EXTERNAL VARIATIONS				
PROTRUDING TONGUE	0	2	0	0
	[0]	[2]	[0]	[0]
INDIVIDUAL EXTERNAL MALFORMATIONS				
MALROTATED HINDPAW	1	2	2	0
	[1]	[1]	[1]	[0]
ADACTYLY	0	1	0	0
	[0]	[1]	[0]	[0]
CLEFT PALATE	0	1	0	0
	[0]	[1]	[0]	[0]
ECTRODACTYLY	0	1	0	0
	[0]	[1]	[0]	[0]
HOOKED TAIL	0	1	0	0
	[0]	[1]	[0]	[0]
MICROCEPHALY	0	1	0	0
	[0]	[1]	[0]	[0]
SHORT TAIL	0	1	0	0
	[0]	[1]	[0]	[0]

APPENDIX H - FETAL OBSERVATIONS
(INCIDENCE OF FETAL OBSERVATIONS)

TARGET DOSE:	0 MG/M^3	2000 MG/M^3	10,000 MG/M^3	20,000 MG/M^3
VISCERAL EXAMINATIONS				
- TOTAL FETUSES EXAMINED:	192	151	162	175
- TOTAL LITTERS EXAMINED:	[25]	[23]	[23]	[24]
INDIVIDUAL VISCERAL VARIATIONS				
UMBILICAL ARTERY ARISES FROM LEFT SIDE OF	1	0	1	0
URINARY BLADDER	[1]	[0]	[1]	[0]
INDIVIDUAL VISCERAL MALFORMATIONS				
MALPOSITIONED KIDNEY	0	1	0	0
	[0]	[1]	[0]	[0]
RETINA FOLD	0	0	0	1
	[0]	[0]	[0]	[1]
SKELETAL EXAMINATIONS				
- TOTAL FETUSES EXAMINED:	193	153	165	170
- TOTAL LITTERS EXAMINED:	[25]	[23]	[23]	[24]
INDIVIDUAL OSSIFICATION VARIATIONS				
STERNEBRAE				
ASYMMETRIC	0	2	1	1
	[0]	[2]	[1]	[1]
BIFID	0	1	0	0
	[0]	[1]	[0]	[0]
HYPOPLASTIC	1	1	0	2
	[1]	[1]	[0]	[1]

APPENDIX H - FETAL OBSERVATIONS
(INCIDENCE OF FETAL OBSERVATIONS)

TARGET DOSE:	0 MG/M^3	2000 MG/M^3	10,000 MG/M^3	20,000 MG/M^3
INDIVIDUAL OSSIFICATION VARIATIONS (CONT'D)				
STERNEBRAE (CONT'D)				
UNOSSIFIED	1	6	4	1
	[1]	[4]	[4]	[1]
RIBS				
RUDIMENTARY LUMBAR	16	11	8	29
	[12]	[8]	[7]	[16]
SHORT LAST THORACIC	3	1	1	0
	[3]	[1]	[1]	[0]
VERTEBRAE				
THORACIC CENTRA BIFID	4	0	0	3
	[3]	[0]	[0]	[3]
THORACIC CENTRA DUMBBELL SHAPED	1	0	0	2
	[1]	[0]	[0]	[2]
EXTRA PRESACRAL	0	0	0	1
	[0]	[0]	[0]	[1]

APPENDIX H - FETAL OBSERVATIONS
(INCIDENCE OF FETAL OBSERVATIONS)

TARGET DOSE:	0 MG/M^3	2000 MG/M^3	10,000 MG/M^3	20,000 MG/M^3
INDIVIDUAL CARTILAGINOUS STRUCTURAL VARIATIONS				
VERTEBRAE ANLAGE				
THORACIC CENTRA DUMBBELL SHAPED	2	1	1	4
	[1]	[1]	[1]	[3]
INDIVIDUAL OSSIFICATION MALFORMATIONS				
SKULL				
MULTIPLE BONES MALFORMED	0	1	0	0
	[0]	[1]	[0]	[0]
STERNEBRAE				
FUSED	1	0	0	0
	[1]	[0]	[0]	[0]
FOREPAW				
MULTIPLE BONES ABSENT	0	1	0	0
	[0]	[1]	[0]	[0]
RIBS				
MULTIPLE BONES MALFORMED	0	1	0	0
	[0]	[1]	[0]	[0]
VERTEBRAE				
LUMBAR ARCH MALFORMED	1	0	0	1
	[1]	[0]	[0]	[1]
SACRAL ARCH MALFORMED	0	0	1	0
	[0]	[0]	[1]	[0]
MULTIPLE VERTEBRAE MALFORMED	0	1	0	0
	[0]	[1]	[0]	[0]

APPENDIX H - FETAL OBSERVATIONS
(INCIDENCE OF FETAL OBSERVATIONS)

TARGET DOSE:	0 MG/M^3	2000 MG/M^3	10,000 MG/M^3	20,000 MG/M^3
INDIVIDUAL OSSIFICATION MALFORMATIONS (CONT'D)				
HINDPAW				
MULTIPLE BONES ABSENT	0	1	0	0
	[0]	[1]	[0]	[0]
INDIVIDUAL CARTILAGINOUS MALFORMATIONS				
RIBS ANLAGE				
FUSED	1	0	0	0
	[1]	[0]	[0]	[0]

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL897

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 2 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	F	+			+
3	A	F	+	+	+	
4	A	M	+			+
5	A	M	+	+	+	
6	A	M	+			+
7	A	M	+	+	+	
8	A	F	+			+
9C	A	F	+	+	+	
10	A	M	+			+
11	A	F	+	+	+	
12	A	M	+			+
13	A	F	+	+	+	
14	A	M	+			+
15	A	M	+	+	+	
16	A	F	+			(b)
17	A	M	+	+	+	
18	A	M	+			(a)

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Left
(b) - SKELETAL/VERTEBRAE (T11): Bifid centra

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL899

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	F	+			+
3	A	M	+	+	+	
4	A	F	+			+
5	A	F	+	+	+	
6	A	F	+			+
E						
7	A	F	+	+	+	
8C	A	F	+			+
9	A	M	+	+	+	
10	A	M	+			+
11	A	M	+	+	+	
12	A	M	+			+
13	A	M	+	+	+	
14	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL874

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	F	+	+	+	
3	A	M	+			+
4	A	M	+	+	+	
5	A	M	+			+
6	A	F	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9C	A	M	+			+
10	A	M	+	+	+	
11	A	F	+			+
12	A	F	+	+	+	
13	A	F	+			+
14	A	M	+	+	+	
15	A	M	+			+
16	A	M	+	+	+	
17	A	F	+			(a)

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Bilateral

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL857

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	M	+			+
3	A	F	+	+	+	
4	A	F	+			+
5	A	F	+	+	+	
6	A	F	+			+
7	A	F	+	+	+	
8	A	F	+			+
9C	A	M	+	+	+	
10	A	F	+			+
11	A	M	+	+	+	
12	A	M	+			+
13	A	F	+	+	+	
14	A	F	+			+
15	A	F	+	+	+	
16	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL865

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 2 MALFORMATIONS: 1

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3	A	M	+	+	+	
4	A	F	+			(a)
5	A	F	+	+	+	
6	A	F	+			+
7C	A	M	+	+	+	
8	A	F	+			+
9	A	F	+	+	+	
10	A	F	+			+
11	A	M	+	+	+	
12	A	M	+			(b,C)
13	A	F	+	+	+	
14	A	F	+			+
15	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Left
(b) - SKELETAL/RIBS (T13): Short last rib; Right
(C) - SKELETAL/VERTEBRAE (L6): Malformed arch; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL876

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1*	A	M	+			+
2*	A	M	+	+	+	
3	A	F	+			+
4*	D	F	+	+	+	
5	A	M	+			+
6	A	F	+	+	+	
7	A	F	+			+
8	A	M	+	+	+	
9	A	M	+			+
10C	A	M	+	+	+	
11	A	F	+			+
12	A	F	+	+	+	
13	A	M	+			+
14	A	M	+	+	+	
15	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
* - Stunted

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL880

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			(a)
2	A	F	+	+	+	
3	A	M	+			+
4	A	M	+	+	+	
5	A	F	+			+
6	A	M	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9	A	F	+			+
10	A	M	+	+	+	
11C	A	F	+			+
12	A	M	+	+	+	
13	A	M	+			+
14	A	F	+	+	+	
15	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Bilateral

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL894

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			+
2	A	F	+	+	+	
3	A	M	+			+
4	A	M	+	+	+	
5	A	M	+			+
6	A	M	+	+	+	
7	A	M	+			+
8	A	F	+	+	+	
9C	A	F	+			(a)
10	A	M	+	+	+	
11	A	M	+			+
12	A	F	+	+	+	
13	A	F	+			+
14	A	F	+	+	+	
15	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (T13): Short last rib; Right

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL902

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			(a)
2	A	M	+	+	+	
3	A	M	+			+
4	A	F	+	+	+	
E						
EC						
5	A	F	+			+
6	A	F	+	+	+	
7	A	F	+			+
8	A	M	+	+	+	
9	A	M	+			+
10	A	M	+	+	+	
11	A	F	+			+
12	A	F	+	+	+	
13	A	M	+			+
14	A	F	+	+	+	
15	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL891

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 2 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	M	+			+
3	A	F	+	+	+	
E						
4	A	F	+			+
5C	A	M	+	+	+	
6	A	F	+			+
7	A	M	+	+	+	
8	A	M	+			(b)
9	A	M	+	+	+	
10	A	F	+			(a)
11	A	M	+	+	+	
12	A	M	+			+
13	A	M	+	+	+	
14	A	F	+			+
15	A	F	+	+	+	
16	A	M	+			+
17	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/STERNEBRAE (II): Hypoplastic
(b) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL901

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	F	+			+
3	A	F	+	+	+	
4	A	M	+			+
5	A	M	+	+	+	
6	A	F	+			+
7	A	M	+	+	+	
8C	A	F	+			+
9	A	F	+	+	+	
10	A	F	+			+
E						
11	A	F	+	+	+	
12	A	F	+			+
13	A	M	+	+	+	
14	A	F	+			+
15	A	F	+	+	+	
16	A	F	+			+
17	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL904

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	M	+	+	+	
3	A	M	+			+
4	A	M	+	+	+	
5	A	M	+			+
6	A	F	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9C	A	F	+			+
10	A	F	+	+	+	
11	A	F	+			+
12	A	F	+	+	+	
13	A	F	+			+
14	A	M	+	+	+	
15	A	M	+			+
16	A	M	+	+	+	
17	A	F	+			+
18	A	M	+	+	+	
19	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL910

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	M	+	+	+	
3	A	F	+			+
4	A	M	+	+	+	
5	A	M	+			+
6	A	M	+	+	+	
7	A	F	+			+
8	A	M	+	+	+	
9C	A	M	+			+
10	A	M	+	+	+	
11	A	F	+			+
12	A	F	+	+	+	
13	A	F	+			+
14	A	F	+	+	+	
15	A	F	+			(a)

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE: Fetus numbers 7, 9, 11, and 13 found with identification tags detached, numbers arbitrarily assigned for skeletal exams.
(a) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL933

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			(a)
3	A	M	+	+	+	
4	A	F	+			+
5	A	M	+	+	+	
6	A	M	+			+
7	A	F	+	+	+	
8	A	M	+			+
9C	A	M	+	+	+	
10	A	M	+			+
11	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/STERNEBRAE (V): Unossified

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL956

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	F	+	+	+	
3	A	M	+			(a)
4	A	F	+	+	+	
5	A	M	+			+
6C	A	M	+	+	+	
7	A	M	+			+
8	A	F	+	+	+	
9	A	M	+			+
10	A	M	+	+	+	
11	A	F	+			+
12	A	M	+	+	+	
13	A	F	+			+
14	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL920

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			+
2	A	F	+	+	+	
3	A	F	+			+
4	A	F	+	+	+	
5	A	F	+			+
6	A	M	+	+	+	
7	A	F	+			+
8	A	M	+	+	+	
9	A	M	+			+
10	A	F	+	+	+	
11C	A	F	+			+
12	A	F	+	+	+	
13	A	M	+			+
14	A	F	+	+	+	
15	A	M	+			+
16	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL931

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 2 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	M	+			(a,c)
3	A	M	+	+	+	
4	A	F	+			+
5	A	M	+	+	+	
6C	A	F	+			+
7	A	M	+	+	+	
8	A	M	+			+
9	A	M	+	+	+	
10	A	M	+			(b,d)
11	A	F	+	+	+	
12	A	M	+			+
13	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/VERTEBRAE (T11): Bifid centra
(b) - SKELETAL/VERTEBRAE (T12): Bifid centra
(c) - SKELETAL/VERTEBRAE (T11 anlage): Dumbbell shaped centra
(d) - SKELETAL/VERTEBRAE (T12 anlage): Dumbbell shaped centra

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL953

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 5 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			(a)
3	A	M	+	+	+	
4	A	F	+			+
5	A	M	+	+	+	
6	A	F	+			+
7	A	F	+	+	+	
8	A	M	+			(b)
9	A	M	+	+	+	
10	A	F	+			(a)
11C	A	F	+	+	+	
12	A	M	+			+
13	A	M	+	+	+	
14	A	M	+			+
15	A	M	+	+	+	
16	A	M	+			(a)
17	A	F	+	+	+	
18	A	M	+			(a)

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Bilateral
(b) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL869

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3	A	M	+	+	+	
4	A	M	+			+
5	A	M	+	+	+	
6	A	F	+			+
7	A	M	+	+	+	
8	A	M	+			+
9C	A	F	+	+	+	
10	A	M	+			+
11	A	F	+	+	+	
12	A	M	+			+
13	A	M	+	+	+	
14	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL921

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	M	+			+
3	A	F	+	+	+	
4	A	F	+			+
5	A	F	+	+	+	
6	A	F	+			+
7C	A	M	+	+	+	
8	A	F	+			+
9	A	M	+	+	+	
10	A	M	+			+
11	A	M	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	
14	A	F	+			+
15	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL928

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 1 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	F	+	+	+	
3	A	M	+			+
4	A	M	+	+	(a)	
5	A	F	+			+
6	A	M	+	+	+	
7	A	F	+			+
8	A	M	+	+	+	
9	A	F	+			+
10	A	M	+	+	+	
11C	A	M	+			+
12	A	M	+	+	+	
13	A	F	+			(b)
14	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - ABDOMEN/THORAX: Umbilical artery arises from left side of urinary bladder
(b) - SKELETAL/RIBS (L1): Rudimentary; Right

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL952

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	M	+	+	+	
E						
3	A	F	+			+
4	A	M	+	+	+	
5	A	F	+			+
6	A	F	+	+	+	
E						
7	A	F	+			+
8C	A	M	+	+	+	
9	A	M	+			+
10	A	M	+	+	+	
11	A	F	+			+
12	A	F	+	+	+	
13	A	M	+			+
14	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL957

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	M	+			+
3	A	F	+	+	+	
4	A	F	+			+
5	A	F	+	+	+	
6	A	F	+			+
7C	A	F	+	+	+	
8	A	F	+			+
9	A	F	+	+	+	
10	A	M	+			+
11	A	M	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	
14	A	F	+			(a)
15	A	M	+	+	+	
16	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Right

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL988

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 1
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 2 MALFORMATIONS: 1

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			+
2	A	M	+	+	+	
3	A	M	+			+
4	A	M	+	+	+	
5*	A	M	+			(B,C,d,f,g,h)
6	A	F	+	+	+	
7	A	F	+			(e)
8	A	F	+	+	+	
9C	A	M	+			+
10	A	F	(A)	+	+	
11	A	M	+			+
12	A	F	+	+	+	
13	A	M	+			+
14	A	M	+	+	+	
15	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
* - Stunted
(A) - EXTERNAL: Malrotated hindpaw; Right
(B) - SKELETAL/STERNEBRAE (IV-VI): Fused
(C) - SKELETAL/RIBS (T1-2 anlage): Fused; Right
(d) - SKELETAL/RIBS (L1): Rudimentary; Bilateral
(e) - SKELETAL/RIBS (T13): Short last rib; Right
(f) - SKELETAL/VERTEBRAE (T1): Bifid centra
(g) - SKELETAL/VERTEBRAE (T2): Dumbbell shaped centra
(h) - SKELETAL/VERTEBRAE (T9): Dumbbell shaped centra

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER: IGL969

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3	A	F	+	+	+	
4	A	M	+			+
5	A	M	+	+	+	
6C	A	F	+			+
7	A	F	+	+	+	
8	A	M	+			+
9	A	M	+	+	+	
10	A	F	+			+
11	A	M	+	+	+	
12	A	F	+			+
13	A	M	+	+	+	
14	A	M	+			+
15	A	F	+	+	+	
16	A	F	+			+
17	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL889

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3	A	M	+	+	+	
4	A	M	+			+
5	A	F	+	+	+	
6	A	F	+			+
7	A	F	+	+	+	
8C	A	M	+			(a)
9	A	F	+	+	+	
10	A	M	+			+
11	A	M	+	+	+	
12	A	M	+			+
13	A	M	+	+	+	
14	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/VERTEBRAE (T11 anlage): Dumbbell shaped centra

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL893

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 2 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	M	+			+
3	A	F	+	+	+	
4	A	F	+			+
5C	A	F	+	+	+	
6	A	M	+			(a)
7	A	F	+	+	+	
8	A	M	+			+
9	A	F	+	+	+	
10	A	M	+			+
11	A	M	+	+	+	
12	A	F	+			+
13	A	M	+	+	+	
14	A	M	+			+
15	A	F	+	+	+	
16	A	F	+			(b)
17	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/STERNEBRAE (II-IV): Asymmetric
(b) - SKELETAL/RIBS (L1): Rudimentary; Right

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL885

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	M	+			+
3	A	F	+	+	+	
4	A	M	+			+
5	A	F	+	+	+	
6C	A	F	+			+
7	A	F	+	+	+	
8	A	F	+			+
9	A	F	+	+	+	
10	A	M	+			+
11	A	F	+	+	+	
12	A	F	+			+
13	A	M	+	+	+	
14	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL890

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	F	+	+	+	
3	A	M	+			+
4	A	F	+	+	+	
5	A	M	+			+
6	A	M	+	+	+	
7	A	F	+			+
8C	A	M	+	+	+	
9	A	M	+			+
10	A	F	+	+	+	
11	A	F	+			+
12	A	M	+	+	+	
13	A	F	+			+
14	A	F	+	+	+	
15	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL863

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 3 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3	A	F	+	+	+	
4	A	F	+			+
5	A	M	+	+	+	
6	A	M	+			(a)
7	A	F	+	+	+	
8	A	F	+			+
9C	A	F	+	+	+	
10	A	F	+			(a)
11	A	M	+	+	+	
12	A	F	+			(a)
13	A	F	+	+	+	
14	A	F	+			+
15	A	F	+	+	+	
16	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/STERNEBRAE (V) - Unossified

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL878

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 3 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			+
2	A	F	+	+	+	
3	A	M	+			(c)
4	A	M	+	+	+	
5	A	M	+			+
6	A	F	+	+	+	
7	A	M	+			(c)
8	A	F	+	+	+	
9	A	M	+			+
10	A	M	+	+	+	
11	A	M	+			(a,b)
12C	A	F	+	+	+	
13	A	M	+			+
14	A	M	+	+	+	
15	A	M	+			+
16	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/STERNEBRAE (I, II): Bifid
(b) - SKELETAL/STERNEBRAE (III, IV): Asymmetric
(c) - SKELETAL/RIBS (L1): Rudimentary; Bilateral

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL882

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			+
2	A	F	+	+	+	
3	A	F	+			+
4	A	F	+	+	+	
5	A	M	+			+
6	A	F	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9C	A	M	+			+
10	A	F	+	+	+	
11	A	M	+			+
12	A	F	+	+	+	
13	A	F	+			+
14	A	F	+	+	+	
15	A	F	+			+
16	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL911

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 1 MALFORMATIONS: 2
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 1
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 3 MALFORMATIONS: 1

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3*	A	F	(A,B,c,D,E,F,H,I)		(J)	(K,L,m,n,O,Q,R)
4	A	M	(G)			+
5	A	F	+	+	+	
6	A	F	+			+
7	A	M	+	+	+	
8C	A	M	+			(p)
9	A	M	+	+	+	
10	A	F	+			+
E						
11	A	M	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	
14	A	F	+			(p)

