ABSTRACT

The developmental toxicity of gasoline with MTBE vapor condensate 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 slight maternal toxicity as indicated by statistically significant decreases from control in the 20,000 mg/m^3 target exposure level for body weight change and food consumption at the GD 8 - GD 11 interval. No other statistically significant differences were noted between the control and treated groups for the maternal parameters. There were no statistically significant differences for uterine implantation data, external, and visceral observations in the fetuses. The incidence of dumbbell vertebral centra was statistically significantly increased in the 10,000 mg/m^3 target group.. This increase was not considered treatment related due to the lack of a dose response. Therefore, the No Observable Adverse Effect Level for maternal toxicity was established at the 10,000 mg/m^3 target exposure level and the No Observable Adverse Effect Level for developmental toxicity was established at 20,000 mg/m^3 target exposure level.

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FINAL REPORT

PROJECT NUMBER: 171334

TEST SUBSTANCE: GASOLINE WITH MTBE VAPOR CONDENSATE
(MRD-00-713)

WHOLE-BODY INHALATION DEVELOPMENTAL TOXICITY STUDY IN RATS
WITH BASELINE GASOLINE VAPOR CONDENSATE (MRD-00-713)

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 22

STUDY COMPLETION DATE: May 28, 2009

APPROVAL SIGNATURES

Dennis J Devlin — May 28, 2009

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

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, 40 CFR, Part 79.60, 1994 with the following exception.

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.

Gary W. Trimmer — 28 May 09

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

Date

Thomas M. Gray — 4/21/09

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

Date

PERSONNEL

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Sponsor:	American Petroleum Institute 1220 L Street Northwest Washington, D.C. 20005-4070
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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: 171334

TEST SUBSTANCE: MRD-00-713

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	01,02 Aug 01	02 Aug 01	02,07,14 Aug 01
Animal Receipt/ Uncrating	01 Aug 01	09 Aug 01	14,16 Aug 01
Gestation Day 8 Body Weights	28 Aug 01	28 Aug 01	30 Aug 01, 12,17 Sep 01
Gestation Day 8 Consumption Weights	29 Aug 01	30 Aug 01	25,31 Oct 01
Uterus Removal and Weighing	11,12 Sep 01	13 Sep 01	17,18,21 Sep 01
PM Viability	14 Sep 01	18 Sep 01	21 Sep 01
Final Report	04-08 Mar 02, 11 Mar-02-04 Apr 02	04 Apr 02	05 Apr 02, 18,23 Oct 06
Second Review of Final Report	11-13, 16 Oct 06	16 Oct 06	18,23 Oct 06
Third Review of Final Report	26 Mar 08	26 Mar 08	26 Mar 08

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

21 May '09
Date

Section 1

SUMMARY

This study was conducted to evaluate the potential developmental toxicity of the test substance, Gasoline with MTBE Vapor Condensate (GMVC). GMVC was administered via whole-body inhalation exposure to pregnant rats during the period of major organogenesis and fetal growth. GMVC was administered by whole-body inhalation exposure to 25 confirmed-mated Crl:CD®(SD)IGSBR female rats at target doses 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 in the 20,000 mg/m^3 target exposure group as indicated by statistically significant decreases in body weight gain and food consumption for the GD 8-11 interval. All dams survived to scheduled terminal sacrifice on GD 21. At the GD 21 cesarean section one animal in each group was found to be not pregnant (*i.e*. no evidence of implantation sites). All animals were free of clinical or postmortem effects attributable to treatment with GMVC.

SUMMARY (CONT'D)

There were no statistically significant differences between the control and the GMVC treated groups for uterine implantation data, fetal body weights, and external, and visceral observations. The incidence of dumbbell-shaped vertebral centra was statistically significantly increased in the 10,000 mg/m^3 target group and the incidence was slightly greater than observed in the historical control data. However, this increase was not considered treatment related due to the lack of a dose response.

In conclusion, administration of the test substance to rats by whole-body inhalation exposure during the period of organogenesis and fetal growth resulted in a transient statistically significant decrease in food consumption and body weight change at the GD 8 - GD 11 interval. No other treatment-related observations were evident in the treated groups that were statistically or biologically significantly different from the observations in the control group.

Therefore, the No Observable Adverse Effect Level for maternal toxicity was established at the 10,000 mg/m^3 target exposure level and the No Adverse Effect level for developmental toxicity was established at 20,000 mg/m^3 target exposure level for this study.

Section 2

INTRODUCTION

This study was conducted to evaluate the developmental toxicity of Gasoline with MTBE Vapor Condensate (MRD-00-713) administered via 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 17, 2001

EXPERIMENTAL START DATE

August 25, 2001

EXPERIMENTAL TERMINATION DATE

March 27, 2002

INLIFE TEST PERIOD

August 19, 2001 to September 18, 2001

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).

JUSTIFICATION OF DOSING ROUTE

Exposure by inhalation is a likely route of human exposure.

JUSTIFICATION OF DOSE SELECTION

The high dose of 20,000 mg/m^3 was selected based on safety concerns as one-half of the Lower Explosive Limit. The low dose (2000 mg/m^3) was expected to produce a No Adverse Effect Level 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. 40 CFR, Part 79.60, 1994.

EPA, United States Environmental Protection Agency, Vehicle Emissions Inhalation Exposure Guideline. 40 CFR, Part 79.61, 1994.

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, January 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-00-713
Sponsor Identification:	Gasoline with MTBE Vapor Condensate
Supplier:	Chevron Research and Technology Company
Lot #:	API 00-02
Description:	Clear colorless liquid
Storage Condition:	Ambient outdoor conditions (blanketed with nitrogen)

Date Received:	Tank numbers:	Expiration Date:
December 11, 2000	1, 3 , 6, 7	December 2005
April 9, 2001	10, 11 - 14, 16	April 2005

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 were the responsibility of the Sponsor. This was not completed when the study initiated, but is currently maintained by 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 five 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 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 for Study 171334 from the 0 mg/m^3 and 20,000 mg/m^3 concentrations. The particle size determination was repeated for the 20,000 mg/m^3 concentration due to a problem with the original determination. The samples were taken using a multistage cascade impactor. Preweighed glass fiber filters were used to collect aerosol on each stage, which were associated with specific cutoff diameters for aerodynamic particle size in microns. Since minimal aerosol was present, no further calculations were performed.

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 9, 2001
Purchase Order Number:	1AM08020

Quarantine and Acclimation Period

10 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 (22-23 weeks old at the initiation of mating) were received for mating purposes from a different colony than the females to assure they were not siblings. These rats were also used for mating with at least one other study. The males were received on November 6, 2001.

Age at Initiation of Gestation (Designated GD 0)

Females: Approximately 12-13 weeks

Weight at Initiation of Gestation (Designated GD 0)

Females: 236 to 305 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 Feeds Inc. Richmond, Indiana
Analysis:	Performed by PMI Feeds Inc. Copies of the feed analyses are maintained in the EMBSI Toxicology Laboratory and included in this report (Appendix M). These analyses were not performed in 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 deionized water system.
Analysis:	Periodic analysis is the responsibility of the testing laboratory. A copy of the results is maintained at the testing laboratory and included in this report (Appendix M). This 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:	64 to 72 degrees Fahrenheit
Humidity:	30 to 78.9 percent relative humidity (see Protocol Exceptions)
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:	64 to 78 degrees Fahrenheit (see Protocol Exceptions and Appendix I)
Humidity:	38 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:	7.8 to 43.6 foot-candles
Chamber Room Light Intensity:	38.0 to 44.3 foot-candles

Light intensity was measured four times (see protocol exceptions) during the study (the first day of exposures, during the second week and third 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: 72.8 to 81.2 db
Oxygen Level: 20.7 to 20.9%
The oxygen level and the noise level were measured in each exposure chamber on the first day of exposures, during the second week and third weeks of exposures and on the last day of exposures (see protocol exceptions).