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
* - Stunted
(A) - EXTERNAL: Cleft palate
(B) - EXTERNAL: Microcephaly
(c) - EXTERNAL: Protruding tongue
(D) - EXTERNAL: Adactyly forepaw; Bilateral
(E) - EXTERNAL: Ectrodactyly hindpaw; Bilateral (2 digits on each paw)
(F) - EXTERNAL: Malrotated hindpaw; Left
(G) - EXTERNAL: Malrotated hindpaw; Right
(H) - EXTERNAL: Short tail
(I) - EXTERNAL: Hooked tail
(J) - ABDOMEN/THORAX: Malpositioned kidney; Bilateral
(K) - SKELETAL/SKULL: Multiple bones malformed
(L) - SKELETAL/FOREPAW: Multiple bones absent
(m) - SKELETAL/STERNEBRAE (III): Hypoplastic
(n) - SKELETAL/STERNEBRAE (IV,V):Unossified
(O) - SKELETAL/RIBS: Multiple bones malformed
(p) - SKELETAL/RIBS (L1): Rudimentary; Left
(Q) - SKELETAL/VERTEBRAE: Multiple bones malformed
(R) - SKELETAL/HINDPAW: Multiple bones absent

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL868

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	F	+	+	+	
3	A	F	+			+
4	A	M	+	+	+	
5	A	F	+			+
6	A	F	+	+	+	
7	A	F	+			+
8C	A	M	+	+	+	
9	A	F	+			+
10	A	M	+	+	+	
11	A	F	+			+
12	A	F	+	+	+	
13	A	M	+			+
14	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL912

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			(a)
2	A	M	+	+	+	
3	A	M	+			+
4	A	F	+	+	+	
5	A	F	+			+
6C	A	F	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9	A	M	+			+
10	A	M	+	+	+	
11	A	F	+			+
12	A	F	+	+	+	
13	A	M	+			+
14	A	F	+	+	+	
15	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL913

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3	A	F	+	+	+	
4	A	M	+			+
5	A	F	+	+	+	
6	A	F	+			+
7C	A	M	+	+	+	
8	A	M	+			+
9	A	F	+	+	+	
10	A	M	+			+
11	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL925

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3	A	M	+	+	+	
4	A	M	+			+
5C	A	M	+	+	+	
6	A	M	+			+
7	A	F	+	+	+	
8	A	F	+			+
9	A	F	+	+	+	
10	A	M	+			+
11	A	M	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL871

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	M	+			+
3	A	F	+	+	+	
4	A	M	+			(a)
5	A	M	+	+	+	
6C	A	M	+			+
7	A	F	+	+	+	
8	A	M	+			+
9	A	M	+	+	+	
10	A	M	+			+
11	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/STERNEBRAE (V): Unossified

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL922

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	M	+	+	+	
3	A	F	+			+
4	A	F	+	+	+	
5	A	F	+			+
6	A	F	+	+	+	
7	A	F	+			+
8	A	M	+	+	+	
9C	A	M	+			+
10	A	M	+	+	+	
11	A	M	+			+
12	A	M	+	+	+	
13	A	F	+			+
14	A	F	+	+	+	
15	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL951

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	F	+			+
3	A	F	+	+	+	
4	A	F	+			+
5	A	M	+	+	+	
6	A	M	+			+
7	A	M	+	+	+	
8C	A	F	+			+
9	A	M	+	+	+	
10	A	M	+			+
11	A	M	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	
14	A	F	+			+
15	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL859

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	F	+			+
3	A	M	+	+	+	
E						
4	A	F	+			+
5	A	M	+	+	+	
6C	A	F	+			+
7	A	M	+	+	+	
8	A	M	+			+
9	A	F	+	+	+	
10	A	M	+			+
11	A	F	+	+	+	
E						
12	A	F	+			(a)

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE: Fetus numbers 8, 10 and 12 found with identification tags incorrectly numbered, numbers arbitrarily assigned for skeletal exams.
(a) - SKELETAL/RIBS (L1): Rudimentary; Right

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL943

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3	A	F	+	+	+	
4	A	F	+			+
5	A	M	+	+	+	
6	A	F	+			+
7C	A	F	+	+	+	
8	A	M	+			+
9	A	F	+	+	+	
10	A	M	+			+
11	A	M	+	+	+	
12	A	M	+			(a)
13	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL948

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 2 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			+
2	A	F	+	+	+	
3	A	F	+			+
4	A	M	+	+	+	
5	A	F	+			+
6	A	F	+	+	+	
7	A	M	+			+
8C	A	M	+	+	+	
E						
9	A	F	+			(a)
10	A	M	+	+	+	
11	A	M	+			(a)
12	A	F	+	+	+	
13	A	M	+			+
14	A	M	+	+	+	
15	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Right

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL974

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 1 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1C	A	F	(*,a)		+	+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
* - Edema head
(a) - EXTERNAL: Protruding tongue

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL888

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	F	+	+	+	
3	A	M	+			+
4	A	F	+	+	+	
5	A	M	+			+
6	A	F	+	+	+	
7	A	F	+			+
8	A	F	+	+	+	
9	A	F	+			+
10	A	M	+	+	+	
11	A	F	+			+
12C	A	F	+	+	+	
13	A	F	+			+
14	A	M	+	+	+	
15	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL976

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	F	+	+	+	
3C	A	M	+			(a)
4	A	M	+	+	+	
5	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (T13): Short last rib; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL923

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	M	+			+
3	A	M	+	+	+	
4	A	F	+			+
5C	A	F	+	+	+	
6	A	F	+			+
7	A	F	+	+	+	
8	A	F	+			+
9	A	F	+	+	+	
10*	A	M	+			(a)
11*	A	F	+	+	+	
12	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
* - Stunted
(a) - SKELETAL/STERNEBRAE (V): Unossified

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER: IGL924

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SFX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			+
2	A	F	+	+	+	
3C	A	M	+			+
4	A	F	+	+	+	
5	A	F	+			+
6	A	F	+	+	+	
7	A	M	+			+
8	A	F	+	+	+	
9	A	F	+			+
10	A	F	+	+	+	
11	A	F	+			+
12	A	M	+	+	+	
13	A	F	+			(a)

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Bilateral

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL870

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			+
2	A	M	+	+	+	
3	A	F	+			+
4	A	F	+	+	+	
5	A	M	+			+
6	A	M	+	+	+	
7C	A	F	+			+
8	A	M	+	+	+	
9	A	F	+			+
10	A	M	+	+	+	
11	A	M	+			+
E						
12	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL875

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	M	+			+
3	A	M	+	+	+	
4	A	M	+			+
5	A	M	+	+	+	
6	A	M	+			+
7C	A	M	+	+	+	
8	A	M	+			+
9	A	F	+	+	+	
10	A	F	+			+
11	A	F	+	+	+	
12	A	M	+			+
13	A	M	+	+	+	
14	A	M	+			+
15	A	F	+	+	+	
16	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE: Fetus numbers 10 and 14 found with identification tags detached, numbers arbitrarily assigned for skeletal exams.

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL862

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	F	+	+	+	
3	A	F	+			+
4	A	M	+	+	+	
5	A	F	+			+
6	A	M	+	+	+	
7C	A	M	+			+
8	A	F	+	+	+	
9	A	F	+			+
10	A	F	+	+	+	
11	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL858

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	F	+	+	+	
3	A	M	+			+
4	A	F	+	+	+	
5	A	F	+			+
6	A	M	+	+	+	
7	A	F	+			+
8	A	M	+	+	+	
9	A	F	+			+
10C	A	F	+	+	+	
E						
11	A	M	+			+
12	A	F	+	+	+	
13	A	M	+			+
14	A	F	+	+	+	
15	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL883

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 2
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	M	+			+
3	A	F	+	+	+	
4	A	F	(A)			+
5	A	F	+	+	+	
6	A	F	+			+
7	A	M	(A)	+	+	
8	A	M	+			+
9	A	F	+	+	+	
10C	A	M	+			+
11	A	F	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	
E						
14	A	F	+			+
15	A	M	+	+	+	
16	A	F	+			(b)

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(A) - EXTERNAL: Malrotated hindpaw; Left
(b) - SKELETAL/STERNEBRAE (V): Unossified

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL896

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 2 MALFORMATIONS: 1

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			(a)
2	A	M	+	+	+	
E						
3	A	M	+			+
4	A	F	+	+	+	
5	A	F	+			+
6	A	M	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9C	A	M	+			(a, B)
10	A	M	+	+	+	
11	A	M	+			+
12	A	M	+	+	+	
13	A	F	+			+
14	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Left
(B) - SKELETAL/VERTEBRAE (S1): Malformed arch; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL906

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	M	+	+	+	
3	A	M	+			+
4	A	F	+	+	+	
5	A	F	+			+
6C	A	F	+	+	+	
7	A	M	+			(a)
8	A	F	+	+	+	
E						
9	A	M	+			+
10	A	F	+	+	+	
11	A	M	+			+
12	A	F	+	+	+	
13	A	M	+			+
14	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL861

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	M	+			+
3	A	F	+	+	+	
4	A	M	+			+
5	A	F	+	+	+	
6	A	F	+			+
7	A	F	+	+	+	
8	A	M	+			+
9C	A	F	+	+	+	
10	A	F	+			+
11	A	F	+	+	+	
12	A	F	+			+
13	A	M	+	+	+	
14*	A	M	+			(a)

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
* - Stunted
(a) - SKELETAL/STERNEBRAE (VI) – Unossified

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL903

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 1 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3	A	M	+	+	+	
4	A	M	+			+
5	A	M	+	+	+	
6	A	M	+			+
7	A	F	+	+	+	
8	A	F	+			+
9C	A	F	+	+	(a)	
10	A	F	+			(b)
11	A	M	+	+	+	
12	A	M	+			+
13	A	F	+	+	+	
14	A	F	+			+
15	A	F	+	+	+	
16	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - ABDOMEN/THORAX: Umbilical artery arises from left side of urinary bladder
(b) - SKELETAL/STERNEBRAE (V) – Unossified

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL914

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	F	+	+	+	
3	A	M	+			+
4	A	F	+	+	+	
5	A	F	+			+
6	A	M	+	+	+	
7	A	M	+			+
8	A	F	+	+	+	
9	A	M	+			(a)
EC						
10	A	M	+	+	+	
11	A	F	+			+
12	A	F	+	+	+	
13	A	M	+			+
14	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/STERNEBRAE (II,IV) - Asymmetric

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL918

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			+
2	A	M	+	+	+	
3	A	M	+			+
4	A	F	+	+	+	
5C	A	M	+			+
6	A	M	+	+	+	
7	A	M	+			(a)
8	A	M	+	+	+	
9	A	M	+			+
10	A	F	+	+	+	
11	A	F	+			+
12	A	M	+	+	+	
13	A	F	+			+
14	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Bilateral

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL907

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	F	+			+
3	A	F	+	+	+	
4	A	F	+			(a)
5	A	M	+	+	+	
6	A	F	+			+
7	A	F	+	+	+	
8	A	M	+			+
9C	A	F	+	+	+	
10	A	F	+			+
11	A	F	+	+	+	
12	A	F	+			+
13	A	M	+	+	+	
14	A	M	+			+
15	A	F	+	+	+	
16	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL909

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3	A	F	+	+	+	
4	A	F	+			+
5	A	F	+	+	+	
6	A	F	+			+
7	A	M	+	+	+	
8	A	M	+			+
9C	A	M	+	+	+	
10	A	M	+			+
11	A	F	+	+	+	
12	A	M	+			+
13	A	F	+	+	+	
14	A	F	+			+
15	A	M	+	+	+	
16	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL946

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	M	+	+	+	
3	A	F	+			+
4C	A	M	+	+	+	
5	A	M	+			+
6	A	F	+	+	+	
7	A	F	+			+
8	A	M	+	+	+	
9	A	M	+			+
10	A	M	+	+	+	
11	A	M	+			+
12	A	F	+	+	+	
13	A	M	+			+
14	A	F	+	+	+	
15	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL954

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 2 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			+
2	A	M	+	+	+	
3	A	F	+			(b)
4	A	F	+	+	+	
5	A	F	+			(a)
6*	A	F	+	+	+	
7C	A	F	+			+
8	A	F	+	+	+	
9	A	M	+			+
10	A	F	+	+	+	
11	A	M	+			+
12	A	F	+	+	+	
13	A	M	+			+
14	A	M	+	+	+	
15	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
* - Stunted
(a) - SKELETAL/STERNEBRAE (V): Unossified
(b) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL955

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3	A	M	+	+	+	
4	A	F	+			+
5	A	M	+	+	+	
6C	A	M	+			+
7	A	F	+	+	+	
8	A	M	+			+
9	A	F	+	+	+	
10	A	F	+			+
11	A	F	+	+	+	
12	A	M	+			(a)
13	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/VERTEBRAE (T11 anlage): Dumbbell shaped centra

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL934

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	M	+	+	+	
3	A	M	+			+
4	A	M	+	+	+	
5	A	M	+			+
6	A	F	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9C	A	F	+			+
10	A	M	+	+	+	
11	A	M	+			+
12	A	M	+	+	+	
13	A	F	+			+
14	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL881

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3	A	M	+	+	+	
4	A	M	+			+
5	A	F	+	+	+	
6C	A	M	+			+
7	A	F	+	+	+	
8	A	F	+			+
9	A	F	+	+	+	
E						
10	A	F	+			+
11	A	F	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	
14	A	M	+			(a)

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (T13): Short last rib; Right

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL917

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	M	+			+
3	A	M	+	+	+	
4	A	F	+			+
5	A	M	+	+	+	
6	A	F	+			+
7	A	M	+	+	+	
8C	A	F	+			+
9	A	M	+	+	+	
10	A	F	+			+
11	A	M	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	
14	A	F	+			+
15	A	F	+	+	+	
16	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL940

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			(a)
2	A	M	+	+	+	
E						
3	A	M	+			+
4C	A	F	+	+	+	
5	A	F	+			+
6	A	M	+	+	+	
7	A	M	+			+
E						
8	A	M	+	+	+	
9	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Right

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL963

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	M	+			+
3	A	F	+	+	+	
4C	A	M	+			+
5	A	M	+	+	+	
6	A	M	+			+
7	A	M	+	+	+	
8	A	F	+			+
9	A	M	+	+	+	
10	A	F	+			+
11	A	M	+	+	+	
12	A	F	+			(a)
13	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Right

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL972

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	F	+	+	+	
3	A	M	+			+
4	A	M	+	+	+	
5C	A	F	+			+
6	A	M	+	+	+	
7	A	F	+			+
8	A	F	+	+	+	
9	A	M	+			+
10	A	F	+	+	+	
11	A	M	+			+
12	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER: IGL895

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	M	+			+
3	A	F	+	+	+	
4	A	F	+			+
5	A	F	+	+	+	
6	A	M	+			+
7	A	M	+	+	+	
8	A	M	+			+
9C	A	M	+	+	+	
10	A	F	+			+
11	A	M	+	+	+	
12	A	M	+			+
13	A	F	+	+	+	
14	A	M	+			+
15	A	F	+	+	+	
16	A	M	+			+
17*	A	M	+	+	+	
18	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
* - Stunted

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL866

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 1
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			+
2	A	M	+	+	+	
3	A	F	+			+
4	A	F	+	+	+	
5C	A	M	+			+
6	A	M	+	(A)	+	
7	A	F	+			(b)
8	A	F	+	+	+	
9	A	M	+			+
10	A	F	+	+	+	
11	A	M	+			+
12	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(A) - VISCERAL/HEAD: Retinal fold; Left
(b) - SKELETAL/RIBS (L1): Rudimentary; Bilateral

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL892

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			+
2	A	M	+	+	+	
3	A	M	+			+
4	A	M	+	+	+	
5C	A	F	+			+
6	A	F	+	+	+	
7	A	F	+			(a)
8	A	F	+	+	+	
9	A	M	+			+
10	A	M	+	+	+	
11	A	M	+			+
12	A	F	+	+	+	
13	A	M	+			+
14	A	M	+	+	+	
15	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Right

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL864

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	M	+	+	+	
3	A	M	+			+
4	A	M	+	+	+	
5	A	F	+			+
6	A	M	+	+	+	
7	A	M	+			+
8C	A	F	+	+	+	
9	A	M	+			+
10	A	M	+	+	+	
11	A	F	+			(a)
12	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Bilateral

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL872

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 2 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			+
2	A	M	+	+	+	
3	A	F	+			+
4	A	F	+	+	+	
5	A	F	+			+
6	A	F	+	+	+	
7	A	F	+			+
8	A	F	+	+	+	
9C	A	F	+			(a)
10	A	F	+	+	+	
11	A	F	+			+
12	A	M	+	+	+	
13	A	M	+			+
14	A	M	+	+	+	
15*	A	M	+			(a)
16	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
* - Stunted
(a) - SKELETAL/STERNEBRAE (VI): Hypoplastic

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL873

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	M	+			+
3	A	F	+	+	+	
4	A	M	+			+
5	A	F	+	+	+	
6	A	F	+			+
7	A	M	+	+	+	
8C	A	M	+			+
9	A	F	+	+	+	
10	A	F	+			+
11	A	F	+	+	+	
12	A	F	+			(a,b)
13	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/VERTEBRAE (T12): Bifid centra
(b) - SKELETAL/VERTEBRAE (T12 anlage): Dumbbell shaped centra

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL879

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 2 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3	A	M	+	+	+	
4	A	M	+			(a)
5	A	F	+	+	+	
6	A	F	+			+
7	A	F	+	+	+	
8	A	F	+			+
9	A	F	+	+	+	
10C	A	M	+			(b,c)
11	A	M	+	+	+	
12	A	F	+			+
13	A	M	+	+	+	
14	A	F	+			+
15	A	M	+	+	+	
16	A	M	+			+
17	A	F	+	+	+	
18	A	F	+			+
19	A	F	+	+	+	
20	A	M	+			+
21	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/VERTEBRAE (T9): Dumbbell shaped centra
(b) - SKELETAL/VERTEBRAE (T12): Bifid centra
(c) - SKELETAL/VERTEBRAE (T12 anlage): Dumbbell shaped centra

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL884

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 2 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			(a)
2	A	F	+	+	+	
3	A	F	+			+
4	A	M	+	+	+	
5	A	M	+			+
6	A	M	+	+	+	
7	A	F	+			+
8C	A	M	+	+	+	
9	A	M	+			(b)
10	A	M	+	+	+	
11	A	F	+			+
12	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Bilateral
(b) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL886

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 3 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			(a)
2	A	M	+	+	+	
3	A	M	+			+
4	A	M	+	+	+	
5	A	F	+			+
6	A	F	+	+	+	
7	A	M	+			+
8C	A	M	+	+	+	
9	A	M	+			+
10	A	F	+	+	+	
11	A	F	+			(b)
E						
12	A	M	+	+	+	
13	A	F	+			(a)

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Bilateral
(b) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL867

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3	A	M	+	+	+	
4	A	F	+			+
5	A	M	+	+	+	
E						
6C	A	M	+			+
7	A	F	+	+	+	
8	A	F	+			+
9	A	F	+	+	+	
10	A	M	+			+
11	A	M	+	+	+	
12	A	F	+			(a)
13	A	M	+	+	+	
14	A	F	+			+
15	A	F	+	+	+	
16	A	F	+			+
17	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL898

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1*	A	M	+			+
2	A	F	+	+	+	
3	A	F	+			+
4	A	M	+	+	+	
5	A	F	+			+
6	A	M	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9	A	F	+			+
10	A	F	+	+	+	
11	A	F	+			+
12C	A	F	+	+	+	
13	A	F	+			+
14	A	F	+	+	+	
15	A	M	+			+
16	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
* - Stunted

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL929

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	M	+			+
3	A	M	+	+	+	
4	A	F	+			+
5	A	F	+	+	+	
6	A	M	+			+
7	A	F	+	+	+	
8	A	M	+			+
9*	A	M	+	+	+	
10C	A	M	+			(a)
11	A	F	+	+	+	
12	A	F	+			+
13	A	M	+	+	+	
14	A	F	+			+
15	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
* - Stunted
(a) - SKELETAL/RIBS (L1): Rudimentary; Bilateral

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL877

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	F	+			+
3	A	F	+	+	+	
4	A	M	+			+
5	A	M	+	+	+	
6C	A	F	+			+
7	A	M	+	+	+	
8	A	F	+			+
9	A	M	+	+	+	
10	A	M	+			+
11	A	F	+	+	+	
12	A	M	+			(a)
13	A	F	+	+	+	
14	A	M	+			+
15	A	F	+	+	+	
16	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL937

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3	A	M	+	+	+	
4	A	F	+			(a)
5	A	M	+	+	+	
6	A	M	+			+
7C	A	F	+	+	+	
8	A	F	+			+
9	A	M	+	+	+	
10	A	M	+			+
11	A	M	+	+	+	
12	A	F	+			+
13	A	M	+	+	+	
14	A	F	+			+
15	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL950

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 3 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			+
2	A	M	+	+	+	
3	A	F	+			+
4	A	F	+	+	+	
5C	A	M	+			+
6	A	F	+	+	+	
7	A	F	+			+
8	A	F	+	+	+	
9	A	M	+			(a)
10	A	M	+	+	+	
11	A	F	+			(a)
12	A	F	+	+	+	
13	A	M	+			(b)
14	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Left
(b) - SKELETAL/RIBS (L1): Rudimentary; Bilateral

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL958

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2	A	F	+	+	+	
3	A	F	+			+
4	A	F	+	+	+	
5	A	F	+			+
6	A	F	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9C	A	F	+			+
10	A	F	+	+	+	
11	A	F	+			+
12	A	F	+	+	+	
13	A	M	+			+
14	A	F	+	+	+	
15	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL945

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	F	+			(a)
3	A	F	+	+	+	
4	A	M	+			+
5	A	F	+	+	+	
6C	A	F	+			+
7	A	M	+	+	+	
8	A	F	+			+
9	A	F	+	+	+	
10	A	M	+			+
11	A	F	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	
14	A	F	+			+
15	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/VERTEBRAE (T11): Bifid centra

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL967

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+	+	+	
2	A	F	+			+
3	A	M	+	+	+	
4	A	F	+			+
5	A	F	+	+	+	
6	A	F	+			+
7C	A	M	+	+	+	
8	A	M	+			+
9	A	M	+	+	+	
10	A	F	+			+
11	A	F	+	+	+	
12	A	M	+			+
13	A	F	+	+	+	
E						
14	A	M	+			+
15	A	F	+	+	+	
E						

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL959

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 3 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	M	+			(a)
3	A	F	+	+	+	
4	A	F	+			+
5	A	M	+	+	+	
6C	A	M	+			+
7	A	F	+	+	+	
8	A	F	+			+
E						
9	A	F	+	+	+	
10	A	M	+			(b)
11	A	M	+	+	+	
12	A	M	+			(c)
13	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Left
(b) - SKELETAL/RIBS (L1): Rudimentary; Right
(c) - SKELETAL/RIBS (L1): Rudimentary; Bilateral

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL962

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 4 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	M	+			+
2*	A	M	+	+	+	
3	A	M	+			(a,b,d)
4	A	M	+	+	+	
5	A	F	+			(e)
6	A	F	+	+	+	
7	A	F	+			(f)
8	A	F	+	+	+	
E						
9	A	M	+			+
10C	A	F	+	+	+	
11	A	M	+			(c)
12	A	F	+	+	+	
13	A	M	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
* - Stunted
(a) - SKELETAL/STERNEBRAE (II-IV): Asymmetric
(b) - SKELETAL/STERNEBRAE (VI): Unossified
(c) - SKELETAL/RIBS (L1): Rudimentary; Left
(d) - SKELETAL/VERTEBRAE (T11-13 anlage): Dumbbell shaped centra
(e) - SKELETAL/VERTEBRAE (T9): Dumbbell shaped centra
(f) - SKELETAL/VERTEBRAE (T10 anlage): Dumbbell shaped centra

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL949

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 4 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			(a)
3	A	M	+	+	+	
4	A	F	+			(b)
5	A	F	+	+	+	
6	A	F	+			(a)
7	A	F	+	+	+	
8C	A	M	+			+
9	A	M	+	+	+	
10	A	M	+			(b)
11	A	F	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	
14	A	F	+			+

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Right
(b) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL916

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 1 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	M	+			+
3	A	F	+	+	+	
4	A	F	+			+
5	A	M	+	+	+	
EC						
6	A	M	+			(a)
7	A	M	+	+	+	
8	A	F	+			+
9	A	F	+	+	+	
10	A	F	+			+
11	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Right

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL938

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 3 MALFORMATIONS: 1

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			+
2	A	F	+	+	+	
3	A	F	+			(a,b,C)
E						
4C	A	M	+	+	+	
5	A	F	+			(a)
6	A	M	+	+	+	
7	A	M	+			+
8	A	F	+	+	+	
9	A	M	+			(a)
10	A	F	+	+	+	
11	A	M	+			+
12	A	F	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Bilateral
(b) - SKELETAL/VERTEBRAE (L): Presacral vertebrae
(C) - SKELETAL/VERTEBRAE (L7): Malformed arch; Left

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL961

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 0 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+	+	+	
2	A	F	+			+
3	A	M	+	+	+	
4	A	F	+			+
5C	A	F	+	+	+	
6	A	M	+			+
7	A	F	+	+	+	
8	A	M	+			+
9	A	M	+	+	+	
10	A	F	+			+
11	A	F	+	+	+	
12	A	M	+			+
13	A	M	+	+	+	
14	A	F	+			+
15	A	M	+	+	+	

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

APPENDIX H - FETAL OBSERVATIONS
(INDIVIDUAL FETAL OBSERVATIONS)
(SEE LIST OF ABBREVIATIONS FOR ABBREVIATIONS)

TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER: IGL970

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 2 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/ THORAX	
1	A	F	+			+
2	A	F	+	+	+	
3	A	M	+			+
4	A	M	+	+	+	
5	A	F	+			+
6	A	F	+	+	+	
7C	A	F	+			+
8	A	F	+	+	+	
9	A	F	+			+
10	A	F	+	+	+	
11	A	M	+			+
12	A	M	+	+	+	
13	A	F	+			(a)
14	A	M	+	+	+	
15	A	M	+			(b)

A = ALIVE M = MALE E = EARLY RESORPTION C = CERVIX
D = DEAD F = FEMALE L = LATE RESORPTION + = NO OBSERVABLE ABNORMALITIES

NOTE:
(a) - SKELETAL/RIBS (L1): Rudimentary; Bilateral
(b) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX I - INHALATION EXPOSURE DATA

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APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

Exposure Chambers

The chambers used in this study were constructed of stainless steel and glass and had a total volume of approximately 1.0 m^3. They were operated at an airflow rate of 200 liters per minute ensuring 12 air changes per hour and a theoretical equilibration time (T_{99}) of 23 minutes. The chamber volume and airflow were considered adequate to ensure an oxygen level greater than 19% and an animal loading below 5%. The chamber airflow rate was monitored continuously with a calibrated flow-limiting orifice and differential pressure gauge and recorded approximately every 30 minutes. All of the chambers were maintained at a slight negative pressure to the room.

Test Atmosphere Generation

Figure I-1 presents a schematic of the test atmosphere generation and exposure system.

Aliquots of the test substance for use in the daily conduct of the study were received in gas cylinders (~20 L nominal volume) via a specially constructed distribution manifold. The manifold system maintained the test substance under nitrogen pressure, ensuring that the transferred substance remained in liquid phase and retained the same composition as the original container.

The test substance was delivered via a diptube from the outlet valve of the cylinder to a variable area rotameter which regulated the rate of liquid flow into a heated glass round-bottom flask. The test substance volatilized within the flask and the resulting vapors mixed with the supply air as they were drawn into the exposure chamber.

Chamber Environmental Conditions

Chamber temperature and humidity were monitored by wet/dry bulb hygrometers and recorded at approximately thirty minute intervals throughout each exposure**.**

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

Analytical Procedures

Schematic of the analytical calibration system: Figure I-2.
Analytical calibration response curves: Figure I-3
Gas chromatograph operating conditions: Table I-2
Mean exposure data: Table I-1
Summary of exposure data: Table I-3

Exposure concentrations were determined on both a nominal and analytical basis. Nominal concentrations for each exposure level were calculated by weighing the tank containing the test substance before and after exposure and dividing the net loss in weight by the total volume of air passing through the chamber during the exposure.

Analytical exposure concentrations were determined hourly during each exposure by on-line gas chromatography (Hewlett Packard 6890). Samples of the chamber atmosphere were continuously delivered to the GC via 1/8" Teflon tubing connected to an automated 12-port multiposition gas sampling valve. The multiposition valve was programmed to sequentially direct each stream to a sample loop which injected a fixed sample volume (2 cc) directly onto the column for analysis. A complete sampling cycle was performed during each hour of exposure.

The analytical system was calibrated against a series of known concentrations of the test substance in air. The air concentrations were determined by injecting a weighed amount of the test substance from a gas-tight syringe into a closed loop system of a known air volume (see schematic of drawing). The closed loop system consisted of an infrared vapor analyzer (MIRAN 1A-CVF, Foxboro Analytical) connected to the gas sampling valve of the GC. A metal bellows pump was used to circulate the injected test substance vapors through the sample cell of the infrared monitor and the gas sampling valve of the GC. The response of the infrared analyzer was monitored until the air concentration appeared equilibrated and stable, then three replicate samples were taken using the gas sample loop of the GC. The entire closed loop system was cleared with clean air between each calibration injection. The average response of the GC (total peak area) for the four main constituents of the atmosphere, at each air concentration was used to construct a linear calibration for the test substance.

This method permitted the GC and the infrared analyzer (a backup analytical method) to be calibrated simultaneously and under conditions similar to actual chamber sampling. Once established, the calibration was checked daily during the study by sampling a certified standard of n-butane, the major component of the test substance mixture.

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

Chamber Homogeneity

Table I-4 presents a summary of the chamber distribution data.

During the method development trials for this study, samples were drawn from twelve different points within the chamber at each target concentration to demonstrate the homogeneity of test atmosphere distribution.

Lighting, Noise and Oxygen Levels

Table I-5 presents a summary of the lighting, noise, and oxygen level data.

Light intensity was measured three times during the study (the first day of exposures, during the second week of exposures, and the last day of exposures) in both the animal room and the chamber room. Light intensity was measured in the animal room in a cage approximately three feet above the floor level. In the chamber room the light intensity was measured three feet above floor level in the approximate center of each generation room.

Additionally, the oxygen level and the noise level were measured in each exposure chamber on the first day of exposures, during the second week of exposures, and on the last day of exposures.

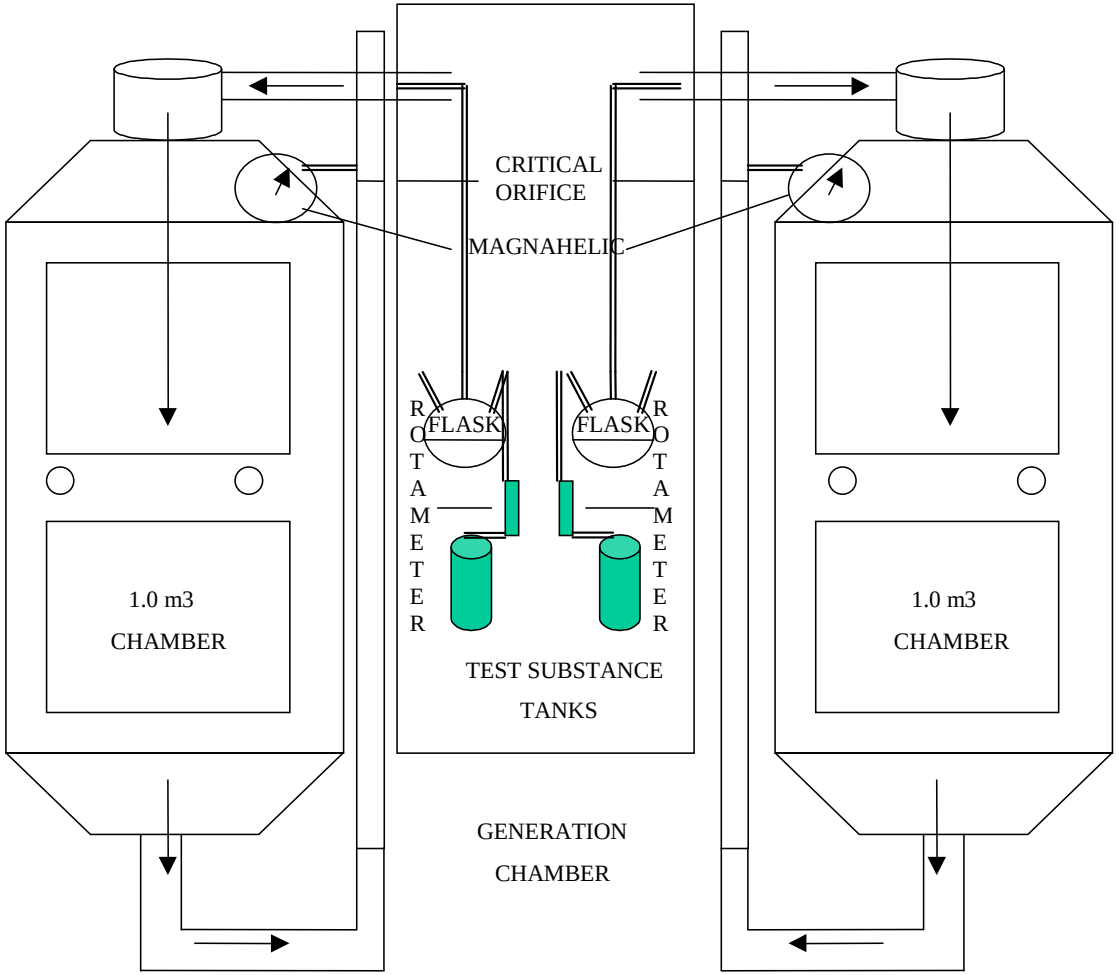
Particle Size Analysis

Table I-6 presents a summary of the particle size data.

A particle size determination of the aerosol portion of the test atmosphere was conducted during the chamber trials from the control and 20,000 mg/m^3 concentration chambers. The sample was taken using a multistage cascade impactor. Preweighed glass fiber filters were used to collect aerosol on each stage, which are associated with specific cutoff diameters for aerodynamic particle size in microns. Since minimal aerosol was present, no further calculations were performed for the aerodynamic diameter, geometric standard deviation, or the estimated percents of the aerosol less than or equal to 1, 10, and 15 microns in size.

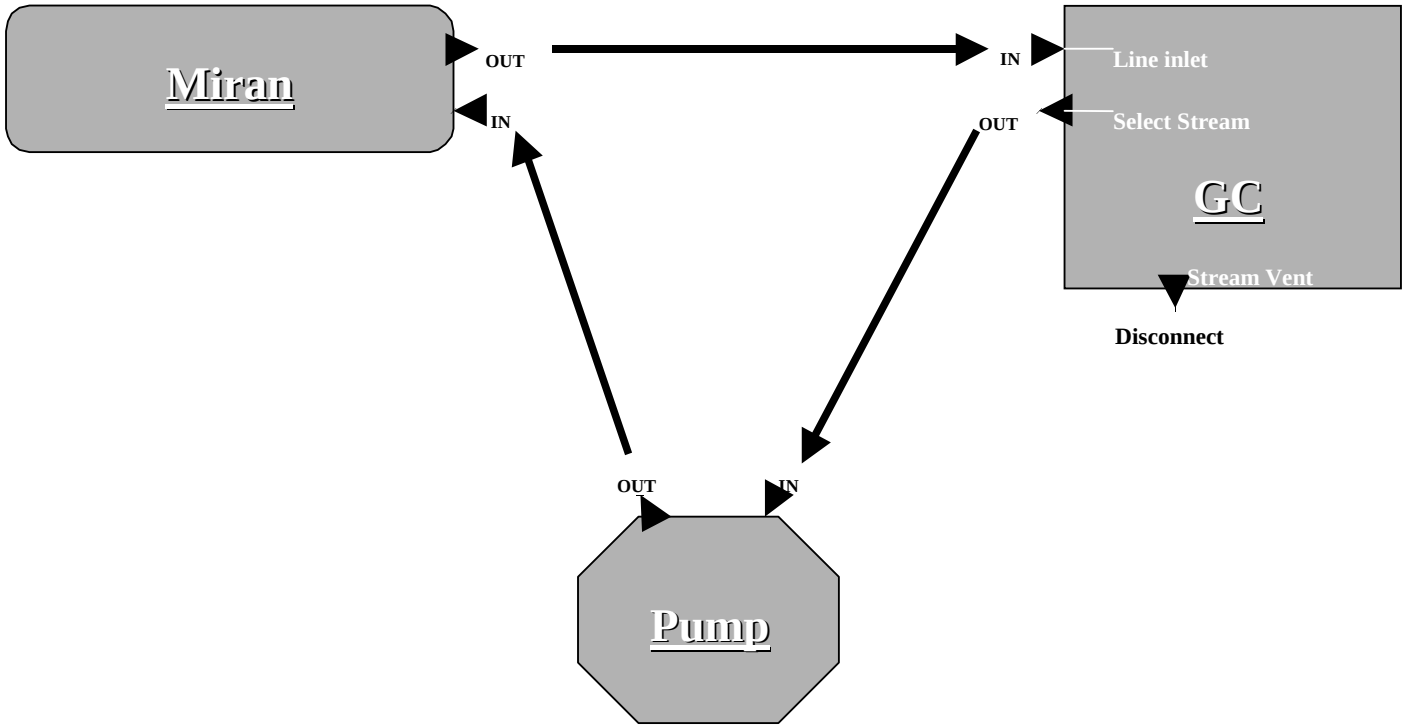
APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

FIGURE I-1 - SCHEMATIC OF GENERATION AND EXPOSURE SYSTEM



APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

FIGURE I-2 - SCHEMATIC OF THE ANALYTICAL CALIBRATION SYSTEM



APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

TABLE I-1 - MEAN EXPOSURE DATA

GROUP:	1	2	3	4
Target Exposure Concentration (mg/m^3)	0	2000	10000	20000
Mean Analytical Exposure Concentration (mg/m^3)	0	2020	10395	20772
Average Chamber Temperature (^OF)	72	72	75	72
Average Chamber Relative Humidity (% RH)	62	62	57	62

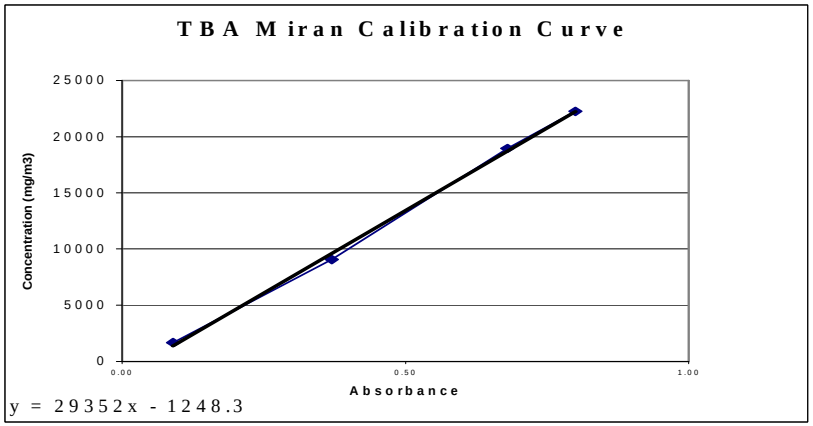
APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

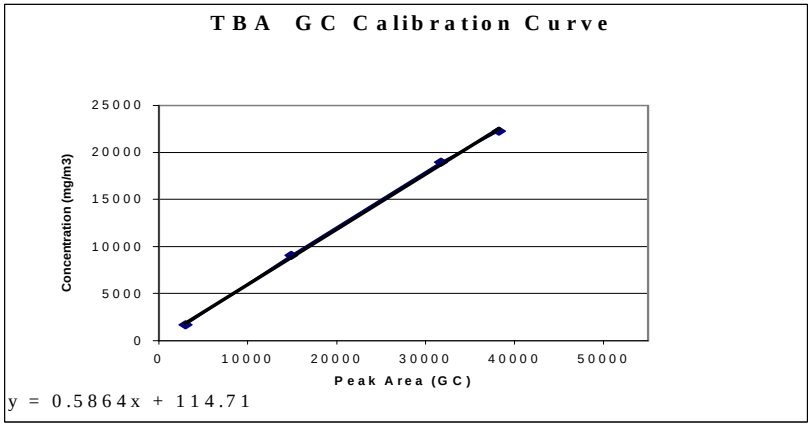
TABLE I-2 - GAS CHROMATOGRAPH OPERATING CONDITIONS

GAS CHROMATOGRAPH:	Hewlett Packard 6890GC
DETECTOR:	Flame Ionization
COLUMN:	Supelco Part # 13867, MTO-SS, 2M 1/8”, Carbopack C 80/100 0.19% Picric Acid 15g
GAS FLOWS (cc/min):	H_2 - 45.0 Air - 450.0 Makeup Gas (Helium) - 30.0
INLET TEMPERATURE:	100^{o}C
INLET FLOW (cc/min)	Helium - 19.8
OVEN TEMPERATURE:	110^{o}C
DETECTOR TEMPERATURE:	250^{o}C
SAMPLE LOOP SIZE:	2 cc
ATTENUATION:	0
RUN TIME:	8.5 Minutes