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 cequilibration 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 12-15 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. 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 70% 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 are maintained in the EMBSI Toxicology Laboratory 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 were 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. The 1% level of significance was 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.

EXPERIMENTAL DESIGN (CONT'D)

Statistical Analysis (Cont'd)

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. 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).

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
Malformations for All Fetuses
Malformations for Alive Fetuses
Variations for All Fetuses
Variations for Alive Fetuses

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 maternal animals survived to scheduled study termination on GD 21. One female in each group was not pregnant.

There were no clinical signs indicative of maternal toxicity. The majority of dams in all dose groups were free of observable abnormalities during the entire gestation period. Clinical signs were limited to alopecia of the trunk for one control and one 2000 mg/m^3 target female and dried ocular discharge for one 20,000 mg/m^3 target female. Clinical signs were not evident in the 10,000 mg/m^3 target dams.

GESTATION BODY WEIGHT

Mean Gestation Body Weight and Body Weight Change: Appendix C
Individual Gestation Body Weight and Body Weight Change: Appendix C

There were no statistically significant differences in the mean gestation body weight between treated and control dams at any interval during the gestation period. There also were no statistically significant differences in mean uterine weight between treated and control dams. There was a statistically significant decrease in mean body weight change in the dams of the 20,000 mg/m^3 target concentration at the GD 8-11 interval versus control. Additionally, there was a statistically significant linear decrease in body weight change in the treated groups for this interval and for GD 0-21 corrected for uterine weight.

GESTATION FOOD CONSUMPTION

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

There was a statistically significant decrease in mean food consumption in the 20,000 mg/m^3 target dams at the GD 8-11 interval versus control. There also was a statistically significant linear decrease in food consumption in the treated groups for this interval and the GD 5-8 interval. However, the food consumption in the treated groups was not statistically significantly different from the control at the GD 5-8 interval, but there was a statistically significant difference between the treated groups. There were no other statistically significant differences in mean gestation food consumption between treated and control dams during the remainder of the gestation period.

RESULTS AND CONCLUSIONS/DISCUSSION (CONT'D)

GROSS POSTMORTEM OBSERVATIONS

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

The gross postmortem examination of the dams revealed alopecia for one 2000 mg/m^3 target 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

There were no statistically significant differences in the uterine implantation parameters between the control and the treated groups. However, there were statistically significant linear decreases in the number of resorptions, resorptions/implantation, transformed resorptions/implantation % postimplantation loss, and the total number of affected fetuses in the treated groups. Inversely, there were statistically significant linear increases in the fetuses/implantation and the transformed fetus/implantation. These trends were not indicative of toxicity. Additionally, there were no dead fetuses in any group.

FETAL BODY WEIGHT

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 between the control and treated groups based on a mixed model analysis of variance that considered dose group, litter size, and fetal sex as explanatory values.

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 variations and malformations, visceral variations and malformations, or skeletal malformations.

RESULTS AND CONCLUSIONS/DISCUSSION (CONT'D)

FETAL OBSERVATIONS (CONT'D)

External Observations

There were no statistically significant differences from the control group in the treated groups for the incidence of fetal external observations. External observations were limited to stunted, fetus discolored red, malrotated hindpaw, filamentous tail, microstomia, and cleft palate.

Visceral Observations

There were no statistically significant differences from the control group in the treated groups for the incidence of fetal visceral observations. Visceral observations were minimal and were limited to low incidences of anophthalmia, hydroureter, hydronephrosis, dilated cerebral ventricle, malpositioned nasal septum, retinal fold, and hydrocephaly.

Skeletal Observations

Skeletal observations are listed in Appendix H. The most frequently noted observations during fetal examinations were bifid centra of the thoracic vertebrae, rudimentary lumbar ribs, and hypoplastic anlage of the thoracic vertebral centra. The incidence of dumbbell-shaped vertebral centra was statistically significantly increased in the 10,000 mg/m^3 target group and the incidence was slightly greater than observed in the historical control data. There was also an increased incidence of dumbbell-shaped vertebral centra anlage at 2,000 mg/m^3. These increases were not considered biologically significant or treatment related due to the lack of a dose response.

There was a dose-related increase (not statistically significant) in the number of fetuses with rudimentary ribs. However, this was not considered toxicologically significant because the fetal incidence in the 20,000 mg/m^3 target group (6.04%) was just slightly higher that the historical control range (5.52%) and the litter incidence (20.8%) was less than the historical control range (25.0%). Additionally, the litter incidence did not show a dose-related increase.

Several related skeletal observations, such as unossified and hypoplastic vertebral centra, were combined for statistical analysis (Appendix K). There were no statistically significant differences from the control group in the treated groups for combined related skeletal observations.

RESULTS AND CONCLUSIONS/DISCUSSION (CONT'D)

EXPOSURE DATA AND CHAMBER CONDITIONS

Summary of Exposure Data: Appendix I

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 4-1:

Table 4-1 - Mean Daily 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	2101	1762	10725	9512	20409	17599
S.D.	96.6	76.4	541.2	305.4	1037.6	509.7
Minimum	1956	1657	10104	8631	16100	16597
Maximum	2455	1940	12790	10321	21567	18944

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 4-2.

Table 4-2 - Summary of Chamber Uniformity

Target	2000 mg/m^3	10,000 mg/m^3	20,000 mg/m^3
Mean	2108	10776	20341
S.D.	62.8	330.6	813.7
CV (%)	3.0	3.1	4.0
Minimum	2022	10397	19226
Maximum	2200	11714	21646

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

The particle size determination was performed once for the control chamber and twice for the 20,000 mg/m^3 target chambers. The initial particle size determination for the 20,000 mg/m^3 target chamber collected 7200 ug of particles while the control chamber had no particles. The particles collected from the 20,000 mg/m^3 target chamber were considered to be due to dander and fur in the make-up air and no particles were detected in the 20,000 mg/m^3 target chamber during the repeat of the particle size determination. Therefore, there was no aerosol component to the chamber concentrations.

The oxygen levels in the chambers ranged from 20.7 to 20.9% at the intervals when they were monitored. The noise level in the chambers ranged from 72.8 to 81.2 db. The light intensity in the chamber rooms ranged from 38.0 foot-candles to 44.3 foot candles.

DISCUSSION

There was evidence of maternal toxicity in this study at the 20,000 mg/m^3 target exposure group as indicated by statistically significant decreases in mean body weight change and mean food consumption at the GD 8-11 interval. However, the decrease in these parameters did not result in a statistically significant decrease in body weight at GD 11 or statistically significant differences in the GD 5-21 or GD 0-21 body weight change intervals..

There were no treatment-related statistically significant differences between the control and the GMVC treated groups for uterine implantation data, fetal body weights, and external, visceral, and skeletal observations. The incidence of dumbbell-shaped vertebral centra was statistically significantly increased in the 10,000 mg/m^3 target group and the incidence was slightly greater than observed in the historical control data. The incidence of dumbbell-shaped vertebral centra anlage (cartilaginous structure) was also statistically increased in the 2,000 mg/m^3 target goup compared to the control group. However, these observations were not considered related to treatment due to the lack of a dose response.

In conclusion, administration of the test substance to rats by whole-body inhalation exposure during the period of organogenesis and fetal growth resulted in signs of slight maternal toxicity and no developmental toxicity.

Therefore, the No Observable Adverse Effect Level for maternal toxicity was established at the 10,000 mg/m^3 target exposure level and the No Observable Adverse Effect Level for developmental toxicity was established at 20,000 mg/m^3 target exposure level for this study.

PROTOCOL EXCEPTIONS

ANIMALS OUT OF WEIGHT RANGE: Three animals were over the protocol-specified 200-300 gram body weight range at Gestation Day 0. These animals were in the 2,000 mg/m^3 target group (#ICK386F, 305 g; and #IGK452F, 301 g) and the 20,000 mg/m^3 target group (#IGK429F, 303 g).

This deviation had no adverse effect on the study results or integrity.

MEAN CHAMBER CONCENTRATION: The mean chamber concentrations for treatment group chambers were outside the acceptable range (± 10%) in seven instances. The following is a list of the dates and the extent of the deviation:

Date	Required Concentration (mg/m^3)	Mean Concentration (mg/m^3)
August 27, 2001	10,000	11180
September 3, 2001	10,000	11161
September 4, 2001	2000	2236
September 4, 2001	10,000	11075
September 5, 2001	2000	2455[a]
September 7, 2001	10,000	12790
September 7, 2001	20,000	16100

a – This deviation was caused by a very high value (3897 mg/m^3) at the fifth hour of the exposure. The cause of this high value was unknown.

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

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 below the protocol defined range. The decreased temperature also caused the humidity in the chambers to be above the protocol-defined range on numerous occasions. Additionally, the mean temperatures were above the protocol required range on several occasions. The individual temperature and humidity deviations are noted in Appendix I as bold italicized values.

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

CHAMBER CONCENTRATION OF SEPTEMBER 15, 2001: At the 1-hour sampling for the chamber concentration on September 15, 2001 the gas chromatography system did not initiate. The system was restarted and it worked normally for the rest of the sampling intervals on September 15, 2001.

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

PROTOCOL EXCEPTIONS (CONT'D)

ANIMAL ROOM TEMPERATURE AND HUMIDITY: The temperature and humidity were out of range in the animal room on the following days:

Date	Deviation
August 25, 2001	Humidity of 73.3% RH
August 26, 2001	Humidity of 78.9% RH
August 26, 2001	Temperature of 67.8°F

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

LIGHT INTENSITY, NOISE LEVEL AND OXYGEN LEVEL: The protocol specified that the light intensity, noise level and oxygen level be measured three times during the study (the first day of exposures, during the second week of exposures and the last day of exposures). These parameters were measured four times during the study, the extra measurements were taken during week three of exposures.

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
(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 (CONT'D)

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

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

Viseral: 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 indicated by a capitalized footnote (e.g. "A"). Developmental variations are indicated by a lower case footnote (e.g. "a"). Observations which are not considered malformations or variations are indicated by an asterisk (e.g. "*").

Section 6

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APPENDIX A - SURVIVAL BAR GRAPH

TARGET DOSE: 0 MG/M^3

ANIMAL		GESTATION DAY																				
NUMBER		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGK329F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK327F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK332F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK337F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK331F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK351F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK360F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK334F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK370F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK343F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK373F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK346F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK379F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK342F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK378F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK402F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK419F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK388F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK417F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=N
IGK439F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK431F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK433F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK435F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK446F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK447F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P

APPENDIX A - SURVIVAL BAR GRAPH (CONT'D)
TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER		GESTATION DAY: 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGK328F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK338F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK330F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK341F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK362F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK364F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK358F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK412F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=N
IGK416F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK359F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK347F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK335F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK418F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK413F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK425F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK422F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK384F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK386F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK442F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK466F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK430F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK445F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK452F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK471F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK458F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P

APPENDIX A - SURVIVAL BAR GRAPH (CONT'D)
TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER		GESTATION DAY: 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGK369F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK339F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK361F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK356F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK355F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK357F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK348F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK368F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK393F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK336F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK409F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK394F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=N
IGK371F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK381F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK401F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK414F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK398F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK377F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK454F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK455F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK434F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK437F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK443F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK444F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK449F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P

APPENDIX A - SURVIVAL BAR GRAPH (CONT'D)
TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER		GESTATION DAY: 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGK366F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK365F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK344F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK349F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK352F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK375F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK333F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK350F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK383F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK363F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK340F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK354F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK380F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK382F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK423F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK389F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK385F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK424F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK429F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK436F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK441F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK432F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK453F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=N
IGK459F	(21)	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=P
IGK460F	(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	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
2000 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
10,000 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
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	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	24
2000 MG/M^3	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23	23	23	23	23	23	23
10,000 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
20,000 MG/M^3	24	24	24	24	24	24	23	23	24	24	24	24	24	24	24	24	24	24	24	24	24	24
ALOPECIA TRUNK																						
0 MG/M^3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
2000 MG/M^3	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
10,000 MG/M^3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20,000 MG/M^3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DRIED OCULAR DISCHARGE																						
0 MG/M^3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000 MG/M^3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10,000 MG/M^3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20,000 MG/M^3	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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

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

ANIMAL		GESTATION DAY																					
NUMBER	OBSERVATION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGK329F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK327F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK332F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK337F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK331F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK351F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK360F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK334F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK370F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK343F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK373F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK346F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK379F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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

ANIMAL		GESTATION DAY																					
NUMBER	OBSERVATION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGK342F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK378F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK402F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK419F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK388F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK417F																							
	ANIMAL NOT PREGNANT																						
IGK439F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK431F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK433F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK435F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK446F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+
	ALOPECIA TRUNK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
IGK447F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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

ANIMAL		GESTATION DAY																					
NUMBER	OBSERVATION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGK328F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK338F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK330F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK341F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK362F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK364F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK358F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK412F																							
	ANIMAL NOT PREGNANT																						
IGK416F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK359F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-
	ALOPECIA TRUNK	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+
IGK347F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK335F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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

ANIMAL		GESTATION DAY																					
NUMBER	OBSERVATION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGK418F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK413F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK425F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK422F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK384F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK386F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK442F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK466F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK430F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK445F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK452F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK471F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK458F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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

ANIMAL		GESTATION DAY																					
NUMBER	OBSERVATION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGK369F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK339F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK361F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK356F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK355F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK357F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK348F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK368F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK393F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK336F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK409F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK394F																							
	ANIMAL NOT PREGNANT																						
IGK371F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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

ANIMAL		GESTATION DAY																					
NUMBER	OBSERVATION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGK381F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK401F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK414F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK398F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK377F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK454F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK455F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK434F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK437F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK443F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK444F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK449F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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

ANIMAL		GESTATION DAY																					
NUMBER	OBSERVATION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGK366F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK365F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK344F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK349F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK352F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK375F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK333F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK350F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK383F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK363F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK340F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK354F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK380F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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

ANIMAL		GESTATION DAY																					
NUMBER	OBSERVATION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
IGK382F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK423F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK389F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK385F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK424F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK429F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK436F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK441F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	DRIED DISHARGE RIGHT EYE	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IGK432F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK453F																							
	ANIMAL NOT PREGNANT																						
IGK459F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IGK460F																							
	NO OBSERVABLE ABNORMALITIES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