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

FIGURE I-3 - ANALYTICAL CALIBRATION RESPONSE CURVES





APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

TABLE I-3 - SUMMARY OF EXPOSURE DATA

	Group 1				Group 2				Group 3				Group 4			
Date	Mean	Nominal	Chamber		Mean	Nominal	Chamber		Mean	Nominal	Chamber		Mean	Nominal	Chamber	
	(mg/m^3)	(mg/m^3)	^oF	% Rh	(mg/m^3)	(mg/m^3)	^oF	% Rh	(mg/m^3)	(mg/m^3)	^oF	% Rh	(mg/m^3)	(mg/m^3)	^oF	% Rh
31-Aug-02	0	0	70	65	2033	1769	70	65	10406	9643	73	58	20818	18599	70	65
1-Sep-02	0	0	68	72	1717	1813	70	64	10337	10169	72	58	20672	19218	71	59
2-Sep-02	0	0	72	59	2099	1832	70	65	10120	9858	73	60	20835	19068	70	65
3-Sep-02	0	0	72	66	1968	1969	70	65	10244	10071	74	60	20232	19019	70	72
4-Sep-02	0	0	72	66	2053	1931	72	63	10181	9906	75	60	20693	18597	72	63
5-Sep-02	0	0	72	64	2122	1864	72	66	10440	10063	76	59	20775	18788	72	63
6-Sep-02	0	0	73	59	2144	1890	72	61	10127	9686	75	54	20609	18649	73	61
7-Sep-02	0	0	71	64	2045	1693	70	67	10381	9882	73	65	20982	19475	72	65
8-Sep-02	0	0	72	66	2053	1932	72	66	10004	8976	73	60	20113	17335	74	60
9-Sep-02	0	0	72	64	1950	1713	71	60	10498	9978	76	57	21048	18050	73	61
10-Sep-02	0	0	74	60	2075	1803	73	67	10410	9914	77	55	19881	17846	74	61
11-Sep-02	0	0	74	60	2040	1906	74	57	10465	9919	76	56	20627	18458	74	58
12-Sep-02	0	0	74	50	2077	1963	73	53	10373	9790	77	47	21534	18379	73	52
13-Sep-02	0	0	75	54	2054	2028	75	54	10088	9928	77	54	21140	18874	74	56
14-Sep-02	0	0	73	73	1995	1701	72	70	10622	10125	75	60	20629	18376	72	69
15-Sep-02	0	0	74	59	2092	1986	74	59	10882	10047	74	66	21371	18872	72	66
16-Sep-02	0	0	73	75	1911	1993	73	70	10117	9778	76	64	20451	18822	72	71
17-Sep-02	0	0	74	60	1738	2094	73	60	10676	9597	77	56	21153	18017	73	61
18-Sep-02	0	0	73	61	2065	1899	73	60	10578	9942	77	55	21214	18249	73	62
19-Sep-02	0	0	72	58	2065	1796	72	65	10687	9964	76	60	20885	18261	72	62
20-Sep-02	0	0	72	62	2119	1899	71	63	10676	9907	76	54	21065	18129	72	60
21-Sep-02	0	0	72	66	2069	2057	71	72	10359	10107	76	59	21177	19008	72	63
22-Sep-02	0	0	71	59	2137	2029	70	64	9985	9701	75	54	20245	18556	72	61
23-Sep-02	0	0	73	58	2054	1715	72	58	10539	10053	76	54	20858	18779	72	60
24-Sep-02	0	0	72	57	1893	1683	72	55	10530	9944	76	49	20905	18521	72	58
25-Sep-02	0	0	71	58	1991	1814	71	58	10402	9867	75	52	20321	18371	71	59
26-Sep-02	0	0	71	64	1973	1833	71	59	10542	10026	75	54	20606	18517	70	62
MEAN	0	0	72	62	2020	1874	72	62	10395	9883	75	57	20772	18549	72	62
s.d.	0	0	1.5	5.6	105.6	118.6	1.4	4.9	228.5	233.5	1.5	4.4	394.4	454.3	1.2	4.3
Minimum	0	0	68	50	1717	1683	70	53	9985	8976	72	47	19881	17335	70	52
Maximum	0	0	75	75	2144	2094	75	72	10882	10169	77	66	21534	19475	74	72

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

TABLE I-3 (CONT'D) - SUMMARY OF EXPOSURE DATA

GROUP 1 - 0 mg/m^3

Date	Exposure Number	Nominal Concentration (mg/m^3)	Mean Analytical Concentration (mg/m^3)	Mean Temperature (^oF)	Mean Relative Humidity (%)
31-Aug-02	1	0	0	70	65
1-Sep-02	2	0	0	68	72
2-Sep-02	3	0	0	72	59
3-Sep-02	4	0	0	72	66
4-Sep-02	5	0	0	72	66
5-Sep-02	6	0	0	72	64
6-Sep-02	7	0	0	73	59
7-Sep-02	8	0	0	71	64
8-Sep-02	9	0	0	72	66
9-Sep-02	10	0	0	72	64
10-Sep-02	11	0	0	74	60
11-Sep-02	12	0	0	74	60
12-Sep-02	13	0	0	74	50
13-Sep-02	14	0	0	75	54
14-Sep-02	15	0	0	73	73

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

TABLE I-3 (CONT'D) - SUMMARY OF EXPOSURE DATA

GROUP 1 - 0 mg/m^3

Date	Exposure Number	Nominal Concentration (mg/m^3)	Mean Analytical Concentration (mg/m^3)	Mean Temperature (^{o}F)	Mean Relative Humidity (%)
15-Sep-02	16	0	0	74	59
16-Sep-02	17	0	0	73	75
17-Sep-02	18	0	0	74	60
18-Sep-02	19	0	0	73	61
19-Sep-02	20	0	0	72	58
20-Sep-02	21	0	0	72	62
21-Sep-02	22	0	0	72	66
22-Sep-02	23	0	0	71	59
23-Sep-02	24	0	0	73	58
24-Sep-02	25	0	0	72	57
25-Sep-02	26	0	0	71	58
26-Sep-02	27	0	0	71	64
MEAN		0	0	72	62
Std. Dev.		0.0	0.0	1.5	5.6

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

TABLE I-3 (CONT'D) - SUMMARY OF EXPOSURE DATA

GROUP 2 - 2000 mg/m^3 TARGET

Date	Exposure Number	Nominal Conc. (mg/m^3)	Hourly Analytical Concentrations (mg/m^3) 1	2	3	4	5	6	Mean Concentration (mg/m^3)	Mean Temperature (^{o}F)	Mean Relative Humidity (%)
31-Aug-02	1	1769	2184	2070	2003	1993	1947	2003	2033	70	65
1-Sep-02	2	1813	1848	2021	1978	1921	1844	688	1717	70	64
2-Sep-02	3	1832	2035	2382	1814	2048	2081	2231	2099	70	65
3-Sep-02	4	1969	1984	2086	2090	2170	1276	2200	1968	70	65
4-Sep-02	5	1931	1845	2167	2185	2119	1585	2414	2053	72	63
5-Sep-02	6	1864	1830	2279	1958	2108	1888	2670	2122	72	66
6-Sep-02	7	1890	2447	2169	1995	2111	2007	2135	2144	72	61
7-Sep-02	8	1693	1867	2014	1973	2199	2040	2178	2045	70	67
8-Sep-02	9	1932	2188	1893	2192	2030	2011	2004	2053	72	66
9-Sep-02	10	1713	2044	1928	2173	1882	2269	1405	1950	71	60
10-Sep-02	11	1803	1866	1980	2145	2094	2268	2098	2075	73	67
11-Sep-02	12	1906	1988	2075	2056	1998	1983	2138	2040	74	57
12-Sep-02	13	1963	1954	2074	2237	1617	2423	2160	2077	73	53
13-Sep-02	14	2028	1889	2374	2029	1639	2290	2106	2054	75	54
14-Sep-02	15	1701	2089	1942	1964	2070	2026	1880	1995	72	70

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

TABLE I-3 (CONT'D) - SUMMARY OF EXPOSURE DATA

GROUP 2 - 2000 mg/m^3 TARGET

Date	Exposure Number	Nominal Conc. (mg/m^3)	Hourly Analytical Concentrations (mg/m^3) 1	2	3	4	5	6	Mean Concentration (mg/m^3)	Mean Temperature (^{o}F)	Mean Relative Humidity (%)
15-Sep-02	16	1986	2313	2317	1645	2032	2206	2036	2092	74	59
16-Sep-02	17	1993	2034	2219	673*	2529	1948	2065	1911	73	70
17-Sep-02	18	2094	2074	2172	2159	1707	0*	2318	1738	73	60
18-Sep-02	19	1899	2069	2149	1304	2353	2126	2389	2065	73	60
19-Sep-02	20	1796	2080	2125	2189	1807	2231	1959	2065	72	65
20-Sep-02	21	1899	2067	2186	2066	2160	2110	2127	2119	71	63
21-Sep-02	22	2057	1992	2024	2231	2025	2335	1809	2069	71	72
22-Sep-02	23	2029	1096	3441	1862	2004	1957	2462	2137	70	64
23-Sep-02	24	1715	2176	2101	2012	2041	2052	1940	2054	72	58
24-Sep-02	25	1683	1964	2041	2154	1288	1692	2218	1893	72	55
25-Sep-02	26	1814	1767	2244	2045	1990	1788	2114	1991	71	58
26-Sep-02	27	1833	2316	1973	2320	1611	1722	1897	1973	71	59
MEAN		1874							2020	72	62
Std. Dev.		188.6							105.6	1.4	4.9

* Float in Rotameter stuck due to air bubble.

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

TABLE I-3 (CONT'D) - SUMMARY OF EXPOSURE DATA

GROUP 3 - 10000 mg/m^3 TARGET

Date	Exposure Number	Nominal Conc. (mg/m^3)	Hourly Analytical Concentration (mg/m^3) 1	2	3	4	5	6	Mean Concentration (mg/m^3)	Mean Temperature (^{o}F)	Mean Relative Humidity (%)
31-Aug-02	1	9643	10496	10382	10653	10467	10257	10180	10406	73	58
1-Sep-02	2	10169	10447	10322	10134	10477	9761	10882	10337	72	58
2-Sep-02	3	9858	10100	10353	9360	9466	10171	11269	10120	73	60
3-Sep-02	4	10071	9729	10104	9675	10419	10548	10990	10244	74	60
4-Sep-02	5	9906	9075	10538	10500	10155	10211	10608	10181	75	60
5-Sep-02	6	10063	9755	10651	10704	10243	10362	10925	10440	76	59
6-Sep-02	7	9686	8985	8149	10852	10937	10904	10932	10127	75	54
7-Sep-02	8	9882	9915	9865	10758	10612	10145	10990	10381	73	65
8-Sep-02	9	8976	10209	9338	8600	10390	10801	10686	10004	73	60
9-Sep-02	10	9978	9297	10666	10519	10258	11491	10756	10498	76	57
10-Sep-02	11	9914	10134	10457	10229	10107	10952	10584	10410	77	55
11-Sep-02	12	9919	10182	10528	10494	10570	10575	10444	10465	76	56
12-Sep-02	13	9790	10412	10675	10462	10143	10329	10216	10373	77	47
13-Sep-02	14	9928	9654	9953	10367	10095	10253	10201	10088	77	54
14-Sep-02	15	10125	9951	10234	10302	11391	11150	10703	10622	75	60

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

TABLE I-3 (CONT'D) - SUMMARY OF EXPOSURE DATA

GROUP 3 - 10000 mg/m^3 TARGET

Date	Exposure Number	Nominal Conc. (mg/m^3)	Hourly Analytical Concentration (mg/m^3) 1	2	3	4	5	6	Mean Concentration (mg/m^3)	Mean Temperature (^{o}F)	Mean Relative Humidity (%)
15-Sep-02	16	10047	10563	11142	10419	11200	11054	10915	10882	74	66
16-Sep-02	17	9778	10200	10074	9607	10669	9865	10286	10117	76	64
17-Sep-02	18	9597	11123	10115	10442	10939	10630	10806	10676	77	56
18-Sep-02	19	9942	10321	10890	10481	10819	10538	10419	10578	77	55
19-Sep-02	20	9964	10379	10721	10964	10639	10653	10770	10687	76	60
20-Sep-02	21	9907	10413	10713	10610	10601	10630	11091	10676	76	54
21-Sep-02	22	10107	9898	10208	10398	10656	10326	10668	10359	76	59
22-Sep-02	23	9701	9839	10287	9563	10291	10090	9839	9985	75	54
23-Sep-02	24	10053	9640	10351	10530	10562	11216	10932	10539	76	54
24-Sep-02	25	9944	10258	10663	10677	10530	10243	10807	10530	76	49
25-Sep-02	26	9867	9838	10416	10646	10305	10570	10636	10402	75	52
26-Sep-02	27	10026	10804	10590	10600	10510	10449	10298	10542	75	54
MEAN		9883							10395	75	57
Std. Dev.		233.5							228.5	1.5	4.4

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

TABLE I-3 (CONT'D) - SUMMARY OF EXPOSURE DATA

GROUP 4 - 20000 mg/m^3 TARGET

Date	Exposure Number	Nominal Conc. (mg/m^3)	Hourly Analytical Concentration (mg/m^3) 1	2	3	4	5	6	Mean Concentration (mg/m^3)	Mean Temperature (^{o}F)	Mean Relative Humidity (%)
31-Aug-02	1	18599	21320	20363	20750	21099	20557	20820	20818	70	65
1-Sep-02	2	19218	20842	20220	20722	21788	20621	19840	20672	71	59
2-Sep-02	3	19068	20315	21067	20810	20192	21359	21270	20835	70	65
3-Sep-02	4	19019	19266	19397	19965	21027	20975	20762	20232	70	72
4-Sep-02	5	18597	19956	20784	20782	21122	21224	20290	20693	72	63
5-Sep-02	6	18788	19689	21885	21201	19713	20896	21270	20775	72	63
6-Sep-02	7	18649	21128	18951	21063	20881	21028	20604	20609	73	61
7-Sep-02	8	19475	19953	20539	20356	21399	21952	21692	20982	72	65
8-Sep-02	9	17335	12042	20955	22457	22071	21568	21586	20113	74	60
9-Sep-02	10	18050	20824	20103	21996	19951	22239	21176	21048	73	61
10-Sep-02	11	17846	20996	20877	17155	19774	20454	20033	19881	74	61
11-Sep-02	12	18458	20632	20219	20425	20809	20834	20841	20627	74	58
12-Sep-02	13	18379	20888	21603	21980	21764	21794	21177	21534	73	52
13-Sep-02	14	18874	21120	20823	21496	21155	20839	21409	21140	74	56
14-Sep-02	15	18376	20665	19309	20635	21251	20984	20933	20629	72	69

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

TABLE I-3 (CONT'D) - SUMMARY OF EXPOSURE DATA

GROUP 4 - 20000 mg/m^3 TARGET

Date	Exposure Number	Nominal Conc. (mg/m^3)	Hourly Analytical Concentration (mg/m^3) 1	2	3	4	5	6	Mean Concentration (mg/m^3)	Mean Temperature (^{o}F)	Mean Relative Humidity (%)
15-Sep-02	16	18872	21093	20876	20980	21661	21928	21688	21371	72	66
16-Sep-02	17	18822	19855	20041	20268	21158	20858	20527	20451	72	71
17-Sep-02	18	18017	21155	19119	21415	22411	22184	20634	21153	73	61
18-Sep-02	19	18249	20942	21483	21178	21971	20813	20895	21214	73	62
19-Sep-02	20	18261	20377	20401	20567	22117	21265	20583	20885	72	62
20-Sep-02	21	18129	21162	20801	20484	21046	20803	22092	21065	72	60
21-Sep-02	22	19008	20793	21628	20296	19370	22830	22146	21177	72	63
22-Sep-02	23	18556	20195	20268	19625	20361	20390	20633	20245	72	61
23-Sep-02	24	18779	19867	21049	20971	20752	20333	22173	20858	72	60
24-Sep-02	25	18521	20619	20596	20388	21168	20841	21818	20905	72	58
25-Sep-02	26	18371	19760	19887	21441	19970	20437	20432	20321	71	59
26-Sep-02	27	18517	20417	19685	21616	20845	20662	20408	20606	70	62
MEAN		18549							20772	72	62
Std. Dev.		454.3							394.4	1.2	4.3

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

TABLE I-4 - SUMMARY OF DISTRIBUTION SAMPLES

SAMPLE	TARGET EXPOSURE LEVELS		
LOCATION	2000 MG/M^3	10,000 MG/M^3	20,000 MG/M^3
Left Top Back	1918	10296	20555
Left Top Front	2038	10572	20473
Left Middle Back	2011	10121	20625
Left Middle Front	2017	10236	20415
Left Bottom Back	1910	9865	20691
Left Bottom Front	1939	9845	20905
Right Top Back	1941	10034	21990
Right Top Front	2027	10972	21142
Right Middle Back	1941	10606	20536
Right Middle Front	1972	10881	21053
Right Bottom Back	1912	10610	20903
Right Bottom Front	1996	10312	20642
MEAN	1968	10362	20828
SD	47.3	370.4	433.0
%CV	2.4	3.6	2.1
Minimum	1910	9845	20415
Maximum	2038	10972	21990

NOTE: top, middle, bottom sample locations represent horizontal planes within exposure chamber. Left, right, front, back represent corners of each horizontal plane. Samples taken in series at approximately 8 minute intervals.

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

TABLE I-5 LIGHTING, NOISE, AND OXYGEN LEVELS

Environmental Conditions			
	August 31, 2002	**September 18, 2002**	**September 26, 2002**
Light Intensity: (fc)			
Room PE103 in a cage 3 feet above the floor.	11.1	11.8	7.31[a]
Center of room PE 102, 3 feet above the floor.	33.4	38.5	43.7
Room PE 110, 3 feet above the floor.	32.8	33.4	31.2
Noise level: (db)			
1m - 1: Door open	78.7	76.3	79.5
1m - 1: Through port	80.1	82.2	82.9
1m - 2: Door open	78.5	75.8	75.3
1m - 2: Through port	80.4	77.8	81.4
1m - 3: Door open	78.5	77.1	73.9
1m - 3: Through port	80.0	79.1	79.9
1m - 4: Door open	79.2	73.8	70.8
1m - 4: Through port	81.2	76.5	76.8
O_2 Level: (%) (Reading upon removal)	No Alarm	No Alarm	No Alarm
1m - 1	20.7	20.6	20.6
1m - 2	20.7	20.7	20.6
1m - 3	20.7	20.5	20.5
1m - 4	20.7	20.5	20.7

a - Instrument only measures to 0.1 fc. Correct measurement is unknown.
1m-1, 1m-2, 1m-3, 1m-4 are exposure chamber designations.
fc = foot candles (measured with an Omega HHLM-2 Light Meter)
db = decibels (measured using an Omega HHSL-1 Sound Meter)
% = % oxygen (measured using a Biosystems Oxy Plus Single Sensor Gas Detector with an alarm at 19.5% O_2)

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

TABLE I-6 - PARTICLE SIZE DATA

0 MG/M^3

IMPACTOR STAGE	STAGE CONSTANT (um)	FILTER WEIGHT DIFFERENCE (UG)	PERCENT IN SIZE RANGE
FILTER	0.30	0	0
8	0.54	0	0
7	0.84	0	0
6	1.50	0	0
5	2.60	0	0
4	4.10	0	0
3	6.80	10	100
2	17.0	0	0
1	28.0	0	0
		TOTAL = 10	
PARTICLE CONCENTRATION = 0.5 MG/M^3			

PARTICLE SIZE DETERMINED WITH A SIERRA SERIES 210 CASCADE IMPACTOR

CONDITIONS:
SAMPLE FLOWRATE (Liters/Minute): 4 SAMPLE DURATION (Minutes): 5

CALCULATION OF PARTICLE CONCENTRATION:
SAMPLE VOLUME = SAMPLE FLOW RATE*SAMPLE DURATION
PARTICLE CONCENTRATION =
((TOTAL FILTER WEIGHT DIFFERENCE [ug]/1000 [ug/mg])/(SAMPLE VOLUME [L]))*1000 [L/M^3]

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

TABLE I-6 - PARTICLE SIZE DATA (CONT'D)

20,000 MG/M^3 TARGET

IMPACTOR STAGE	STAGE CONSTANT (um)	FILTER WEIGHT DIFFERENCE (UG)	PERCENT IN SIZE RANGE
FILTER	0.30	0	0
8	0.54	0	0
7	0.84	0	0
6	1.50	0	0
5	2.60	0	0
4	4.10	10	100
3	6.80	0	0
2	17.0	0	0
1	28.0	0	0
		TOTAL = 10	
CONCENTRATION OF PARTICLES = 0.5 MG/M^3			

PARTICLE SIZE DETERMINED WITH A SIERRA SERIES 210 CASCADE IMPACTOR

CONDITIONS:
SAMPLE FLOWRATE (Liters/Minute): 4 SAMPLE DURATION (Minutes): 5

CALCULATION OF PARTICLE CONCENTRATION:
SAMPLE VOLUME (Liters) = SAMPLE FLOW RATE*SAMPLE DURATION
PARTICLE CONCENTRATION =
((TOTAL FILTER WEIGHT DIFFERENCE/1000 ug/mg)/(SAMPLE VOLUME))*1000 L/M^3

TABLE I-7 – CHAMBER TEMPERATURES AND HUMIDITIES
CHAMBER TEMPERATURES (ºF) - 0 mg/m^3 Target Concentration

	Time from Start of Exposure (Hours)												
	0	**0.5**	**1**	**1.5**	**2**	**2.5**	**3**	**3.5**	**4**	**4.5**	**5**	**5.5**	**6**
31-Aug-02	***66***	70	70	70	70	70	70	70	70	70	70	70	70
1-Sep-02	***66***	68	68	68	68	68	68	68	68	68	68	68	68
2-Sep-02	68	70	72	72	72	72	72	72	72	72	72	72	72
3-Sep-02	66	72	72	72	72	72	72	72	72	72	72	72	72
4-Sep-02	68	72	72	72	72	72	72	72	72	72	72	72	72
5-Sep-02	68	72	72	72	72	72	72	72	72	72	72	74	74
6-Sep-02	68	72	74	74	74	74	74	74	74	74	74	74	74
7-Sep-02	68	70	71	71	71	71	71	71	71	71	71	71	71
8-Sep-02	70	72	72	72	72	72	72	72	72	72	72	72	72
9-Sep-02	68	70	72	72	72	72	72	72	72	74	74	74	74
10-Sep-02	70	72	74	74	74	74	74	74	74	74	74	74	74
11-Sep-02	70	72	74	74	74	74	74	74	74	74	74	74	74
12-Sep-02	70	72	74	74	***76***	75	75	75	75	75	75	75	75
13-Sep-02	72	74	74	74	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***
14-Sep-02	68	70	70	70	74	74	74	74	74	74	74	74	74
15-Sep-02	70	74	74	74	74	74	74	74	74	74	74	74	74
16-Sep-02	67	70	72	72	72	73	74	74	74	74	74	74	74
17-Sep-02	70	72	74	74	74	74	74	74	74	74	74	74	74
18-Sep-02	68	68	72	72	74	74	74	74	74	74	74	74	74
19-Sep-02	70	70	72	72	72	72	72	72	72	72	72	72	72
20-Sep-02	68	70	72	72	72	72	72	72	72	72	72	72	72
21-Sep-02	68	72	72	72	72	72	72	72	72	72	72	72	72
22-Sep-02	68	70	70	72	72	72	72	72	72	72	72	72	72
23-Sep-02	68	72	72	72	72	74	74	74	74	74	74	74	74
24-Sep-02	70	70	70	70	70	74	74	74	74	74	74	74	74
25-Sep-02	68	70	70	70	72	72	72	72	72	72	72	72	72
26-Sep-02	68	70	70	70	72	72	72	72	72	72	72	72	72

TABLE I-7 – CHAMBER TEMPERATURES AND HUMIDITIES (CONT'D)
CHAMBER TEMPERATURES (ºF) - 2000 mg/m^3 Target Concentration

	Time from Start of Exposure (Hours)												
	0	**0.5**	**1**	**1.5**	**2**	**2.5**	**3**	**3.5**	**4**	**4.5**	**5**	**5.5**	**6**
31-Aug-02	***66***	68	70	70	70	70	70	70	70	70	70	70	70
1-Sep-02	***66***	70	70	70	70	70	70	70	70	70	70	70	70
2-Sep-02	68	70	70	70	70	70	70	70	70	70	70	70	70
3-Sep-02	***66***	70	70	70	70	70	70	70	70	70	70	70	70
4-Sep-02	68	72	72	72	72	72	72	72	74	74	74	74	74
5-Sep-02	68	70	72	72	72	72	72	72	72	72	74	74	74
6-Sep-02	70	72	72	72	72	72	72	72	72	72	72	72	72
7-Sep-02	70	70	70	70	70	70	70	70	70	70	70	70	70
8-Sep-02	70	72	72	72	72	72	72	72	72	72	72	72	72
9-Sep-02	68	70	70	70	70	70	70	70	70	74	74	74	74
10-Sep-02	70	70	73	74	74	74	74	74	74	74	74	74	74
11-Sep-02	70	72	74	74	74	74	74	76	76	76	76	76	76
12-Sep-02	70	70	74	74	74	74	74	74	74	74	74	74	74
13-Sep-02	70	74	74	74	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***
14-Sep-02	68	70	70	72	72	73	73	73	73	73	73	73	73
15-Sep-02	70	74	74	74	74	74	74	74	74	74	74	74	74
16-Sep-02	68	72	72	72	72	70	74	74	74	74	74	74	74
17-Sep-02	70	70	74	74	74	74	74	74	74	74	74	74	74
18-Sep-02	70	72	72	72	74	74	74	74	74	74	74	74	74
19-Sep-02	70	72	72	72	72	72	72	72	72	72	72	72	72
20-Sep-02	68	70	70	70	72	72	72	72	72	72	72	72	72
21-Sep-02	***66***	70	70	70	70	70	70	72	72	72	72	72	72
22-Sep-02	68	70	70	70	70	70	70	70	70	70	70	70	70
23-Sep-02	68	70	72	72	72	72	72	72	72	72	72	72	72
24-Sep-02	70	70	72	72	72	72	72	72	72	72	72	72	72
25-Sep-02	68	70	70	70	70	70	70	70	72	72	72	72	72
26-Sep-02	68	70	70	72	72	72	72	72	72	72	72	72	72

TABLE I-7 – CHAMBER TEMPERATURES AND HUMIDITIES (CONT'D)
CHAMBER TEMPERATURES (ºF) – 10,000 mg/m^3 Target Concentration

	Time from Start of Exposure (Hours)												
	0	**0.5**	**1**	**1.5**	**2**	**2.5**	**3**	**3.5**	**4**	**4.5**	**5**	**5.5**	**6**
31-Aug-02	68	72	74	74	74	74	74	74	74	74	74	74	74
1-Sep-02	***66***	72	72	72	72	72	72	72	72	72	72	72	72
2-Sep-02	***66***	72	74	74	74	74	74	74	74	74	74	74	74
3-Sep-02	***66***	74	74	74	74	74	74	74	74	74	74	74	74
4-Sep-02	68	74	74	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***
5-Sep-02	68	74	76	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***78***	***78***
6-Sep-02	70	74	74	74	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***
7-Sep-02	70	73	73	73	73	73	73	73	73	73	73	73	73
8-Sep-02	70	72	72	74	74	74	74	74	74	74	74	74	74
9-Sep-02	68	72	74	***76***	***76***	***76***	***76***	***76***	***76***	***78***	***78***	***78***	***78***
10-Sep-02	70	74	***76***	***78***	***78***	***78***	***78***	***78***	***78***	***78***	***78***	***78***	***78***
11-Sep-02	68	74	***76***	***76***	***76***	***78***	***78***	***78***	***78***	***78***	***78***	***78***	***78***
12-Sep-02	70	74	***76***	***78***	***78***	***78***	***78***	***78***	***78***	***78***	***78***	***78***	***78***
13-Sep-02	70	74	***76***	***78***	***78***	***78***	***78***	***78***	***78***	***78***	***78***	***78***	***78***
14-Sep-02	68	73	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***
15-Sep-02	70	72	74	74	74	74	74	74	74	74	74	74	74
16-Sep-02	66	72	74	***76***	***76***	***76***	***78***	***78***	***78***	***78***	***78***	***78***	***78***
17-Sep-02	70	73	***76***	***76***	***78***	***78***	***78***	***78***	***78***	***78***	***78***	***78***	***78***
18-Sep-02	70	74	***76***	***76***	***78***	***78***	***78***	***78***	***78***	***78***	***78***	***78***	***78***
19-Sep-02	70	72	74	74	76	***76***	***78***	***78***	***78***	***78***	***78***	***78***	***78***
20-Sep-02	70	74	***76***	***76***	***76***	***76***	***76***	***78***	***78***	***78***	***78***	***78***	***78***
21-Sep-02	68	72	74	74	***76***	***76***	***76***	***78***	***78***	***78***	***78***	***78***	***78***
22-Sep-02	68	72	74	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***
23-Sep-02	66	74	***76***	***76***	***76***	***78***	***78***	***78***	***78***	***78***	***78***	***78***	***78***
24-Sep-02	70	74	***76***	***76***	***76***	***76***	***76***	***76***	***78***	***78***	***78***	***78***	***78***
25-Sep-02	70	74	74	74	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***
26-Sep-02	70	74	74	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***	***76***

TABLE I-7 – CHAMBER TEMPERATURES AND HUMIDITIES (CONT'D)
CHAMBER TEMPERATURES (ºF) – 20,000 mg/m^3 Target Concentration

	Time from Start of Exposure (Hours)												
	0	**0.5**	**1**	**1.5**	**2**	**2.5**	**3**	**3.5**	**4**	**4.5**	**5**	**5.5**	**6**
31-Aug-02	***66***	68	70	70	70	70	70	70	70	70	70	70	70
1-Sep-02	***66***	68	72	72	72	72	72	72	72	72	72	72	72
2-Sep-02	***66***	70	70	70	70	70	70	70	70	70	70	70	70
3-Sep-02	***66***	70	70	70	70	70	70	70	70	70	70	70	70
4-Sep-02	68	70	72	72	72	72	72	74	74	74	74	74	74
5-Sep-02	68	70	72	72	72	72	72	74	74	74	74	74	74
6-Sep-02	68	72	72	74	74	74	74	74	74	74	74	74	74
7-Sep-02	68	70	72	72	72	72	72	72	72	72	72	72	72
8-Sep-02	70	70	74	74	74	74	74	74	74	74	74	74	74
9-Sep-02	68	70	72	74	74	74	74	74	74	74	74	74	74
10-Sep-02	68	70	72	74	74	74	74	74	***76***	***76***	***76***	***76***	***76***
11-Sep-02	68	70	72	74	74	74	74	***76***	***76***	***76***	***76***	***76***	***76***
12-Sep-02	68	71	72	74	74	74	74	74	74	74	74	74	74
13-Sep-02	70	72	74	74	74	74	74	74	74	74	***76***	***76***	***76***
14-Sep-02	68	70	72	72	72	72	72	72	72	72	72	72	72
15-Sep-02	70	72	72	72	72	72	72	72	72	72	72	72	72
16-Sep-02	***66***	68	70	70	72	72	74	74	74	74	74	74	74
17-Sep-02	68	70	72	74	74	74	74	74	74	74	74	74	74
18-Sep-02	68	70	72	72	72	72	74	74	74	74	74	74	74
19-Sep-02	68	70	70	72	72	72	72	74	74	74	74	74	74
20-Sep-02	***66***	70	72	72	72	72	72	74	74	74	74	74	74
21-Sep-02	***66***	70	72	72	72	72	72	74	74	74	74	74	74
22-Sep-02	68	70	72	72	72	72	72	72	72	72	72	72	72
23-Sep-02	***66***	70	70	70	72	72	72	74	74	74	74	74	74
24-Sep-02	68	70	72	72	72	72	72	72	72	72	72	72	72
25-Sep-02	68	70	70	70	72	72	72	72	72	72	72	72	72
26-Sep-02	68	70	70	70	70	70	70	70	70	72	72	72	72

TABLE I-7 – CHAMBER TEMPERATURES AND HUMIDITIES (CONT'D)
CHAMBER HUMIDITIES (%RH) - 0 mg/m^3 Target Concentration

	Time from Start of Exposure (Hours)												
	0	**0.5**	**1**	**1.5**	**2**	**2.5**	**3**	**3.5**	**4**	**4.5**	**5**	**5.5**	**6**
31-Aug-02	***71***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***
1-Sep-02	***71***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***
2-Sep-02	***72***	***64***	57	57	57	57	57	57	57	57	57	57	57
3-Sep-02	***80***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
4-Sep-02	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
5-Sep-02	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	58	58
6-Sep-02	***72***	57	58	58	58	58	58	58	58	58	58	58	58
7-Sep-02	***67***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***
8-Sep-02	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
9-Sep-02	***72***	***68***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	58	58	58	58
10-Sep-02	***72***	***69***	58	58	58	58	58	58	58	58	58	58	58
11-Sep-02	***72***	***65***	58	58	58	58	58	58	58	58	58	58	58
12-Sep-02	***64***	57	51	51	45	48	48	48	48	48	48	48	48
13-Sep-02	57	58	58	58	52	52	52	52	52	52	52	52	52
14-Sep-02	***81***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***
15-Sep-02	***72***	58	58	58	58	58	58	58	58	58	58	58	58
16-Sep-02	***95***	***90***	***82***	***82***	***82***	***78***	***66***	***66***	***66***	***66***	***66***	***66***	***66***
17-Sep-02	***72***	***65***	58	58	58	58	58	58	58	58	58	58	58
18-Sep-02	***72***	***72***	***65***	***65***	58	58	58	58	58	58	58	58	58
19-Sep-02	***64***	***64***	57	57	57	57	57	57	57	57	57	57	57
20-Sep-02	***72***	***64***	57	57	57	57	57	***65***	***65***	***65***	***65***	***65***	***65***
21-Sep-02	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
22-Sep-02	***72***	***64***	***64***	57	57	57	57	57	57	57	57	57	57
23-Sep-02	***64***	57	57	57	57	58	58	58	58	58	58	58	58
24-Sep-02	57	57	57	57	57	57	57	57	57	57	57	57	57
25-Sep-02	***64***	57	57	57	57	57	57	57	57	57	57	57	57
26-Sep-02	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***

TABLE I-7 – CHAMBER TEMPERATURES AND HUMIDITIES (CONT'D)
CHAMBER HUMIDITIES (%RH) - 2000 mg/m^3 Target Concentration

	Time from Start of Exposure (Hours)												
	0	**0.5**	**1**	**1.5**	**2**	**2.5**	**3**	**3.5**	**4**	**4.5**	**5**	**5.5**	**6**
31-Aug-02	***71***	***72***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***
1-Sep-02	***71***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***
2-Sep-02	***72***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***
3-Sep-02	***71***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***
4-Sep-02	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	58	58	58	58	58
5-Sep-02	***72***	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
6-Sep-02	***64***	57	57	***65***	***65***	***65***	57	57	57	57	57	***65***	***65***
7-Sep-02	57	***64***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***
8-Sep-02	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
9-Sep-02	***72***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	58	58	58	58
10-Sep-02	***72***	***72***	***61***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***
11-Sep-02	***72***	***65***	58	58	58	58	58	52	52	52	52	52	52
12-Sep-02	***64***	***64***	51	51	51	51	51	51	51	51	51	51	51
13-Sep-02	***64***	58	58	58	52	52	52	52	52	52	52	52	52
14-Sep-02	***72***	***72***	***72***	***69***	***69***	***69***	***69***	***69***	***69***	***69***	***69***	***69***	***69***
15-Sep-02	***72***	58	58	58	58	58	58	58	58	58	58	58	58
16-Sep-02	***90***	***73***	***73***	***73***	***73***	***72***	***66***	***66***	***66***	***66***	***66***	***66***	***66***
17-Sep-02	***72***	72	58	58	58	58	58	58	58	58	58	58	58
18-Sep-02	***64***	***65***	***65***	***65***	58	58	58	58	58	58	58	58	58
19-Sep-02	***64***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
20-Sep-02	***72***	***64***	***64***	***64***	57	57	57	***65***	***65***	***65***	***65***	***65***	***65***
21-Sep-02	***90***	***81***	***81***	***81***	***72***	***72***	***72***	***65***	***65***	***65***	***65***	***65***	***65***
22-Sep-02	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***
23-Sep-02	***64***	***64***	57	57	57	57	57	57	57	57	57	57	57
24-Sep-02	57	57	57	57	57	57	57	57	57	50	50	50	50
25-Sep-02	***64***	57	57	57	57	57	57	57	57	57	57	57	57
26-Sep-02	***64***	***64***	***64***	57	57	57	57	57	57	57	57	57	57

TABLE I-7 – CHAMBER TEMPERATURES AND HUMIDITIES (CONT'D)
CHAMBER HUMIDITIES (%RH) – 10,000 mg/m^3 Target Concentration

	Time from Start of Exposure (Hours)												
	0	**0.5**	**1**	**1.5**	**2**	**2.5**	**3**	**3.5**	**4**	**4.5**	**5**	**5.5**	**6**
31-Aug-02	***64***	57	58	58	58	58	58	58	58	58	58	58	58
1-Sep-02	***71***	57	57	57	57	57	57	57	57	57	57	57	57
2-Sep-02	***71***	65	58	58	58	58	58	58	58	58	58	58	58
3-Sep-02	***80***	58	58	58	58	58	58	58	58	58	58	58	58
4-Sep-02	***72***	58	58	59	59	59	59	59	59	59	59	59	59
5-Sep-02	***72***	58	59	59	59	59	59	59	59	59	59	53	53
6-Sep-02	***64***	58	58	58	52	52	52	52	52	52	52	52	52
7-Sep-02	***64***	***61***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
8-Sep-02	***76***	***65***	***65***	58	58	58	58	58	58	58	58	58	58
9-Sep-02	***72***	***65***	58	56	56	56	56	56	56	53	53	53	53
10-Sep-02	***72***	***62***	56	53	53	53	53	53	53	53	53	53	53
11-Sep-02	***72***	58	59	59	59	53	53	53	53	53	53	53	53
12-Sep-02	57	51	45	46	46	46	46	46	46	46	46	46	46
13-Sep-02	***64***	58	52	53	53	53	53	53	53	53	53	53	53
14-Sep-02	***72***	***65***	59	59	59	59	59	59	59	59	59	59	59
15-Sep-02	***72***	***65***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***
16-Sep-02	***90***	***82***	***74***	***67***	***67***	***67***	57	57	57	53	53	53	53
17-Sep-02	***72***	***61***	59	59	53	53	53	53	53	53	53	53	53
18-Sep-02	***64***	58	59	59	53	53	53	53	53	53	53	53	53
19-Sep-02	***81***	***73***	***66***	***66***	59	59	53	53	53	53	53	53	53
20-Sep-02	***64***	58	52	52	52	52	52	53	53	53	53	53	53
21-Sep-02	***72***	***65***	***66***	***66***	59	59	59	53	53	53	53	53	53
22-Sep-02	***64***	***61***	58	52	52	52	52	52	52	52	52	52	52
23-Sep-02	***71***	58	52	52	52	52	52	52	52	52	52	52	52
24-Sep-02	57	51	45	52	52	52	52	52	46	46	46	46	46
25-Sep-02	57	51	51	51	52	52	52	52	52	52	52	52	52
26-Sep-02	***64***	58	58	52	52	52	52	52	52	52	52	52	52

TABLE I-7 – CHAMBER TEMPERATURES AND HUMIDITIES (CONT'D)
CHAMBER HUMIDITIES (%RH) – 20,000 mg/m^3 Target Concentration

	Time from Start of Exposure (Hours)												
	0	**0.5**	**1**	**1.5**	**2**	**2.5**	**3**	**3.5**	**4**	**4.5**	**5**	**5.5**	**6**
31-Aug-02	***71***	***72***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***
1-Sep-02	***71***	***72***	57	57	57	57	57	57	57	57	57	57	57
2-Sep-02	***71***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***
3-Sep-02	***71***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***
4-Sep-02	***72***	***72***	***65***	***65***	***65***	***65***	***65***	58	58	58	58	58	58
5-Sep-02	***72***	***72***	***65***	***65***	***65***	***65***	***65***	58	58	58	58	58	58
6-Sep-02	***81***	***65***	***65***	58	58	58	58	58	58	58	58	58	58
7-Sep-02	***64***	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
8-Sep-02	***72***	***72***	58	58	58	58	58	58	58	58	58	58	58
9-Sep-02	***72***	***77***	***65***	58	58	58	58	58	58	58	58	58	58
10-Sep-02	***72***	***77***	***65***	58	58	58	58	58	59	59	59	59	59
11-Sep-02	***72***	***72***	***65***	58	58	58	58	52	52	52	52	52	52
12-Sep-02	55	57	57	51	51	51	51	51	51	51	51	51	51
13-Sep-02	57	57	51	58	58	58	58	58	58	58	52	52	52
14-Sep-02	***72***	***64***	***65***	***69***	***69***	***69***	***69***	***69***	***69***	***69***	***69***	***69***	***69***
15-Sep-02	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
16-Sep-02	***90***	***90***	***81***	***81***	***73***	***73***	***66***	***66***	***66***	58	58	58	58
17-Sep-02	***72***	***72***	***65***	58	58	58	58	58	58	58	58	58	58
18-Sep-02	***72***	***72***	***65***	***65***	***65***	***65***	58	58	58	58	58	58	58
19-Sep-02	***72***	***64***	***64***	***65***	***65***	***65***	***65***	58	58	58	58	58	58
20-Sep-02	***71***	***64***	57	57	57	57	65	58	58	58	58	58	58
21-Sep-02	***71***	***72***	***65***	***65***	***65***	***65***	***65***	58	58	58	58	58	58
22-Sep-02	***64***	***64***	***61***	***61***	***61***	***61***	***61***	***61***	***61***	***61***	***61***	***61***	***61***
23-Sep-02	***71***	***64***	***64***	***64***	57	57	57	58	58	58	58	58	58
24-Sep-02	***64***	***64***	57	57	57	57	57	57	57	57	57	57	57
25-Sep-02	***64***	***64***	***64***	***64***	57	57	57	57	57	57	57	57	57
26-Sep-02	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	57	57	57	57

APPENDIX J- ANALYTICAL CHEMISTRY REPORT

SUMMARY

Charcoal tube sorbent tube samples were received by the Analytical Chemistry Laboratory from inhalation chamber exposures and were characterized for hydrocarbon distribution using capillary gas chromatography with flame ionization detection (GC/FID). Sorbent tube samples were stored in a freezer pending analysis.