APPENDIX C - GESTATION BODY WEIGHT AND BODY WEIGHT CHANGE
(MEAN GESTATION BODY WEIGHT BY TARGET DOSE)
(SEE LIST OF ABBREVIATIONS FOR STATISTICAL SYMBOLS ON PAGES 5-1 AND 5-2)
(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-	A-L-	A-L-	A-L-	A-L-	A-L-	A-L-	A-L-	A-L-
0 MG/M^3										
MEAN	265.9	297.8	305.4	320.1	334.3	363.3	410.4	430.3	111.6	318.7
STD.DEV.	13	12.7	12.2	12.6	14.8	16.9	20.3	22.1	12.7	16.1
(N)	24	24	24	24	24	24	24	24	24	24
2000 MG/M^3										
MEAN	267.0	301.8	308.8	323.5	335.3	367.0	417.5	436.5	115.3	321.1
STD.DEV.	16.6	19.5	21.7	22.1	24.4	28.7	35.6	38.0	15.7	26.2
(N)	24	24	24	24	24	24	24	24	24	24
10000 MG/M^3										
MEAN	267.2	299.7	304.1	318.8	330.6	361.8	412.0	430.6	113.6	317
STD.DEV.	17.0	18.9	17.0	20.1	21.1	24.3	28.4	31.8	14.6	21.9
(N)	24	24	22	24	24	24	24	24	24	24
20000 MG/M^3										
MEAN	266.5	291.8	303.5	312.9	325.7	358.1	409.1	427.3	114.4	312.9
STD.DEV.	14.8	24.3	17.2	16.4	18.0	22.4	28.8	29.0	14.8	18.3
(N)	24	24	24	24	24	24	24	24	24	24

APPENDIX C - GESTATION BODY WEIGHT AND BODY WEIGHT CHANGE
(MEAN GESTATION BODY WEIGHT CHANGE BY TARGET DOSE)
(SEE LIST OF ABBREVIATIONS FOR STATISTICAL SYMBOLS ON PAGES 5-1 AND 5-2)
(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	K-J-	K-J-	A+L+	A-L-	A-L-	A-L-	A-L-	A-L-	A-L-	A-L
0 MG/M^3										
MEAN	31.9	7.6	14.8	14.2	29.0	47.1	19.9	132.5	164.4	52.8
STD.DEV.	8.5	5.7	4.6	5.4	5.5	8.7	8.6	17.5	18.1	13.0
(N)	24	24	24	24	24	24	24	24	24	24
2000 MG/M^3										
MEAN	34.8	7.0	14.7	11.8	31.7	50.5	19.0	134.6	169.4	54.1
STD.DEV.	6.3	6.2	7.0	6.6	7.1	8.6	5.2	23.7	25.4	14.4
(N)	24	24	24	24	24	24	24	24	24	24
10000 MG/M^3										
MEAN	32.5	5.7	13.3	11.8	31.1	50.3	18.6	131.0	163.4	49.8
STD.DEV.	6.2	4.8	5.8	7.7	9.3	5.9	6.5	18.7	19.4	12.2
(N)	24	22	22	24	24	24	24	24	24	24
20000 MG/M^3			*							
MEAN	25.3	11.7	9.4	12.8	32.4	51.0	18.1	135.5	160.8	46.4
STD.DEV.	18.9	14.7	6.7	4.4	6.3	8.0	4.6	21.0	21.4	13.5
(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)
(GRAMS)
TARGET 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
IGK329F	244	285	292	308	326	357	410	434	317	117
IGK327F	250	285	288	312	321	344	392	408	295	113
IGK332F	251	288	299	306	325	354	400	429	338	91
IGK337F	252	277	284	293	299	323	369	381	282	99
IGK331F	257	296	304	321	336	373	424	441	321	120
IGK351F	259	299	316	332	347	381	426	434	317	117
IGK360F	259	298	303	315	335	367	417	435	318	117
IGK334F	262	298	307	317	337	360	409	422	307	115
IGK370F	254	280	277	293	301	324	371	390	296	94
IGK343F	273	300	306	322	335	359	396	415	318	97
IGK373F	278	292	314	332	357	387	433	462	348	114
IGK346F	281	305	311	321	347	388	451	471	331	140
IGK379F	251	289	296	313	328	354	407	411	294	117
IGK342F	263	284	300	321	329	366	412	439	322	117
IGK378F	265	283	295	308	319	353	399	414	301	113
IGK402F	269	299	310	333	346	372	407	432	335	97
IGK419F	272	312	312	329	339	367	424	452	327	125
IGK388F	278	313	318	333	347	369	419	440	327	113
IGK417F NP										
IGK439F	292	328	328	340	358	382	430	450	337	113
IGK431F	275	304	309	314	330	351	390	404	315	89
IGK433F	278	307	312	328	338	373	436	450	324	126
IGK435F	291	314	320	334	349	382	436	454	336	118
IGK446F	266	299	312	327	334	364	397	418	323	95
IGK447F	262	312	316	331	341	369	395	442	320	122

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
IGK328F	240	273	279	297	313	338	382	389	284	105
IGK338F	249	279	279	294	310	344	389	406	281	125
IGK330F	262	294	313	340	349	389	439	460	337	123
IGK341F	246	280	283	292	302	322	364	382	294	88
IGK362F	249	283	281	314	302	333	375	386	291	95
IGK364F	259	295	306	324	335	375	432	464	339	125
IGK358F	264	298	313	321	326	361	411	429	310	119
IGK412F NP										
IGK416F	259	304	308	322	335	360	398	417	328	89
IGK359F	270	292	300	315	328	357	411	436	315	121
IGK347F	274	303	306	322	333	361	402	424	320	104
IGK335F	277	319	330	350	362	409	462	483	358	125
IGK418F	253	286	295	304	316	337	382	399	299	100
IGK413F	257	289	304	319	327	363	422	446	312	134
IGK425F	263	295	299	307	325	359	420	441	315	126
IGK422F	272	313	313	316	328	353	403	420	305	115
IGK384F	280	310	323	336	353	385	439	456	336	120
IGK386F	305	341	356	369	390	429	491	509	374	135
IGK442F	259	285	279	290	303	326	363	376	291	85
IGK466F	289	331	339	348	364	404	472	488	354	134
IGK430F	277	323	324	337	343	382	435	453	335	118
IGK445F	282	312	314	342	355	378	428	455	339	116
IGK452F	301	347	355	371	389	421	487	511	370	141
IGK471F	252	292	301	316	323	355	396	413	308	105
IGK458F	270	300	311	317	336	367	416	432	312	120

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
IGK369F	251	280	286	299	334	339	395	403	280	123
IGK339F	260	302	306	319	311	366	411	427	309	118
IGK361F	272	305	313	321	331	354	396	406	311	95
IGK356F	236	270	274	292	293	322	367	386	287	99
IGK355F	253	288	287	304	322	354	410	434	307	127
IGK357F	266	302	304	323	325	360	412	429	328	101
IGK348F	267	304	308	322	332	369	419	448	325	123
IGK368F	286	319	320	337	348	375	424	447	337	110
IGK393F	251	280	281	290	308	332	373	384	287	97
IGK336F	251	274	274	284	296	323	373	387	279	108
IGK409F	274	303	309	323	336	367	421	455	331	124
IGK394F NP										
IGK371F	269	298	308	320	332	373	432	454	329	125
IGK381F	299	325	328	348	362	402	465	488	351	137
IGK401F	254	278	288	295	309	333	375	389	288	101
IGK414F	257	297	309	312	325	349	396	407	292	115
IGK398F	262	296	303	302	315	338	381	395	307	88
IGK377F	264	294	310	322	336	364	408	429	323	106
IGK454F	292	329	331	344	353	386	438	452	333	119
IGK455F	244	278	294	311	321	348	395	409	320	89
IGK434F	295	338	291$	357	376	411	466	482	347	135
IGK437F	263	289	339$	312	319	360	410	436	329	107
IGK443F	279	298	306	328	337	372	427	446	327	119
IGK444F	274	313	318	331	344	382	436	462	337	125
IGK449F	294	332	333	355	370	403	459	480	344	136