SAMPLE PREPARATION

The front and back sections of each charcoal sample tube were desorbed and analyzed separately to assess potential sampling breakthrough. The charcoal tube sections were desorbed with 3.0 mL 5% 2-propanol / 95% carbon disulfide (5% 2-PrOH/95% CS_2) for at least 30 minutes. Aliquots were then analyzed by GC-FID.

STANDARDIZATION

A standard mixture was prepared in CS_2 containing each of the 18 target hydrocarbons plus TBA oxygenate. Analysis of the standard mixture was used to confirm the relative retention times of each target hydrocarbon and was not used for quantitative purposes.

CHARACTERIZATION

Characterization of the neat MRD-00-718 (gasoline vapor condensate with TBA) was performed separately and will be reported as part of EMBSI Study 167490. Neat test substance characterization included a similar analysis of the relative distribution of target hydrocarbons and oxygenate as was performed for the chamber sorbent tube samples.

APPENDIX J- ANALYTICAL CHEMISTRY REPORT

INSTRUMENT CONDITIONS FOR MRD-00-718 ON CHARCOAL SORBENT TUBE

The following GC conditions and equipment were used to determine the hydrocarbon distribution of test substance on chamber characterization sorbent tubes:

GC	Perkin Elmer XL Autosystem
FID Range	FID (2^5)
Detector Temperature; (gas flows)	225°C (H_2 45 mL/min; Air 450 mL/min)
Injector Temperature (Split ratio)	200°C (split injection 20:1)
Injection Volume	0.2µL or 0.5µL*
Analytical Column C-32	Supleco Petrocol DH 150 fused silica capillary column (150 m x 250 µm; 1.0 µm film thickness)
Oven Temperature Program	35°C (hold 130 minutes); ramp @ 2°C/minute to 200°C
Data Collection	Perkin Elmer Nelson Turbochrom (TC4) version 4.1.2
Carrier Gas Program	65 psi (He)

*0.2µL injected of 10,000mg/m^3 and 20,000mg/m^3 samples, 0.5µL injected of 2000mg/m^3 samples.

RESULTS

Hydrocarbon characterization was performed on an area percent basis for each of the 18 target hydrocarbons and TBA oxygenate. Results are listed in Table J-1.

The relative distribution of hydrocarbons and oxygenate measured on the chamber characterization charcoal tubes was in good agreement with that measured in the characterization of neat MRD-00-718 test substance.

D. J. Letinski, M.S.
Analytical Chemist

7 Oct 09
Date

APPENDIX J- ANALYTICAL CHEMISTRY REPORT

TABLE J - 1

MRD-00-718 CHAMBER CHARACTERIZATION - SORBENT TUBES HYDROCARBON DISTRIBUTION

Sample Date	4-Sep-02			10-Sep-02			17-Sep-02			25-Sep-02		
Inhalation ID	1	2	3	4	5	6	7	8	9	10	11	12
		target mg/m^3			target mg/m^3			target mg/m^3			target mg/m^3	
	2000	10,000	20,000	2000	10,000	20,000	2000	10,000	20,000	2000	10,000	20,000
Compound	*RESULTS ARE in "AREA %" of TARGET HYDROCARBONS*											
isobutane	2.1	2.0	2.0	2.2	2.2	0.3	2.2	2.0	2.0	2.2	2.0	2.1
n-butane	9.6	9.4	9.3	10.1	9.8	3.1	9.8	9.5	9.4	10.1	9.5	9.6
isopentane	25.9	26.1	26.5	26.3	26.2	21.4	25.9	26.1	26.2	26.6	25.7	25.9
n-pentane	12.0	12.1	12.3	12.1	12.1	11.8	12.0	12.1	12.2	12.3	12.0	12.0
trans-2-pentene	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2
TBA	14.9	15.7	15.9	14.6	15.5	19.9	15.0	15.7	16.1	15.4	16.1	16.1
2-methyl-2-butene	3.3	3.3	3.4	3.3	3.3	3.6	3.3	3.3	3.4	3.3	3.3	3.3
2,3-dimethylbutane	1.9	1.9	1.9	1.9	1.9	2.3	1.9	1.9	1.9	1.9	1.9	1.9
2-methylpentane	6.4	6.4	6.4	6.3	6.3	7.8	6.3	6.4	6.3	6.3	6.3	6.3
3-methylpentane	4.0	4.0	3.9	3.9	3.9	5.0	3.9	4.0	3.9	3.9	4.0	3.9
n-hexane	3.5	3.5	3.4	3.5	3.4	4.5	3.4	3.5	3.4	3.4	3.5	3.5
methylcyclopentane	1.7	1.7	1.7	1.7	1.6	2.2	1.7	1.7	1.7	1.7	1.7	1.7
2,4-dimethylpentane	1.1	1.1	1.1	1.1	1.1	1.5	1.1	1.1	1.1	1.0	1.1	1.1
benzene	2.5	2.1	2.1	2.4	2.1	2.9	2.5	2.1	2.1	2.4	2.2	2.2
2-methylhexane	1.4	1.3	1.3	1.3	1.3	1.8	1.4	1.3	1.3	1.2	1.4	1.3
2,3-dimethylpentane	1.3	1.3	1.2	1.3	1.3	1.7	1.3	1.3	1.2	1.2	1.3	1.3
3-methylhexane	1.6	1.5	1.5	1.5	1.5	2.0	1.6	1.5	1.5	1.3	1.5	1.5
isooctane	1.6	1.6	1.5	1.5	1.6	2.1	1.6	1.6	1.5	1.3	1.6	1.5
toluene	3.0	2.9	2.6	2.8	2.9	4.0	3.0	2.9	2.6	2.4	2.9	2.8
Sum	100	100	100	100	100	100	100	100	100	100	100	100

No hydrocarbon target compounds were detected on the back section of the sorbent tubes analyzed.

APPENDIX K – STATISTICIAN'S REPORT

Analysis of Fetal Data from a Whole-Body Inhalation Developmental Toxicity Study in Rats with Gasoline with TBA Vapor Condensate (MRD-00-718)

This report details the statistical analysis of fetal body weight and anomaly data from ExxonMobil Study 171834. The study was conducted to evaluate the potential developmental toxicity of Gasoline with TBA Vapor Condensate (GTVC). GTVC was administered via whole-body inhalation exposure to pregnant rats during the period of major organogenesis and fetal growth. GTVC was administered by whole-body inhalation exposure to 25 confirmed-mated CD® (SD) IGS BR female rats at target exposures of 0 (air control) 2000, 10,000, and 20,000 mg/m^3 for six hours (plus the theoretical equilibration time) daily from Gestation Day (GD) 5 through GD 20.

The fetal body weight was analyzed by a mixed model analysis of variance that provides an accurate statistical model of the biology. The analysis used the litter as the basis for analysis and effectively used the litter size as a covariate. Two alternative models were used: one model considered exposure group, litter size, and fetal sex as explanatory variables while the other model used these variables and included the corpora lutea (CL) as an additional covariate. When the overall effect of exposure, or the interactions with exposure, were statistically significant the exposure groups means were tested pairwise vs. the control group using least squares means. The least squares means allows comparisons that account for differences in litter size and sex. The mathematical model is based on a paper by Chen, et al (1996). The analysis was run using SAS with code suggested in Little, et al (1997).

The number of implants per dam, the litter size per dam, and the dam uterine weight were analyzed by a standard analysis of variance with CL as a covariate. When the overall effect of exposure, or the interactions of exposure with CL, was statistically significant the exposure groups' means were tested pairwise vs. the control group using least squares means (Snedecor and Cochran, 1989).

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

The analysis of anomalies (malformations or variations) was based on a Generalized Estimating Equation (GEE) application of the linearized model, Ryan (1992). The model used the litter as the basis for analysis and considered correlation among littermates by incorporating an estimated constant correlation and the litter size as a covariate. When the overall effect of exposure, or the exposure by sex effect, was statistically significant the exposure groups were tested pairwise vs. the control group using least squares means. The least squares means allows comparisons that account for differences in litter size. There were three categories of anomalies tested, and within each category specific anomalies were also tested. In addition to the category specific anomalies a series of combined analyses were performed within each category:

Combined Malformations and Variations for All Fetuses
Combined Malformations and Variations for Alive Fetuses
Combined Malformations and Variations for Dead Fetuses
Malformations for All Fetuses
Malformations for Alive Fetuses
Malformations for Dead Fetuses
Variations for All Fetuses
Variations for Alive Fetuses
Variations for Dead Fetuses

In some cases there were no dead fetuses in a category.

Table I lists the four categories and corresponding sub-categories. Within each category several subcategories were combined into a group of similar anomalies. For example in the Category Skeletal the separate sub-categories of "Bifid vertebral centra" and "Dumbbell-shaped vertebral centra" were combined into a sub-category "Hypoplastic vertebral centra". In this combined category an animal is counted once when he, or she, exhibits more than one characteristic. The sub-categories that were combined are listed in the Sub-categories Combined column of Table 1 by the sub-category number. The analyses were run using SAS.

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

Table I
Malformation Categories and Corresponding Sub-categories

Category	Sub-Category	Sub-categories combined
Head	1 - Retinal fold; Left	
External	1 - Adactyly forepaw; Bilateral	
	2 - Cleft palate	
	3 - Ectrodactyly hindpaw; Bilateral (2 digits on each paw)	
	4 - Hooked tail	
	5 - Malrotated hindpaw	
	6 – Microcephaly	
	7 - Protruding tongue	
	8 - Short tail	
Abdomen/Thorax	1 - Malpositioned kidney; Bilateral	
	2 - Umbilical artery arises from left side of urinary bladder	
Skeletal	1 - Multiple paw bones absent	
	2 Ribs - Fused; Right	
	3 Ribs - Multiple bones malformed	
	4 - Rudimentary supernumerary ribs	
	5 - Short last rib	
	6 Skull - Multiple bones malformed	
	7 Sternebrae – Bifid	
	8 Sternebrae – Fused	
	9 - Asymmetric sternebrae	
	10 - Hypoplastic sternebrae	
	11 - Unossified sternebrae	
	12 - Presacral vertebrae	
	13 - Bifid vertebral centra	
	14 - Dumbbell-shaped vertebral centra	
	15 - Dumbbell-shaped vertebral centra anlage	
	16 - Malformed vertebral arch	
	17 Vertebrae - Multiple bones malformed	
	18 - Delayed ossification of the sternebrae	10, 11
	19 - Hypoplastic vertebral centra	13, 14

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

RESULTS:

BODY WEIGHT ANALYSIS

Based on the bodyweight analysis that did not consider CL count, there was no statistically significant difference in the mean fetal litter weights among the exposure groups. The exposure by sex interaction was not statistically significant; therefore only the group means are presented. Table II shows the mean fetal weight and the least squares mean fetal weight.

Table II
Mean fetal weight, the least squares mean fetal weight not considering CL count

Exposure Group (mg/m^3)	n litters	n fetuses	observed fetus mean (gm)	Least squares fetus mean (gm)
0	25	385	5.29	5.32
2,000	23	302	5.33	5.29
10,000	23	327	5.29	5.29
20,000	24	345	5.13	5.16

The bodyweight analysis that included CL count and a CL by exposure interaction indicated a statistically significant difference in the mean fetal litter weights among the exposure groups and an exposure by CL count interaction ($p<0.0025$ and $p<0.0005$ respectively); the 20,000 mg/m^3 exposure group was different from the 0 exposure group ($p<0.02$). When the model as fit without the exposure by CL count interaction there was not a significant difference in fetal weights among the exposure groups ($p<0.14$). Table III shows the mean fetal weight and the least squares mean fetal weight based on the two models.

Table III
Mean fetal weight, the least squares mean fetal weight considering CL count

Exposure Group (mg/m^3)	n litters	n fetuses	mean CL	observed fetus mean (gm)	Least squares fetus mean (gm) with CL*exposure	Least squares fetus mean (gm) without CL*exposure
0	25	385	16.3	5.29	5.31	5.31
2,000	23	302	14.0	5.33	5.36	5.30
10,000	23	327	14.9	5.29	5.26	5.29
20,000	24	345	15.1	5.13	5.15 *	5.16

* statistically significantly different from control, $p<0.02$

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

IMPLANTS, LITTER SIZE, AND UTERINE WEIGHT ANALYSES

The number of implants per dam, the litter size per dam, and the dam uterine weight analyses that included a CL and an exposure by CL interaction indicated statistically significant differences in the exposure related means for all three measures. However, only the uterine weight analyses indicated a statistically significant difference between the control and an exposed group. Table IV shows the means the least squares means for these three measures. When the analyses were repeated with a model that did not include an exposure by CL interaction term there were no statistically significant exposure related effects.

Table IV
Mean number of implants, litter size, and uterine weight, and the
corresponding least squares means considering CL count and an exposure by CL interaction

			Observed Means			Least Squares Means		
Exposure Group (mg/m^3)	n litters	mean CL	n implants	Litter Size	Uterine Weight	n implants	Litter Size	Uterine Weight
0	25	16.3	15.68	15.40	114.3	14.73	14.58	109.2
2,000	23	14.0	13.30	13.13	100.6	14.35	14.17	107.7
10,000	23	14.9	14.61	14.22	105.5	14.82	14.44	106.6
20,000	24	15.1	14.71	14.38	104.1	14.71	14.38	103.7*

* statistically significantly different from control, $p<0.02$

MALFORMATION ANALYSES

Of the 31 anomaly analyses the count of skeletal rudimentary supernumerary ribs, count of combined skeletal variations and malformations and count of combined skeletal variations indicated a statistically significant differences among the exposure groups ($p<0.05$). Individual comparisons indicated the high exposure group (20,000 mg/m^3) had a large incidence of rudimentary supernumerary ribs than the control group. None of the other measures indicated statistically significant differences among the exposure groups. See Table V for the incidences of skeletal rudimentary supernumerary ribs.

Statistically significant differences in counts between control and 20,000 mg/m^3 for count of combined skeletal variations and malformations and count of combined skeletal variations can be explained by difference in counts for skeletal rudimentary supernumerary ribs. Differences between exposure groups become insignificant when the skeletal count of rudimentary supernumerary ribs are removed from the definitions of count of combined skeletal variations and malformations and count of combined skeletal variations.

Incidence tables for all measures are provided in the appendix.

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

Table V
Skeletal Count of Rudimentary Supernumerary Ribs
Numbers in parenthesis are percents

Exposure Group (mg/m^3)	Dams Examined	Fetuses Examined	Dams Affected	Fetuses Affected
0	25	193	12 (48)	16 (8)
2000	23	153	8 (35)	11 (7)
10000	23	165	7 (30)	8 (5)
20000	24	170	16 (67)	29* (17)

* statistically significantly different from control, $p<0.05$

DISCUSSION:
The analyses for fetal body weight, number of implants per dam, the litter size per dam, and the dam uterine weight are complicated. The analyses that did not include CL count were not statistically significant, those that included a term for CL and no exposure by CL interaction terms were not statistically significant, but when there was a CL term and an interaction term there were statistically significant exposure effects (only the fetal weight and uterine weight endpoints indicated a difference between an exposure group and the 0 exposure group). Supplementary diagnostics indicate that the changing pattern is due to complex relationships among the endpoints, the exposure, and the CL count. The models for fetal weight indicate that at low CL counts the bodyweight increases with increasing exposure, for moderate CL count (in the 12 to 14 count range) there is no change in fetal weight as exposure changes, and for high CL count (above 14 CL per dam) the fetal weight decreases with increasing exposure (the rate of decrease in weight becoming sharper as the CL count increases). The specific least squares analysis uses the overall mean CL count of 15.1, so the model predicts a decrease in fetal weight with increasing exposure. Because of these complexities and the confounding of CL count and exposure it is not clear that exposure is directly linked with adverse effects

CONCLUSION:

Based on these findings, administration of the test substance at the exposures tested is associated with an increased incidence of skeletal rudimentary supernumerary ribs in the 20,000 mg/m^3 exposure group relative to the control group. Analyses of mean litter fetal body weight and uterine weight are complex with equivocal results; observed effects may be due to a confounding with CL count. The confounding effect may also apply to the number of implants per dam and the litter size, but that has not been clearly shown with these data

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

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APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

APPENDIX
Anomaly Counts
Study # 171834

head - individual
VISCERAL/HEAD: Retinal fold; Left

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	192	0	0
2000 MG/M3	22	149	0	0
10000 MG/M3	23	162	0	0
20000 MG/M3	24	175	1	1

External Variations and Malformations - combined
All Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	385	1	1
2000 MG/M3	23	302	2	3
10000 MG/M3	23	327	1	2
20000 MG/M3	24	345	0	0

External Variations and Malformations - combined
Alive Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	384	1	1
2000 MG/M3	23	302	2	3
10000 MG/M3	23	327	1	2
20000 MG/M3	24	345	0	0

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

External Variations and Malformations - combined
Dead Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	1	1	0	0

External Malformations - combined
All Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	385	1	1
2000 MG/M3	23	302	1	2
10000 MG/M3	23	327	1	2
20000 MG/M3	24	345	0	0

External Malformations - combined
Alive Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	384	1	1
2000 MG/M3	23	302	1	2
10000 MG/M3	23	327	1	2
20000 MG/M3	24	345	0	0

External Malformations - combined
Dead Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	1	1	0	0

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

external - individual
EXTERNAL: Adactyly forepaw; Bilateral

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	385	0	0
2000 MG/M3	23	302	1	1
10000 MG/M3	23	327	0	0
20000 MG/M3	24	345	0	0

external - individual
EXTERNAL: Cleft palate

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	385	0	0
2000 MG/M3	23	302	1	1
10000 MG/M3	23	327	0	0
20000 MG/M3	24	345	0	0

external - individual
EXTERNAL: Ectrodactyly hindpaw; Bilateral
(2 digits on each paw)

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	385	0	0
2000 MG/M3	23	302	1	1
10000 MG/M3	23	327	0	0
20000 MG/M3	24	345	0	0

external - individual
EXTERNAL: Hooked tail

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	385	0	0
2000 MG/M3	23	302	1	1
10000 MG/M3	23	327	0	0
20000 MG/M3	24	345	0	0

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

external - individual
EXTERNAL: Malrotated hindpaw

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	385	1	1
2000 MG/M3	23	302	1	2
10000 MG/M3	23	327	1	2
20000 MG/M3	24	345	0	0

external - individual
EXTERNAL: Microcephaly

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	385	0	0
2000 MG/M3	23	302	1	1
10000 MG/M3	23	327	0	0
20000 MG/M3	24	345	0	0

external - individual
EXTERNAL: Protruding tongue

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	385	0	0
2000 MG/M3	23	302	2	2
10000 MG/M3	23	327	0	0
20000 MG/M3	24	345	0	0

external - individual
EXTERNAL: Short tail

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	385	0	0
2000 MG/M3	23	302	1	1
10000 MG/M3	23	327	0	0
20000 MG/M3	24	345	0	0

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

Visceral Variations and Malformations - combined
All Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	192	1	1
2000 MG/M3	23	151	1	1
10000 MG/M3	23	162	1	1
20000 MG/M3	24	175	0	0

Visceral Variations and Malformations - combined
Alive Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	191	1	1
2000 MG/M3	23	151	1	1
10000 MG/M3	23	162	1	1
20000 MG/M3	24	175	0	0

Visceral Variations and Malformations - combined
Dead Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	1	1	0	0

visceral - individual
ABDOMEN/THORAX: Malpositioned kidney; Bilateral

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	192	0	0
2000 MG/M3	23	151	1	1
10000 MG/M3	23	162	0	0
20000 MG/M3	24	175	0	0

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

visceral - individual
ABDOMEN/THORAX: Umbilical artery arises from left side of urinary bladder

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	192	1	1
2000 MG/M3	23	151	0	0
10000 MG/M3	23	162	1	1
20000 MG/M3	24	175	0	0

Skeletal Variations and Malformations - combined
All Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	15	24
2000 MG/M3	23	153	13	21
10000 MG/M3	23	165	13	15
20000 MG/M3	24	170	20	38

Skeletal Variations and Malformations - combined
Alive Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	15	24
2000 MG/M3	23	153	13	21
10000 MG/M3	23	165	13	15
20000 MG/M3	24	170	20	38

Skeletal Variations and Malformations - combined,without Rudimentary Supernumarary Ribs
All Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	7	9
2000 MG/M3	23	153	8	10
10000 MG/M3	23	165	8	8
20000 MG/M3	24	170	6	10

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

Skeletal Variations and Malformations -
combined,without Rudimentary Supernumarary Ribs
Alive Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	7	9
2000 MG/M3	23	153	8	10
10000 MG/M3	23	165	8	8
20000 MG/M3	24	170	6	10

Skeletal Variations - combined
All Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	15	24
2000 MG/M3	23	153	13	21
10000 MG/M3	23	165	13	15
20000 MG/M3	24	170	20	38

Skeletal Variations - combined
Alive Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	15	24
2000 MG/M3	23	153	13	21
10000 MG/M3	23	165	13	15
20000 MG/M3	24	170	20	38

Skeletal Variations - combined,without
Rudimentary Supernumarary Ribs
All Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	7	9
2000 MG/M3	23	153	8	10
10000 MG/M3	23	165	7	7
20000 MG/M3	24	170	6	10

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

Skeletal Variations - combined,without
Rudimentary Supernumarary Ribs
Alive Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	7	9
2000 MG/M3	23	153	8	10
10000 MG/M3	23	165	7	7
20000 MG/M3	24	170	6	10

Skeletal Malformations - combined
All Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	2	2
2000 MG/M3	23	153	1	1
10000 MG/M3	23	165	1	1
20000 MG/M3	24	170	1	1

Skeletal Malformations - combined
Alive Fetuses

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	2	2
2000 MG/M3	23	153	1	1
10000 MG/M3	23	165	1	1
20000 MG/M3	24	170	1	1

skeletal - individual
SKELETAL/PAW: Multiple paw bones absent

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	0	0
2000 MG/M3	23	153	1	1
10000 MG/M3	23	165	0	0
20000 MG/M3	24	170	0	0

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

skeletal - individual
SKELETAL/RIBS (T1-2 anlage): Fused; Right

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	1	1
2000 MG/M3	23	153	0	0
10000 MG/M3	23	165	0	0
20000 MG/M3	24	170	0	0

skeletal - individual
SKELETAL/RIBS: Multiple bones malformed

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	0	0
2000 MG/M3	23	153	1	1
10000 MG/M3	23	165	0	0
20000 MG/M3	24	170	0	0

skeletal - individual
SKELETAL/RIBS: Rudimentary supernumerary ribs

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	12	16
2000 MG/M3	23	153	8	11
10000 MG/M3	23	165	7	8
20000 MG/M3	24	170	16	29

skeletal - individual
SKELETAL/RIBS: Short last rib

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	3	3
2000 MG/M3	23	153	1	1
10000 MG/M3	23	165	1	1
20000 MG/M3	24	170	0	0

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

skeletal - individual
SKELETAL/SKULL: Multiple bones malformed

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	0	0
2000 MG/M3	23	153	1	1
10000 MG/M3	23	165	0	0
20000 MG/M3	24	170	0	0

skeletal - individual
SKELETAL/STERNEBRAE (I, II): Bifid

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	0	0
2000 MG/M3	23	153	1	1
10000 MG/M3	23	165	0	0
20000 MG/M3	24	170	0	0

skeletal - individual
SKELETAL/STERNEBRAE (IV-VI): Fused

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	1	1
2000 MG/M3	23	153	0	0
10000 MG/M3	23	165	0	0
20000 MG/M3	24	170	0	0

skeletal - individual
SKELETAL/STERNEBRAE: Asymmetric sternebrae

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	0	0
2000 MG/M3	23	153	2	2
10000 MG/M3	23	165	1	1
20000 MG/M3	24	170	1	1

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

skeletal - individual
SKELETAL/STERNEBRAE: Hypoplastic sternebrae

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	1	1
2000 MG/M3	23	153	1	1
10000 MG/M3	23	165	0	0
20000 MG/M3	24	170	1	2

skeletal - individual
SKELETAL/STERNEBRAE: Unossified sternebrae

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	1	1
2000 MG/M3	23	153	4	6
10000 MG/M3	23	165	4	4
20000 MG/M3	24	170	1	1

skeletal - individual
SKELETAL/VERTEBRAE (L): Presacral vertebrae

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	0	0
2000 MG/M3	23	153	0	0
10000 MG/M3	23	165	0	0
20000 MG/M3	24	170	1	1

skeletal - individual
SKELETAL/VERTEBRAE: Bifid vertebral centra

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	3	4
2000 MG/M3	23	153	0	0
10000 MG/M3	23	165	0	0
20000 MG/M3	24	170	3	3

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

skeletal - individual
SKELETAL/VERTEBRAE: Dumbbell-shaped vertebral centra

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	1	1
2000 MG/M3	23	153	0	0
10000 MG/M3	23	165	0	0
20000 MG/M3	24	170	2	2

skeletal - individual
SKELETAL/VERTEBRAE: Dumbbell-shaped vertebral centra anlage

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	1	2
2000 MG/M3	23	153	1	1
10000 MG/M3	23	165	1	1
20000 MG/M3	24	170	3	4

skeletal - individual
SKELETAL/VERTEBRAE: Malformed vertebral arch

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	1	1
2000 MG/M3	23	153	0	0
10000 MG/M3	23	165	1	1
20000 MG/M3	24	170	1	1

skeletal - individual
SKELETAL/VERTEBRAE: Multiple bones malformed

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	0	0
2000 MG/M3	23	153	1	1
10000 MG/M3	23	165	0	0
20000 MG/M3	24	170	0	0

APPENDIX K – STATISTICIAN'S REPORT (CONT/D)

skeletal - combined
SKELETAL/STERNEBRAE: Delayed ossification of the sternebrae

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	2	2
2000 MG/M3	23	153	5	7
10000 MG/M3	23	165	4	4
20000 MG/M3	24	170	2	3

skeletal - combined
SKELETAL/VERTEBRAE: Hypoplastic vertebral centra

DOSE	litters examined	fetuses examined	litters affected	fetuses affected
0 MG/M3	25	193	3	4
2000 MG/M3	23	153	0	0
10000 MG/M3	23	165	0	0
20000 MG/M3	24	170	4	5

APPENDIX L - HISTORICAL CONTROL DATA FOR ANNANDALE, NJ FACILITY
TESTING FACILITY – ANNANDALE, NJ

SUPPLIER: Charles River Laboratories, Inc.

FEED: PMI Certified Rodent Chow (5002 Meal)

STUDY NUMBER	STUDY DATES	SUPPLIER LOCATION/AREA	SPECIES/STRAIN	NUMBER OF LITTERS/FETUSES	% PREGNANT	DOSING ROUTE/CARRIER
9A	May 9, 2000 – June 2, 2000	Raleigh, NC/R04	Crl:CD®(SD)IGSBR VAF/Plus	25/398	100	Oral/Corn Oil
9B	May 9, 2000 – June 2, 2000	Raleigh, NC/R04	Crl:CD®(SD)IGSBR VAF/Plus	25/401	100	Oral/Corn Oil
10	May 19, 2001 – June 15, 2001	Raleigh, NC/R04	Crl:CD®(SD)IGSBR VAF/Plus	24/359	96	Inhalation/Air
11	August 19, 2001 – September 18, 2001	Raleigh, NC/R04	Crl:CD®(SD)IGSBR VAF/Plus	24/358	96	Inhalation/Air
12	November 18, 2001 - December 20, 2001	Raleigh, NC/R04	Crl:CD®(SD)IGSBR VAF/Plus	25/389	100	Inhalation/Air
13	February 3, 2002 – March 8, 2001	Raleigh, NC/R04	Crl:CD®(SD)IGSBR VAF/Plus	25/374	100	Inhalation/Air
14	April 22, 2002 – May 22, 2002	Raleigh, NC/R04	Crl:CD®(SD)IGSBR VAF/Plus	25/353	100	Inhalation/Air
15	June 17, 2002 – July 17, 2002	Raleigh, NC/R04	Crl:CD®(SD)IGSBR VAF/Plus	22/316	88	Inhalation/Air

APPENDIX L - HISTORICAL CONTROL DATA FOR ANNANDALE, NJ FACILITY (CONT'D)
(UTERINE IMPLANTATION DATA)

	NUMBER OF LITTERS	LIVE	MALE	FEMALE	RESORPTIONS	IMPLANTS	CORPORA LUTEA	DEAD	FETUS/ IMPLANTS	RESORPTIONS/ IMPLANTS	F/I TRANSFORMED
HIGH		16.04	7.92	8.36	0.72	16.48	17.16	0.04	0.98	0.05	80.376320
LOW		14.12	6.88	7.24	0.32	14.56	15.50	0	0.95	0.02	77.306160
STUDY #											
15	22	14.36	7.09	7.27	0.36	14.73	15.50	0	0.98	0.02	79.881591
STD		1.89	1.80	1.72	0.66	2.00	1.82	0	0.04	0.04	4.499537
(N)		22	22	22	22	22	22	22	22	22	22
14	25	14.12	6.88	7.24	0.40	14.56	15.88	0.04	0.95	0.04	78.128760
STD		3.11	2.44	2.15	0.58	3.00	1.54	0.2	0.10	0.10	8.029518
(N)		25	25	25	25	25	25	25	25	25	25
13	25	14.96	7.36	7.60	0.72	15.68	15.96	0	0.95	0.05	77.306160
STD		3.12	2.45	2.42	0.84	3.09	3.18	0	0.07	0.07	6.507916
(N)		25	25	25	25	25	25	25	25	25	25
12	25	15.56	7.92	7.64	0.32	15.88	16.40	0	0.98	0.02	80.376320
STD		2.92	2.64	2.38	0.56	2.88	2.99	0	0.04	0.03	3.947106
(N)		25	25	25	25	25	25	25	25	25	25
11	24	14.92	7.17	7.75	0.63	15.54	16.04	0	0.96	0.04	78.114083
STD		2.19	2.57	2.27	0.77	1.82	1.94	0	0.05	0.05	5.545914
(N)		24	24	24	24	24	24	24	24	24	24
10	24	14.96	7.54	7.42	0.58	15.50	16.42	0	0.97	0.04	78.883958
STD		3.07	2.90	2.55	0.83	3.18	3.41	0	0.05	0.05	5.408551
(N)		24	24	24	24	24	24	24	24	24	24
9(B)	25	16.04	7.84	8.20	0.44	16.48	17.16	0	0.97	0.03	79.840760
STD		2.24	1.57	1.91	0.77	2.02	1.93	0	0.05	0.05	5.232909
(N)		25	25	25	25	25	25	25	25	25	25
9(A)	25	15.92	7.56	8.36	0.52	16.44	16.88	0	0.97	0.03	79.294360
STD		1.53	1.69	1.60	0.71	1.42	1.48	0	0.04	0.04	4.836482
(N)		25	25	25	25	25	25	25	25	25	25

APPENDIX L - HISTORICAL CONTROL DATA FOR ANNANDALE, NJ FACILITY (CONT'D)
(UTERINE IMPLANTATION DATA)

	NUMBER OF LITTERS	R/I TRANSFORMED	D/I TRANSFORMED	DEAD/ IMPLANTS	PRE IMPLANT LOSS	POST IMPLANT LOSS	MALFORMATIONS	VARIATIONS	AFFECTED
HIGH		12.694280	8.238	0	7.9	5.1	0.28	1.70	1.00
LOW		9.624000	7.103	0	1.6	2.0	0.08	0.00	0.40
STUDY #									
15	22	10.118955	7.545	0	4.4	2.3	0.27	0.50	0.60
STD		4.499552	0.595	0	10.9	4.3	0.46	0.80	0.70
(N)		22	22	22	22	22	22	22	22
14	25	11.588840	8.238	0	7.9	4.6	0.28	1.70	0.70
STD		8.074369	2.934	0	17.7	10.2	0.46	1.20	0.70
(N)		25	25	25	25	25	25	25	25
13	25	12.694280	7.473	0	1.6	5.1	0.24	1.40	1.00
STD		6.507867	1.521	0	2.7	6.7	0.52	1.60	1.00
(N)		25	25	25	25	25	25	25	25
12	25	9.624000	7.326	0	3.0	2.0	0.10	1.40	0.40
STD		3.947128	0.905	0	3.9	3.4	0.30	1.20	0.60
(N)		25	25	25	25	25	25	25	25
11	24	11.886500	7.324	0	3.0	4.2	0.25	1.10	0.90
STD		5.545880	0.446	0	3.9	5.4	0.53	1.10	1.10
(N)		24	24	24	24	24	24	24	24
10	24	11.402500	7.455	0	5.1	3.3	0.17	0.70	0.80
STD		5.349722	1.087	0	12.6	5.4	0.38	0.80	0.80
(N)		24	24	24	24	24	24	24	24
9(B)	25	10.159600	7.117	0	3.9	2.8	0.08	0.00	0.50
STD		5.232766	0.478	0	7.0	5.0	0.40	0.00	0.80
(N)		25	25	25	25	25	25	25	25
9(A)	25	10.706120	7.103	0	2.5	3.1	0.12	0.10	0.60
STD		4.836645	0.318	0	4.3	4.3	0.33	0.40	0.70
(N)		25	25	25	25	25	25	25	25

APPENDIX L - HISTORICAL CONTROL DATA FOR ANNANDALE, NJ FACILITY (CONT'D)
(FETAL BODY WEIGHTS)

	NUMBER OF LITTERS	MALE	FEMALE
HIGH		5.75	5.50
LOW		5.41	5.16
STUDY #			
15	22	5.60	5.33
STD		0.41	0.38
(N)		156	160
14	25	5.46	5.18
STD		0.41	0.39
(N)		172	181
13	25	5.49	5.17
STD		0.33	0.37
(N)		184	190
12	25	5.59	5.36
STD		0.36	0.32
(N)		198	191
11	24	5.52	5.25
STD		0.38	0.45
(N)		172	186
10	24	5.75	5.50
STD		0.35	0.34
(N)		181	178
9(B)	25	5.41	5.16
STD		0.45	0.39
(N)		196	205
9(A)	25	5.61	5.31
STD		0.38	0.37
(N)		189	209

APPENDIX L - HISTORICAL CONTROL DATA FOR ANNANDALE, NJ FACILITY (CONT'D)
(EXTERNAL DATA)

STUDY #	15	14	13	12	11	10	9(B)	9(A)
NUMBER OF LITTER	22	25	25	25	24	24	25	25
NUMBER OF FETUSES	316	353	374	389	358	359	401	398
% STUNTED - F	0.63	0.85	0.27	0.26	0.84	0	1.25	0
% STUNTED - L	9.09	12.00	4.00	4.00	8.33	0	16.00	0
% EXT. VAR. - F	0	0	0	0	0	0	0	0
% EXT. VAR. - L	0	0	0	0	0	0	0	0
% EXT. MAL - F	0.94	0.85	0.53	0.26	0.56	0.28	0	0.50
% EXT. MAL. - L	13.64	12.00	8.00	4.00	8.33	4.17	0	8.00
Domed head - F		0.28						
Domed head - L		4.00						
Malrotated hindpaw - F	0.94	0.57	0.53	0.26	0.28	0.28		0.50
Malrotated hindpaw - L	13.64	8.00	8.00	4.00	4.17	4.17		8.00
Filamentous tail - F					0.28			
Filamentous tail - L					4.17			

NOTE: F - Fetus
L - Litter
Blank entries for an observation indicate that the observation was not present in that study

APPENDIX L - HISTORICAL CONTROL DATA FOR ANNANDALE, NJ FACILITY (CONT'D)
(INTERNAL DATA)

STUDY #	15	14	13	12	11	10	9(B)	9(A)
NUMBER OF LITTER	22	25	25	25	24	24	25	25
NUMBER OF FETUSES	158	177	182	195	181	178	197	201
% VIS. VAR. - F	1.27	2.26	0.55	0	0	0	0	1.00
% VIS. VAR. - L	9.09	12.00	4.00	0	0	0	0	4.00
% VIS. MAL. - F	1.9	2.26	2.19	0.51	2.21	1.69	1.02	0.50
% VIS. MAL. - L	9.09	16.00	12.00	4.0	16.67	12.50	4.00	4.00
Olfactory bulb: Misshapen - F				0.51				
Olfactory bulb: Misshapen - L				4.00				
Microphthalmia - F							0.51	
Microphthalmia - L							4.00	
Retinal fold - F		0.56	1.64			1.12		
Retinal fold - L		4.00	8.00			8.33		
Carotid artery: Malpositioned - F		0.56						
Carotid artery: Malpositioned - L		4.00						
Innominate artery: Absent - F		0.56						
Innominate artery: Absent - L		4.00						
Subclavian artery: Malpositioned - F		0.56						
Subclavian artery: Malpositioned - L		4.00						

NOTE: F - Fetus
L - Litter

Blank entries for an observation indicate that the observation was not present in that study

APPENDIX L - HISTORICAL CONTROL DATA FOR ANNANDALE, NJ FACILITY (CONT'D)
(INTERNAL DATA)

STUDY #	15	14	13	12	11	10	9(B)	9(A)
NUMBER OF LITTER	22	25	25	25	24	24	25	25
NUMBER OF FETUSES	158	177	182	195	181	178	197	201
Spleen: Small - F	0.63							
Spleen: Small - L	4.55							
Kidney(s): Large - F	0.63							
Kidney(s): Large - L	4.55							
Hydronephrosis - F	1.26	1.13			1.66			
Hydronephrosis - L	9.09	8.00			12.50			
Ureter(s): Convoluted - F								1.00
Ureter(s): Convoluted - L								4.00
Hydroureter - F	1.26	1.13			0.55	0.56	0.51	0.50
Hydroureter - L	9.09	8.00			4.17	4.17	4.00	4.00
Umbilical artery: Left of urinary bladder - F	1.26	2.26	0.55					
Umbilical artery: Left of urinary bladder - L	9.09	12	4.00					
Testis(es): Malpositioned - L			0.55					
Testis(es): Malpositioned - F			4.00					

NOTE: F - Fetus
L - Litter

APPENDIX L - HISTORICAL CONTROL DATA FOR ANNANDALE, NJ FACILITY (CONT'D)
(SKELETAL DATA)

STUDY #	15	14	13	12	11	10	9(B)	9(A)
NUMBER OF LITTER	22	24	25	25	24	24	$	$
NUMBER OF FETUSES	157	176	192	194	177	181	$	$
% SKEL. VAR. - F	5.10	21.60	17.80	15.46	15.25	8.84	$	$
% SKEL. VAR. - L	27.27	70.83	76.00	60.00	54.17	50.00	$	$
% SKEL. MAL. - F	0	0.57	0	0	1.13	0	$	$
% SKEL. MAL. - L	0	4.17	0	0	8.33	0	$	$
Forepaw anlage: Misshapen - F		0.57						
Forepaw anlage: Misshapen - L		4.17						
Sternebrae: Advanced - F		2.84	1.05					
Sternebrae: Advanced - L		16.67	8.00					
Sternebrae: Bifid - F			0.52					
Sternebrae: Bifid - L			4.00					
Sternebrae: Hypoplastic - F				1.03				
Sternebrae: Hypoplastic - L				4.00				
Sternebrae: Unossified - F	0.64	1.70	1.05		1.7	1.10		
Sternebrae: Unossified - L	4.55	12.5	8.00		8.33	8.33		
Sternebral anlage: Hypoplastic - F					2.82			
Sternebral anlage: Hypoplastic - L					12.50			
Vertebrae: Absent multiple - F					0.56			
Vertebrae: Absent multiple - L					4.17			
Vertebral centra: Bifid- F	0.64	3.98	5.76	10.82	6.78	1.10		
Vertebral centra: Bifid- L	4.55	25.00	36.00	48.00	29.17	8.33		

APPENDIX L - HISTORICAL CONTROL DATA FOR ANNANDALE, NJ FACILITY (CONT'D)
(SKELETAL DATA)

STUDY #	15	14	13	12	11	10	9(B)	9(A)
NUMBER OF LITTER	22	24	25	25	24	24	$	$
NUMBER OF FETUSES	157	176	192	194	177	181	$	$
Vertebral centra: Dumbbell/8-shaped - F		1.14	0.52	0.52		1.10		
Vertebral centra: Dumbbell/8-shaped - L		8.33	4.00	4.00		8.33		
Vertebral centra: Misshapen - F					0.56			
Vertebral centra: Misshapen- L					4.17			
Vertebral centra: Unossified - F					0.56			
Vertebral centra: Unossified - L					4.17			
Vertebrae: Supernumerary presacral Lumbar - F			0.52		0.56			
Vertebrae: Supernumerary presacral Lumbar - L			4.00		4.17			
Vertebral centra anlage: Bifid - F			0.52					
Vertebral centra anlage: Bifid - L			4.00					
Vertebral centra anlage: Dumbbell/8 shaped - F		6.82	5.24	1.55				
Vertebral centra anlage: Dumbbell/8 shaped - L		33.33	28.00	12.00				
Vertebral centra anlage: Hypoplastic - F					1.69			
Vertebral centra anlage: Hypoplastic - L					12.50			
Vertebral centra anlage: Misshapen - F					0.56			
Vertebral centra anlage: Misshapen - L					4.17			
Rib(s): Cervical - F		0.57						
Rib(s): Cervical - L		4.17						
Rib(s): Rudimentary lumbar - F	3.18	9.66	8.90	4.12	1.70	5.52		
Rib(s): Rudimentary lumbar - L	22.73	37.50	40.00	24.00	12.50	25.00		
Rib(s): Rudimentary thoracic - F			0.52					
Rib(s): Rudimentary thoracic - L			4.00					
Rib(s): Well formed lumbar - F			0.52					
Rib(s): Well formed lumbar - L			4.00					
Rib(s): Short last thoracic - F	0.64	1.14						
Rib(s): Short last thoracic - L	4.55	8.33						
Rib(s): Thick/wavy - F								
Rib(s): Thick/wavy - L								