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
IGK366F	242	279	288	294	301	328	368	385	305	80
IGK365F	266	296	302	307	323	354	407	428	312	116
IGK344F	273	305	309	325	344	380	441	455	317	138
IGK349F	279	320	335	356	370	414	478	494	353	141
IGK352F	258	279	294	306	313	343	391	403	296	107
IGK375F	262	302	309	320	337	368	417	443	326	117
IGK333F	265	231	284	296	310	335	385	407	302	105
IGK350F	269	238	292	303	316	342	392	411	308	103
IGK383F	261	285	290	302	316	345	385	403	299	104
IGK363F	263	289	287	300	307	341	372	385	292	93
IGK340F	268	306	316	325	345	391	447	463	329	134
IGK354F	271	301	310	321	329	357	400	425	307	118
IGK380F	244	266	277	290	305	330	378	396	282	114
IGK382F	255	281	293	299	311	345	391	400	290	110
IGK423F	258	288	289	306	317	357	417	427	302	125
IGK389F	261	295	303	313	324	359	413	433	310	123
IGK385F	261	284	302	305	318	337	382	402	300	102
IGK424F	278	296	316	327	331	365	424	447	319	128
IGK429F	303	328	318	324	344	384	438	454	333	121
IGK436F	281	314	323	328	338	369	428	452	341	111
IGK441F	288	322	342	327	338	367	418	432	323	109
IGK432F	242	277	286	296	311	342	392	413	318	95
IGK453F NP										
IGK459F	258	292	292	299	309	344	394	417	298	119
IGK460F	289	329	327	341	360	397	461	479	347	132

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
IGK329F	41	7	16	18	31	53	24	149	190	73
IGK327F	35	3	24	9	23	48	16	123	158	45
IGK332F	37	11	7	19	29	46	29	141	178	87
IGK337F	25	7	9	6	24	46	12	104	129	30
IGK331F	39	8	17	15	37	51	17	145	184	64
IGK351F	40	17	16	15	34	45	8	135	175	58
IGK360F	39	5	12	20	32	50	18	137	176	59
IGK334F	36	9	10	20	23	49	13	124	160	45
IGK370F	26	-3	16	8	23	47	19	110	136	42
IGK343F	27	6	16	13	24	37	19	115	142	45
IGK373F	14	22	18	25	30	46	29	170	184	70
IGK346F	24	6	10	26	41	63	20	166	190	50
IGK379F	38	7	17	15	26	53	4	122	160	43
IGK342F	21	16	21	8	37	46	27	155	176	59
IGK378F	18	12	13	11	34	46	15	131	149	36
IGK402F	30	11	23	13	26	35	25	133	163	66
IGK419F	40	0	17	10	28	57	28	140	180	55
IGK388F	35	5	15	14	22	50	21	127	162	49
IGK417F NP										
IGK439F	36	0	12	18	24	48	20	122	158	45
IGK431F	29	5	5	16	21	39	14	100	129	40
IGK433F	29	5	16	10	35	63	14	143	172	46
IGK435F	23	6	14	15	33	54	18	140	163	45
IGK446F	33	13	15	7	30	33	21	119	152	57
IGK447F	50	4	15	10	28	26	47	130	180	58

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 0-5	GD 0-21	GD 0-21C
IGK328F	33	6	18	16	25	44	7	116	149	44
IGK338F	30	0	15	16	34	45	17	127	157	32
IGK330F	32	19	27	9	40	50	21	166	198	75
IGK341F	34	3	9	10	20	42	18	102	136	48
IGK362F	34	-2	33	-12	31	42	11	103	137	42
IGK364F	36	11	18	11	40	57	32	169	205	80
IGK358F	34	15	8	5	35	50	18	131	165	46
IGK412F NP										
IGK416F	45	4	14	13	25	38	19	113	158	69
IGK359F	22	8	15	13	29	54	25	144	166	45
IGK347F	29	3	16	11	28	41	22	121	150	46
IGK335F	42	11	20	12	47	53	21	164	206	81
IGK418F	33	9	9	12	21	45	17	113	146	46
IGK413F	32	15	15	8	36	59	24	157	189	55
IGK425F	32	4	8	18	34	61	21	146	178	52
IGK422F	41	0	3	12	25	50	17	107	148	33
IGK384F	30	13	13	17	32	54	17	146	176	56
IGK386F	36	15	13	21	39	62	18	168	204	69
IGK442F	26	-6	11	13	23	37	13	91	117	32
IGK466F	42	8	9	16	40	68	16	157	199	65
IGK430F	46	1	13	6	39	53	18	130	176	58
IGK445F	30	2	28	13	23	50	27	143	173	57
IGK452F	46	8	16	18	32	66	24	164	210	69
IGK471F	40	9	15	7	32	41	17	121	161	56
IGK458F	30	11	6	19	31	49	16	132	162	42

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
IGK369F	29	6	13	35	5	56	8	123	152	29
IGK339F	42	4	13	-8	55	45	16	125	167	49
IGK361F	33	8	8	10	23	42	10	101	134	39
IGK356F	34	4	18	1	29	45	19	116	150	51
IGK355F	35	-1	17	18	32	56	24	146	181	54
IGK357F	36	2	19	2	35	52	17	127	163	62
IGK348F	37	4	14	10	37	50	29	144	181	58
IGK368F	33	1	17	11	27	49	23	128	161	51
IGK393F	29	1	9	18	24	41	11	104	133	36
IGK336F	23	0	10	12	27	50	14	113	136	28
IGK409F	29	6	14	13	31	54	34	152	181	57
IGK394F NP										
IGK371F	29	10	12	12	41	59	22	156	185	60
IGK381F	26	3	20	14	40	63	23	163	189	52
IGK401F	24	10	7	14	24	42	14	111	135	34
IGK414F	40	12	3	13	24	47	11	110	150	35
IGK398F	34	7	-1	13	23	43	14	99	133	45
IGK377F	30	16	12	14	28	44	21	135	165	59
IGK454F	37	2	13	9	33	52	14	123	160	41
IGK455F	34	16	17	10	27	47	14	131	165	76
IGK434F	43	-47[a]	66	19	35	55	16	144	187	52
IGK437F	26	50 [a]	-27	7	41	50	26	147	173	66
IGK443F	19	8	22	9	35	55	19	148	167	48
IGK444F	39	5	13	13	38	54	26	149	188	63
IGK449F	38	1	22	15	33	56	21	148	186	50

a- Values were considered spurious and were not used in the statistical analyses

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
IGK366F	37	9	6	7	27	40	17	106	143	63
IGK365F	30	6	5	16	31	53	21	132	162	46
IGK344F	32	4	16	19	36	61	14	150	182	44
IGK349F	41	15	21	14	44	64	16	174	215	74
IGK352F	21	15	12	7	30	48	12	124	145	38
IGK375F	40	7	11	17	31	49	26	141	181	64
IGK333F	-34	53	12	14	25	50	22	176	142	37
IGK350F	-31	54	11	13	26	50	19	173	142	39
IGK383F	24	5	12	14	29	40	18	118	142	38
IGK363F	26	-2	13	7	34	31	13	96	122	29
IGK340F	38	10	9	20	46	56	16	157	195	61
IGK354F	30	9	11	8	28	43	25	124	154	36
IGK380F	22	11	13	15	25	48	18	130	152	38
IGK382F	26	12	6	12	34	46	9	119	145	35
IGK423F	30	1	17	11	40	60	10	139	169	44
IGK389F	34	8	10	11	35	54	20	138	172	49
IGK385F	23	18	3	13	19	45	20	118	141	39
IGK424F	18	20	11	4	34	59	23	151	169	41
IGK429F	25	-10	6	20	40	54	16	126	151	30
IGK436F	33	9	5	10	31	59	24	138	171	60
IGK441F	34	20	-15	11	29	51	14	110	144	35
IGK432F	35	9	10	15	31	50	21	136	171	76
IGK453F NP										
IGK459F	34	0	7	10	35	50	23	125	159	40
IGK460F	40	-2	14	19	37	64	18	150	190	58

NOTE: NP - ANIMAL NOT PREGNANT GD - GESTATION DAY $ - APPARENT BAD VALUE, EXCLUDED FROM CALCULATIONS
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 ON PAGES 5-1 AND 5-2)
(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-	AL+	AL+	A-L-	A-L-	A-L-	A-L-	A-L-	A-L-
0 MG/M^3									
MEAN	121.3	72.1	71.9	74.1	77.0	80.2	24.3	375.3	520.8
STD.DEV.	12.6	8.8	6.6	8.5	6.3	5.8	5.8	29.7	38.8
(N)	24	24	24	24	24	24	24	24	24
2000 MG/M^3									
MEAN	125.5	74.5	71.9	73.8	78.5	83.5	26.1	383.2	534.7
STD.DEV.	16.9	8.3	7.3	10.4	8.9	10.0	4.0	40.8	58.1
(N)	24	24	24	23	24	23	24	22	22
10000 MG/M^3									
MEAN	123.0	71.3	71.0	71.7	75.8	81.1	25.1	368.6	516.6
STD.DEV.	12.9	6.3	6.8	6.7	7.3	9.1	3.7	26.1	37.3
(N)	23	24	24	23	24	24	24	23	23
20000 MG/M^3			*						
MEAN	118.8	67.9	66.5	72.1	77.0	82.6	26.9	366.0	513.2
STD.DEV.	16.2	7.6	7.0	6.3	6.9	8.0	5.5	29.1	40.4
(N)	24	24	23	23	24	24	24	23	23

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	GD 5-20	GD 0-21
IGK329F	117	76	73	74	78	80	29	381	527
IGK327F	109	68	67	68	73	79	23	355	487
IGK332F	107	72	65	75	78	84	33	374	514
IGK337F	102	65	60	61	67	68	23	321	446
IGK331F	117	76	71	70	76	85	26	378	521
IGK351F	129	83	79	84	89	85	23	420	572
IGK360F	116	43	70	48	76	81	27	318	461
IGK334F	129	80	72	76	71	73	22	372	523
IGK370F	99	58	57	63	64	73	22	315	436
IGK343F	119	71	70	70	70	72	23	353	495
IGK373F	100	74	74	80	83	90	32	401	533
IGK346F	139	79	75	88	89	93	27	424	590
IGK379F	116	68	68	70	74	76	15	356	487
IGK342F	118	68	69	73	76	75	26	361	505
IGK378F	113	65	67	71	82	79	22	364	499
IGK402F	123	77	83	86	83	82	26	411	560
IGK419F	134	72	73	74	73	81	29	373	536
IGK388F	136	76	77	77	72	79	25	381	542
IGK417F NP									
IGK439F	136	76	76	80	80	79	30	391	557
IGK431F	126	71	70	80	74	80	22	375	523
IGK433F	119	72	71	76	79	84	21	382	522
IGK435F	125	74	72	79	84	87	28	396	549
IGK446F	139	85	86	78	82	81	4	412	555
IGK447F	142	82	80	77	76	78	24	393	559

APPENDIX D - GESTATION FOOD CONSUMPTION (CONT'D)
(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	GD 5-20	GD 0-21
IGK328F	98	65	65	67	73	71	20	341	459
IGK338F	107	66	67	43	73	71	22	320	449
IGK330F	100	78	77	75	95	89	27	414	541
IGK341F	117	70	70	S	65	74	22		
IGK362F	112	63	66	68	68	75	22	340	474
IGK364F	134	75	76	77	80	S	33		
IGK358F	122	75	71	66	76	84	25	372	519
IGK412F NP									
IGK416F	135	72	73	74	76	82	28	377	540
IGK359F	107	64	64	67	74	81	26	350	483
IGK347F	124	74	74	77	79	80	27	384	535
IGK335F	142	81	82	87	90	99	29	439	610
IGK418F	124	76	79	70	65	71	22	361	507
IGK413F	119	72	73	70	78	85	28	378	525
IGK425F	115	64	61	66	74	80	31	345	491
IGK422F	133	73	57	67	75	79	22	351	506
IGK384F	130	84	79	80	87	88	25	418	573
IGK386F	138	84	76	92	94	98	28	444	610
IGK442F	110	66	62	68	69	72	24	337	471
IGK466F	155	88	80	87	92	106	32	453	640
IGK430F	143	77	73	77	85	92	30	404	577
IGK445F	129	72	76	80	79	89	30	396	555
IGK452F	170	97	87	90	90	98	32	462	664
IGK471F	126	77	70	71	71	77	21	366	513
IGK458F	122	76	68	78	76	80	21	378	521

APPENDIX D - GESTATION FOOD CONSUMPTION (CONT'D)
(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	GD 5-20	GD 0-21
IGK369F	95	65	61	75	76	69	21	346	462
IGK339F	117	73	66	63	72	67	22	341	480
IGK361F	120	72	77	62	68	102	21	381	522
IGK356F	106	60	61	61	67	74	22	323	451
IGK355F	125	68	67	74	78	84	26	371	522
IGK357F	123	65	71	64	77	81	24	358	505
IGK348F	127	71	72	69	77	80	28	369	524
IGK368F	131	71	79	76	81	84	26	391	548
IGK393F	113	61	61	66	66	70	23	324	460
IGK336F	109	62	61	61	62	77	23	323	455
IGK409F	121	73	73	68	68	77	36	359	516
IGK394F NP									
IGK371F	136	74	69	75	75	85	30	378	544
IGK381F	126	71	77	79	86	93	28	406	560
IGK401F	106	68	64	71	74	72	21	349	476
IGK414F	147	83	73	74	68	69	20	367	534
IGK398F	130	77	63	68	70	72	24	350	504
IGK377F	115	72	73	76	81	80	25	382	522
IGK454F	141	82	82	79	80	85	26	408	575
IGK455F	117	75	77	78	74	80	26	384	527
IGK434F	140	71	75	84	78	91	23	399	562
IGK437F	122	67	72	71	85	90	30	385	537
IGK443F	120	71	71	76	78	85	23	381	524
IGK444F	141	77	75	80	86	84	28	402	571
IGK449F	S	83	84	S	91	95	27		