APPENDIX L - HISTORICAL CONTROL DATA FOR ANNANDALE, NJ FACILITY (CONT'D)
(SKELETAL DATA)

STUDY #	15	14	13	12	11	10	9(B)	9(A)
NUMBER OF LITTER	22	24	25	25	24	24	$	$
NUMBER OF FETUSES	157	176	192	194	177	181	$	$
Rib(s): Cervical anlage - F		0.57						
Rib(s): Cervical anlage - L		4.17						
Rib(s) anlage: Fused - F		0.57						
Rib(s) anlage: Fused - L		4.17						
Rib(s) anlage: Hypoplastic - F					2.82			
Rib(s) anlage: Hypoplastic - L					12.50			
Rib(s) anlage: Site of ossification - F					1.13			
Rib(s) anlage: Site of ossification - L					4.17			
Calcaneus: Advanced - F		0.57						
Calcaneus: Advanced - L		4.17						

NOTE: F - Fetus
L - Litter
$ - Not examined

APPENDIX M – FEED AND WATER ANALYSES
FEED ANALYSIS

LabDiet PMI NUTRITION INTERNATIONAL

Return to Certified Analysis Retrieval

Product Code: 5002M
Product Desc: CERTIFIED RODENT DIET MEAL
Lab Number: L0217564-2
Lot Code: JUN 01 02 3B
Entered: 6/3/2002

Assay	Analysis	Units
PROTEIN	21.1	%
FAT (ACID HYDRO.)	5.89	%
FIBER (CRUDE)	4.69	%
ARSENIC	LESS THAN 0.2	PPM
CADMIUM	0.076	PPM
CALCIUM	0.991	%
LEAD	0.18	PPM
MERCURY	LESS THAN 0.025	PPM
PHOSPHORUS	0.669	%
SELENIUM	0.302	PPM

ORGANOPHOSPHATES	PPM	ORGANOPHOSPHATES	PPM
Diazinon	LESS THAN 0.02	Disulfoton	LESS THAN 0.02
Ethion	LESS THAN 0.02	Malathion	0.06
Methyl Parathion	LESS THAN 0.02	Parathion	LESS THAN 0.02
Thimet	LESS THAN 0.02	Thiodan	LESS THAN 0.02
Trithion	LESS THAN 0.02		

PESTICIDES AND PCB	PPM	PESTICIDES AND PCB	PPM
Aldrin	LESS THAN 0.02	Alpha-BHC	LESS THAN 0.02
Beta-BHC	LESS THAN 0.02	Chlordane	LESS THAN 0.02
DDE	LESS THAN 0.02	DDT	LESS THAN 0.02
Delta-BHC	LESS THAN 0.02	Dieldrin	LESS THAN 0.02
Endrin	LESS THAN 0.02	HCB	LESS THAN 0.02
Heptachlor	LESS THAN 0.02	Heptachlor Epoxide	LESS THAN 0.02
Lindane	LESS THAN 0.02	Methoxychlor	LESS THAN 0.02
Mirex	LESS THAN 0.02	PCB	LESS THAN 0.15

AFLATOXINS	Aflatoxins	LESS THAN 5 PPB

No notes.
For additional information, please contact:
1) Customer Service at (314) 982-1310 -- for assay methodology
2) Dr. Dorrance Haught at (314) 317-5178 -- for nutritional interpretation
3) Richmond, IN Manufacturing Plant at (765) 962-9561 -- all other questions

The term "Less Than" is used to signify the lower limit of quantitation of the procedure under the conditions employed. The use of the term "Less Than" does not imply that traces of analyte were present.

APPENDIX M – FEED AND WATER ANALYSES (CONT'D)
FEED ANALYSIS

ExxonMobil Biomedical Sciences, Inc.

Memorandum

To PE Wing Animal Facility Supply
Water Analysis Files

Re Analysis Results for 24-Jan-02 Sample

From R. C. Forgash RF 20-Feb-02

Date February 20, 2002

EXACT COPY
RF 20-Feb-02

The results of the PE wing animal facility supply water analysis from the sample collected on 24-Jan-02 revealed no contaminant levels above the maximum contaminant levels. The only noteworthy results were those listed below.

	Result	MCL
Chloroform	0.72 µg/l	80 µg/l *
Total Plate Count	1 CFU/ml	100 CFU/ml

All reported values for this water analysis are judged acceptable.

Key: * = Total for Trihalomethanes
MCL = Maximum Contaminant Level
µg/l = micrograms per liter
CFU/l = Colony Forming Units per milliliter

cc: J. J. Freeman

APPENDIX M – FEED AND WATER ANALYSES (CONT'D)
FEED ANALYSIS

Accutest Laboratories

Report of Analysis

Client Sample ID:	PE105		
Lab Sample ID:	N7196-1	**Date Sampled:**	01/24/02
Matrix:	DW - Drinking Water	**Date Received:**	01/24/02
Method:	EPA 624	**Percent Solids:**	n/a
Project:	Lab Animal Room Water		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T30050.D	1	01/31/02	GTT	n/a	n/a	VT969
Run #2							

VOA PPL List

CAS No.	Compound	Result	MCL	RL	Units	Q
107-02-8	Acrolein	ND		6.6	ug/l	
107-13-1	Acrylonitrile	ND		4.0	ug/l	
71-43-2	Benzene	ND	1.0	0.27	ug/l	
75-27-4	Bromodichloromethane	ND		0.19	ug/l	
75-25-2	Bromoform	ND		0.53	ug/l	
74-83-9	Bromomethane	ND		0.72	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	0.67	ug/l	
108-90-7	Chlorobenzene	ND	50	0.31	ug/l	
75-00-3	Chloroethane	ND		0.87	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND		0.60	ug/l	
67-66-3	Chloroform	0.72		0.60	ug/l	
74-87-3	Chloromethane	ND		1.0	ug/l	
124-48-1	Dibromochloromethane	ND		0.28	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	600	0.58	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	600	0.67	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	75	0.70	ug/l	
75-71-8	Dichlorodifluoromethane	ND		1.1	ug/l	
75-34-3	1,1-Dichloroethane	ND	50	0.55	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	0.75	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.0	0.69	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	70	0.89	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	100	0.89	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	0.29	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND		0.55	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND		0.60	ug/l	
100-41-4	Ethylbenzene	ND	700	0.60	ug/l	
1634-04-4	**Methyl Tert Butyl Ether**	ND	70	0.26	ug/l	
75-09-2	Methylene chloride	ND	3.0	0.39	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.91	ug/l	
108-88-3	Toluene	ND	1000	0.62	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	30	0.78	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	3.0	0.59	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.30	ug/l	
75-69-4	Trichlorofluoromethane	ND		1.3	ug/l	
75-01-4	Vinyl chloride	ND	2.0	1.3	ug/l	

ND = Not detected
MCL = Maximum Contamination Level (NJAC 7:10-1 11/96)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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APPENDIX M – FEED AND WATER ANALYSES (CONT'D)
FEED ANALYSIS

Accutest Laboratories

Report of Analysis

Client Sample ID:	PE105		
Lab Sample ID:	N7196-1	**Date Sampled:**	01/24/02
Matrix:	DW - Drinking Water	**Date Received:**	01/24/02
Method:	EPA 624	**Percent Solids:**	n/a
Project:	Lab Animal Room Water		

VOA PPL List

CAS No.	Compound	Result	MCL	RL	Units	Q
1330-20-7	Xylenes (total)	ND	1000	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4 (SUR)	111%		73-127%
2037-26-5	Toluene-D8 (SUR)	98%		88-111%
460-00-4	4-Bromofluorobenzene (SUR)	83%		75-114%

ND = Not detected
MCL = Maximum Contamination Level (NJAC 7:10-1 11/96)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

APPENDIX M – FEED AND WATER ANALYSES (CONT'D)
FEED ANALYSIS

Accutest Laboratories

Report of Analysis

Client Sample ID:	PE105		
Lab Sample ID:	N7196-1	**Date Sampled:**	01/24/02
Matrix:	DW - Drinking Water	**Date Received:**	01/24/02
Method:	EPA 625 EPA 625	**Percent Solids:**	n/a
Project:	Lab Animal Room Water		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R21946.D	1	02/02/02	CBD	01/28/02	OP10919	ER682
Run #2							

ABN AP9 special List

CAS No.	Compound	Result	MCL	RL	Units	Q
95-57-8	2-Chlorophenol	ND		1.4	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND		0.99	ug/l	
120-83-2	2,4-Dichlorophenol	ND		1.4	ug/l	
105-67-9	2,4-Dimethylphenol	ND		1.4	ug/l	
51-28-5	2,4-Dinitrophenol	ND		1.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND		1.2	ug/l	
88-75-5	2-Nitrophenol	ND		1.5	ug/l	
100-02-7	4-Nitrophenol	ND		1.7	ug/l	
87-86-5	Pentachlorophenol	ND	1.0	3.8	ug/l	
108-95-2	Phenol	ND		0.64	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND		1.7	ug/l	
83-32-9	Acenaphthene	ND		0.20	ug/l	
208-96-8	Acenaphthylene	ND		0.22	ug/l	
120-12-7	Anthracene	ND		0.10	ug/l	
92-87-5	Benzidine	ND		10	ug/l	
56-55-3	Benzo(a)anthracene	ND		0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.23	ug/l	
205-99-2	Benzo(b)fluoranthene	ND		0.28	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND		0.30	ug/l	
207-08-9	Benzo(k)fluoranthene	ND		0.41	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND		0.27	ug/l	
85-68-7	Butyl benzyl phthalate	ND		0.16	ug/l	
91-58-7	2-Chloronaphthalene	ND		0.19	ug/l	
106-47-8	4-Chloroaniline	ND		0.19	ug/l	
218-01-9	Chrysene	ND		0.22	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND		0.12	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND		0.26	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND		0.20	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND		0.25	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	600	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND		0.21	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	600	0.27	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	75	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND		0.29	ug/l	
606-20-2	2,6-Dinitrotoluene	ND		0.44	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND		0.47	ug/l	

ND = Not detected
MCL = Maximum Contamination Level (NJAC 7:10-1 11/96)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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APPENDIX M – FEED AND WATER ANALYSES (CONT'D)
FEED ANALYSIS

Accutest Laboratories

Report of Analysis

Client Sample ID:	PE105		
Lab Sample ID:	N7196-1	**Date Sampled:**	01/24/02
Matrix:	DW - Drinking Water	**Date Received:**	01/24/02
Method:	EPA 625 EPA 625	**Percent Solids:**	n/a
Project:	Lab Animal Room Water		

ABN AP9 special List

CAS No.	Compound	Result	MCL	RL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND		0.20	ug/l	
60-51-5	Dimethoate	ND		5.0	ug/l	
298-04-4	Disulfoton	ND		5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND		0.12	ug/l	
117-84-0	Di-n-octyl phthalate	ND		0.16	ug/l	
84-66-2	Diethyl phthalate	ND		0.25	ug/l	
131-11-3	Dimethyl phthalate	ND		0.18	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	6.0	0.29	ug/l	
52-85-7	Famphur	ND		5.0	ug/l	
206-44-0	Fluoranthene	ND		0.11	ug/l	
86-73-7	Fluorene	ND		0.19	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.13	ug/l	
87-68-3	Hexachlorobutadiene	ND		0.28	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	50	10	ug/l	
67-72-1	Hexachloroethane	ND		0.14	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND		0.20	ug/l	
78-59-1	Isophorone	ND		0.10	ug/l	
298-00-0	Methyl parathion	ND		5.0	ug/l	
91-20-3	Naphthalene	ND	300	0.14	ug/l	
98-95-3	Nitrobenzene	ND		0.28	ug/l	
62-75-9	n-Nitrosodimethylamine	ND		0.44	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND		0.33	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND		0.16	ug/l	
56-38-2	Parathion	ND		10	ug/l	
85-01-8	Phenanthrene	ND		0.15	ug/l	
298-02-2	Phorate	ND		5.0	ug/l	
129-00-0	Pyrene	ND		0.19	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	9.0	0.16	ug/l	
297-97-2	Thionazin	ND		5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	66%		15-93%
4165-62-2	Phenol-d5	25%		10-76%
118-79-6	2,4,6-Tribromophenol	98%		38-144%
4165-60-0	Nitrobenzene-d5	89%		43-126%
321-60-8	2-Fluorobiphenyl	82%		38-130%
1718-51-0	Terphenyl-d14	92%		24-155%

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ND = Not detected
MCL = Maximum Contamination Level (NJAC 7:10-1 11/96)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

APPENDIX M – FEED AND WATER ANALYSES (CONT'D)
FEED ANALYSIS

Accutest Laboratories

Report of Analysis

Client Sample ID:	PE105		
Lab Sample ID:	N7196-1	**Date Sampled:**	01/24/02
Matrix:	DW - Drinking Water	**Date Received:**	01/24/02
Method:	EPA 508 EPA 508	**Percent Solids:**	n/a
Project:	Lab Animal Room Water		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX26022.D	1	01/28/02	KLS	01/28/02	OP10914	GXX600
Run #2	WW30054.D	1	01/29/02	YYX	01/28/02	OP10914	GWW1007

Pesticide/PCB PPL List

CAS No.	Compound	Result	MCL	RL	Units	Q
309-00-2	Aldrin	ND [a]		0.0076	ug/l	
319-84-6	alpha-BHC	ND [a]		0.0056	ug/l	
319-85-7	beta-BHC	ND [a]		0.0049	ug/l	
319-86-8	delta-BHC	ND [a]		0.0076	ug/l	
58-89-9	gamma-BHC (Lindane)	ND [a]	0.20	0.0056	ug/l	
12789-03-6	Chlordane	ND [a]	0.50	0.19	ug/l	
60-57-1	Dieldrin	ND [a]		0.0066	ug/l	
72-54-8	4,4'-DDD	ND [a]		0.014	ug/l	
72-55-9	4,4'-DDE	ND [a]		0.013	ug/l	
50-29-3	4,4'-DDT	ND [a]		0.011	ug/l	
72-20-8	Endrin	ND [a]	2.0	0.0096	ug/l	
1031-07-8	Endosulfan sulfate	ND [a]		0.0076	ug/l	
7421-93-4	Endrin aldehyde	ND [a]		0.0081	ug/l	
959-98-8	Endosulfan-I	ND [a]		0.0051	ug/l	
33213-65-9	Endosulfan-II	ND [a]		0.0076	ug/l	
76-44-8	Heptachlor	ND [a]	0.40	0.0076	ug/l	
1024-57-3	Heptachlor epoxide	ND [a]	0.20	0.0061	ug/l	
72-43-5	Methoxychlor	ND [a]	40	0.049	ug/l	
8001-35-2	Toxaphene	ND [a]	3.0	0.34	ug/l	
12674-11-2	Aroclor 1016	ND	0.50	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	0.090	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	0.13	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	0.30	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	0.23	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	0.11	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	0.27	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	96%	110%	66-121%
877-09-8	Tetrachloro-m-xylene	98%	96%	66-121%
2051-24-3	Decachlorobiphenyl	76%	85%	61-131%
2051-24-3	Decachlorobiphenyl	81%	83%	61-131%

(a) Result is from Run# 2

ND = Not detected
MCL = Maximum Contamination Level (NJAC 7:10-1 11/96)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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APPENDIX M – FEED AND WATER ANALYSES (CONT'D)
FEED ANALYSIS

Accutest Laboratories

Report of Analysis

Client Sample ID:	PE105		
Lab Sample ID:	N7196-1	**Date Sampled:**	01/24/02
Matrix:	DW - Drinking Water	**Date Received:**	01/24/02
Method:	SW846 8151 SW846 3510C	**Percent Solids:**	n/a
Project:	Lab Animal Room Water		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EF35926.D	1	01/30/02	YYX	01/29/02	OP10915	GEF1972
Run #2							

Herbicide List

CAS No.	Compound	Result	MCL	RL	Units	Q
94-75-7	2,4-D	ND	70	0.50	ug/l	
93-72-1	2,4,5-TP (Silvex)	ND	50	0.10	ug/l	
93-76-5	2,4,5-T	ND		0.10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	74%		57-158%
19719-28-9	2,4-DCAA	80%		57-158%

ND = Not detected
MCL = Maximum Contamination Level (NJAC 7:10-1 11/96)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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APPENDIX M – FEED AND WATER ANALYSES (CONT'D)
FEED ANALYSIS

Accutest Laboratories

Report of Analysis

Client Sample ID: PE105
Lab Sample ID: N7196-1
Matrix: DW - Drinking Water
Project: Lab Animal Room Water

Date Sampled: 01/24/02
Date Received: 01/24/02
Percent Solids: n/a

Metals Analysis

Analyte	Result	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	<0.0050	0.0060	0.0050	mg/l	1	02/13/02	02/13/02	JDM	EPA 200.9	EPA 200.9
Arsenic	<0.0050	0.050	0.0050	mg/l	1	01/30/02	01/30/02	LH	EPA 200.7	EPA 200.7
Beryllium	<0.0030	0.0040	0.0030	mg/l	1	01/30/02	01/30/02	LH	EPA 200.7	EPA 200.7
Cadmium	<0.0040	0.0050	0.0040	mg/l	1	01/30/02	01/30/02	LH	EPA 200.7	EPA 200.7
Calcium	<5.0		5.0	mg/l	1	01/30/02	01/30/02	LH	EPA 200.7	EPA 200.7
Chromium	<0.010	0.10	0.010	mg/l	1	01/30/02	01/30/02	LH	EPA 200.7	EPA 200.7
Copper	<0.025	1.3	0.025	mg/l	1	01/30/02	01/30/02	LH	EPA 200.7	EPA 200.7
Lead	<0.0030	0.015	0.0030	mg/l	1	02/12/02	02/12/02	JDM	EPA 200.9	EPA 200.9
Magnesium	<5.0		5.0	mg/l	1	01/30/02	01/30/02	LH	EPA 200.7	EPA 200.7
Manganese	<0.015	0.050	0.015	mg/l	1	01/30/02	01/30/02	LH	EPA 200.7	EPA 200.7
Mercury	<0.00020	0.0020	0.00020	mg/l	1	02/05/02	02/05/02	RP	EPA 245.1	EPA 245.1
Nickel	<0.040		0.040	mg/l	1	01/30/02	01/30/02	LH	EPA 200.7	EPA 200.7
Selenium	<0.0050	0.050	0.0050	mg/l	1	02/13/02	02/13/02	JDM	EPA 200.9	EPA 200.9
Silver	<0.010	0.10	0.010	mg/l	1	01/30/02	01/30/02	LH	EPA 200.7	EPA 200.7
Thallium	<0.0020	0.0020	0.0020	mg/l	1	02/14/02	02/14/02	JDM	EPA 200.9	EPA 200.9
Zinc	<0.020	5.0	0.020	mg/l	1	01/30/02	01/30/02	LH	EPA 200.7	EPA 200.7

RL = Reporting Limit
MCL = Maximum Contamination Level (NJAC 7:10-1 11/96)

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APPENDIX M – FEED AND WATER ANALYSES (CONT'D)
FEED ANALYSIS

Accutest Laboratories

Report of Analysis

Client Sample ID:	PE105		
Lab Sample ID:	N7196-1	**Date Sampled:**	01/24/02
Matrix:	DW - Drinking Water	**Date Received:**	01/24/02
		Percent Solids:	n/a
Project:	Lab Animal Room Water		

General Chemistry

Analyte	Result	MCL	Units	DF	Analyzed By	Method
Florescent Pseudomonas						
Florescent Pseudomonads	0		col/ml	1	01/25/02 MJC	ACCUTEST
Coliform, Fecal [a]	0		col/100ml	1	01/25/02 MJC,	SM18 9222D
Coliform, Total	NEGATIVE	0		1	01/25/02 MJC	SM18 9223B
Cyanide	<0.010	0.20	mg/l	1	01/31/02 PDC	EPA 335.4
Hardness, Total	<4.0		mg/l	1	02/01/02 JKT	SM19 2340C
Nitrogen, Ammonia	<0.10		mg/l	1	02/06/02 AMS	EPA350.1, SM4500NH3H
Phenols	<0.050		mg/l	1	02/07/02 PDC	EPA 420.2
Plate Count, Total	1		CFU/ml	1	01/25/02 MJC	SM18 9215B
Solids, Total Suspended	<4.0		mg/l	1	01/25/02 KJ	EPA 160.2

(a) Fecal Coliform result confirmed by negative total coliform result.

MCL = Maximum Contamination Level (NJAC 7:10-1 11/96)

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