APPENDIX D - GESTATION FOOD CONSUMPTION (CONT'D)
(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	GD 5-20	GD 0-21
IGK366F	113	68	63	67	67	76	26	341	480
IGK365F	113	61	58	70	75	80	25	344	482
IGK344F	116	66	66	76	82	86	26	376	518
IGK349F	143	92	85	88	91	97	30	453	626
IGK352F	110	70	74	75	79	88	23	386	519
IGK375F	126	80	72	76	80	86	30	394	550
IGK333F	83	66	S	S	75	87	27		
IGK350F	74	57	78	77	72	79	24	363	461
IGK383F	109	61	67	68	71	75	24	342	475
IGK363F	112	59	64	66	64	73	21	326	459
IGK340F	132	72	67	77	84	84	28	384	544
IGK354F	129	67	65	66	69	75	29	342	500
IGK380F	117	71	67	65	74	73	25	350	492
IGK382F	119	69	63	67	76	80	19	355	493
IGK423F	113	62	69	68	83	86	23	368	504
IGK389F	134	71	68	76	84	83	26	382	542
IGK385F	110	69	56	66	67	71	22	329	461
IGK424F	112	75	65	66	75	82	26	363	501
IGK429F	132	60	54	78	87	95	29	374	535
IGK436F	126	67	66	71	75	93	32	372	530
IGK441F	135	67	69	74	80	88	26	378	539
IGK432F	120	66	61	71	78	69	48	345	513
IGK453F NP									
IGK459F	131	60	59	66	74	80	26	339	496
IGK460F	141	73	73	84	86	97	30	413	584

NOTE: GD - GESTATION DAY
NP - NOT PREGNANT
S - NOT MEASURED DUE TO EXCESS SPILLAGE

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

	FEMALES			
TARGET DOSE	0 MG/M^3	2000 MG/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	25	25
ALOPECIA: Trunk	0	1	0	0
NO EVIDENCE OF UTERINE IMPLANTATION SITES	1	1	1	1

NOTE: (A) - INCLUDES NON-PREGNANT ANIMALS

APPENDIX E - GROSS POSTMORTEM OBSERVATIONS (INDIVIDUAL GROSS POSTMORTEM OBSERVATIONS) TARGET DOSE: 0 MG/M^3

IGK329F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK327F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK332F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK337F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK331F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK351F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK360F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK334F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK370F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK343F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK373F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK346F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK379F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK342F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK378F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK402F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK419F - ALL TISSUES AND ORGANS: No observable abnormalities.

APPENDIX E - GROSS POSTMORTEM OBSERVATIONS (INDIVIDUAL GROSS POSTMORTEM OBSERVATIONS) TARGET DOSE: 0 MG/M^3 (CONT'D)

IGK388F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK417F - ALL TISSUES AND ORGANS: No observable abnormalities.
NOTE: No evidence of uterine implantation sites.

IGK439F - ALL TISSUES AND ORGANS: No observable abnormalities

IGK431F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK433F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK435F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK446F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK447F - ALL TISSUES AND ORGANS: No observable abnormalities.

APPENDIX E - GROSS POSTMORTEM OBSERVATIONS (INDIVIDUAL GROSS POSTMORTEM OBSERVATIONS) TARGET DOSE: 2000 MG/M^3

IGK328F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK338F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK330F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK341F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK362F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK364F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK358F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK412F - ALL TISSUES AND ORGANS: No observable abnormalities.
NOTE: No evidence of uterine implantation sites.

IGK416F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK359F - GENERAL CONDITION: Alopecia trunk.

IGK347F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK335F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK418F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK413F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK425F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK422F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK384F - ALL TISSUES AND ORGANS: No observable abnormalities.

APPENDIX E - GROSS POSTMORTEM OBSERVATIONS (INDIVIDUAL GROSS POSTMORTEM OBSERVATIONS) TARGET DOSE: 2000 MG/M^3 (Cont'd)

IGK386F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK442F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK466F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK430F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK445F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK452F - ALL TISSUES AND ORGANS: No observable abnormalities

IGK471F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK458F - ALL TISSUES AND ORGANS: No observable abnormalities.

APPENDIX E - GROSS POSTMORTEM OBSERVATIONS (INDIVIDUAL GROSS POSTMORTEM OBSERVATIONS) TARGET DOSE: 10,000 MG/M^3

IGK369F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK339F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK361F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK356F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK355F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK357F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK348F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK368F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK393F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK336F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK409F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK394F - ALL TISSUES AND ORGANS: No observable abnormalities.
NOTE: No evidence of uterine implantation sites.

IGK371F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK381F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK401F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK414F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK398F - ALL TISSUES AND ORGANS: No observable abnormalities.

APPENDIX E - GROSS POSTMORTEM OBSERVATIONS (INDIVIDUAL GROSS POSTMORTEM OBSERVATIONS) TARGET DOSE: 10,000 MG/M^3 (Cont'd)

IGK377F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK454F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK455F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK434F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK437F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK443F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK444F - ALL TISSUES AND ORGANS: No observable abnormalities

IGK449F - 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)

IGK366F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK365F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK344F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK349F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK352F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK375F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK333F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK350F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK383F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK363F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK340F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK354F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK380F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK382F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK423F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK389F- ALL TISSUES AND ORGANS: No observable abnormalities.

IGK385F - 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)

IGK424F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK429F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK436F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK441F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK432F - ALL TISSUES AND ORGANS: No observable abnormalities.

IGK453F - ALL TISSUES AND ORGANS: No observable abnormalities.
NOTE: No evidence of uterine implantation sites.

IGK459F - ALL TISSUES AND ORGANS: No observable abnormalities

IGK460F - 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 ON PAGES 5-1 AND 5-2)

FEMALE	Total Live A-L-	Male Fetuses A-L-	Female Fetuses A-L-	Resorptions A-L	Implantation Sites A-L-	Corpora Lutea A-L-	Total Dead NT	Fetuses/ Implantation A-L	Resorptions/ Implantation A-L
0 MG/M^3									
MEAN	14.92	7.17	7.75	0.63	15.54	16.04	0	0.96	0.04
STD.DEV.	2.19	2.57	2.27	0.77	1.82	1.94	0	0.05	0.05
(N)	24	24	24	24	24	24	24	24	24
2000 MG/M^3									
MEAN	15.08	7.33	7.75	0.75	15.83	16.54	0	0.95	0.05
STD.DEV.	2.04	2.43	2.42	0.94	1.99	2.3	0	0.06	0.06
(N)	24	24	24	24	24	24	24	24	24
10000 MG/M^3									
MEAN	15.38	7.79	7.58	0.33	15.71	16.25	0	0.98	0.02
STD.DEV.	2.24	1.53	2.32	0.56	2.24	2.74	0	0.04	0.04
(N)	24	24	24	24	24	24	24	24	24
20000 MG/M^3									
MEAN	15.25	6.96	8.29	0.33	15.58	16.67	0	0.98	0.02
STD.DEV.	2.11	2.63	2.56	0.56	2.15	3.28	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 ON PAGES 5-1 AND 5-2)

FEMALE	F/I Tran A-L	R/I Tran A-L	D/I Tran A-L-	Dead/ Implantation NT	% Preimplant Loss K-J-	% Postimplant Loss A-L	Total Malformations K-J-	Total Variations A-L-	Total Affected A-L
0 MG/M^3									
MEAN	78.114083	11.886500	7.324		3.0	4.2	0.29	1.1	0.9
STD.DEV.	5.545914	5.545880	0.446		3.9	5.4	0.55	1.4	1.2
(N)	24	24	24	24	24	24	24	24	24
2000 MG/M^3									
MEAN	77.649292	12.351208	7.265		4.0	4.7	0.21	1.4	1.0
STD.DEV.	6.041860	6.041705	0.504		5.7	5.9	0.51	1.4	1.0
(N)	24	24	24	24	24	24	24	24	24
10000 MG/M^3									
MEAN	80.309458	9.691042	7.303		2.8	2.1	0.13	1.3	0.5
STD.DEV.	4.000682	4.000675	0.539		5.3	3.6	0.34	1.3	0.7
(N)	24	24	24	24	24	24	24	24	24
20000 MG/M^3									
MEAN	80.278667	9.721917	7.331		5.1	2.1	0.08	1.5	0.4
STD.DEV.	3.980406	3.980252	0.552		10.5	3.6	0.28	1.6	0.7
(N)	24	24	24	24	24	24	24	24	24

APPENDIX F - UTERINE IMPLANTATION DATA
(INDIVIDUAL INDIVIDUAL UTERINE IMPLANTATION DATA)
(SEE LIST OF ABBREVIATIONS ON PAGE 5-2)
TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER	Live	Male	Female	Resorp	Implants	CL	Dead	Mal	Var
IGK329F	15	7	8	1	16	16	0	0	0
IGK327F	15	7	8	1	16	16	0	1	3
IGK332F	11	5	6	3	14	14	0	1	0
IGK337F	13	4	9	2	15	15	0	2	0
IGK331F	17	6	11	0	17	18	0	0	2
IGK351F	15	6	9	1	16	17	0	0	0
IGK360F	16	6	10	0	16	16	0	0	1
IGK334F	17	8	9	0	17	17	0	1	0
IGK370F	13	7	6	1	14	15	0	0	1
IGK343F	12	5	7	1	13	14	0	0	5
IGK373F	14	7	7	0	14	14	0	0	2
IGK346F	20	13	7	0	20	20	0	0	3
IGK379F	17	9	8	1	18	19	0	0	1
IGK342F	16	10	6	0	16	18	0	0	1
IGK378F	15	9	6	1	16	16	0	0	0
IGK402F	13	3	10	1	14	16	0	1	0
IGK419F	17	4	13	0	17	18	0	0	0
IGK388F	16	11	5	0	16	16	0	0	0
IGK417F NP									
IGK439F	15	11	4	1	16	16	0	1	2
IGK431F	11	5	6	1	12	12	0	0	0
IGK433F	16	9	7	0	16	16	0	0	2
IGK435F	16	9	7	0	16	17	0	0	1
IGK446F	12	7	5	0	12	12	0	0	3
IGK447F	16	4	12	0	16	17	0	0	0

APPENDIX F - UTERINE IMPLANTATION DATA
(INDIVIDUAL INDIVIDUAL UTERINE IMPLANTATION DATA)
(SEE LIST OF ABBREVIATIONS ON PAGE 5-2)
TARGET DOSE: 0 MG/M^3

ANIMAL NUMBER	F/I Tran	R/I Tran	D/I Tran
IGK329F	75.523	14.478	7.1808
IGK327F	75.523	14.478	7.1808
IGK332F	62.425	27.575	7.6795
IGK337F	68.584	21.417	7.4176
IGK331F	83.035	6.965	6.9653
IGK351F	75.523	14.478	7.1808
IGK360F	82.820	7.181	7.1808
IGK334F	83.035	6.965	6.9653
IGK370F	74.499	15.501	7.6795
IGK343F	73.898	16.102	7.9712
IGK373F	82.321	7.679	7.6795
IGK346F	83.581	6.419	6.4193
IGK379F	76.367	13.633	6.7681
IGK342F	82.820	7.181	7.1808
IGK378F	75.523	14.478	7.1808
IGK402F	74.499	15.501	7.6795
IGK419F	83.035	6.965	6.9653
IGK388F	82.82	7.181	7.1808
IGK417F NP			
IGK439F	75.523	14.478	7.1808
IGK431F	73.222	16.779	8.299
IGK433F	82.820	7.181	7.1808
IGK435F	82.820	7.181	7.1808
IGK446F	81.702	8.299	8.299
IGK447F	82.820	7.181	7.1808

APPENDIX F - UTERINE IMPLANTATION DATA
(INDIVIDUAL INDIVIDUAL UTERINE IMPLANTATION DATA)
(SEE LIST OF ABBREVIATIONS ON PAGE 5-2)
TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER	Live	Male	Female	Resorp	Implants	CL	Dead	Mal	Var
IGK328F	14	7	7	1	15	16	0	0	3
IGK338F	15	7	8	0	15	15	0	0	4
IGK330F	15	6	9	0	15	15	0	0	1
IGK341F	12	6	6	0	12	15	0	0	4
IGK362F	12	6	6	2	14	14	0	0	0
IGK364F	16	7	9	1	17	17	0	0	5
IGK358F	16	6	10	1	17	18	0	0	2
IGK412F NP									
IGK416F	11	5	6	0	11	11	0	0	0
IGK359F	17	6	11	0	17	17	0	0	2
IGK347F	13	5	8	3	16	17	0	0	1
IGK335F	16	9	7	3	19	21	0	0	0
IGK418F	15	9	6	0	15	17	0	1	0
IGK413F	18	16	2	0	18	21	0	0	1
IGK425F	16	9	7	0	16	17	0	0	2
IGK422F	15	6	9	0	15	15	0	0	0
IGK384F	16	4	12	1	17	18	0	0	1
IGK386F	16	6	10	0	16	16	0	0	0
IGK442F	11	7	4	2	13	13	0	1	1
IGK466F	18	8	10	0	18	18	0	2	2
IGK430F	16	10	6	1	17	16	0	1	1
IGK445F	16	10	6	1	17	18	0	0	1
IGK452F	18	6	12	1	19	20	0	0	1
IGK471F	14	7	7	1	15	16	0	0	0
IGK458F	16	8	8	0	16	16	0	0	1

APPENDIX F - UTERINE IMPLANTATION DATA
(INDIVIDUAL INDIVIDUAL UTERINE IMPLANTATION DATA)
(SEE LIST OF ABBREVIATIONS ON PAGE 5-2)
TARGET DOSE: 2000 MG/M^3

ANIMAL NUMBER	F/I Tran	R/I Tran	D/I Tran
IGK328F	75.037	14.963	7.4176
IGK338F	82.583	7.418	7.4176
IGK330F	82.583	7.418	7.4176
IGK341F	81.702	8.299	8.299
IGK362F	67.793	22.208	7.6795
IGK364F	75.964	14.036	6.9653
IGK358F	75.964	14.036	6.9653
IGK412F NP			
IGK416F	81.330	8.671	8.6708
IGK359F	83.035	6.965	6.9653
IGK347F	64.341	25.659	7.1808
IGK335F	66.587	23.413	6.5868
IGK418F	82.583	7.418	7.4176
IGK413F	83.232	6.768	6.7681
IGK425F	82.820	7.181	7.1808
IGK422F	82.583	7.418	7.4176
IGK384F	75.964	14.036	6.9653
IGK386F	82.820	7.181	7.1808
IGK442F	66.907	23.094	7.9712
IGK466F	83.232	6.768	6.7681
IGK430F	75.964	14.036	6.9653
IGK445F	75.964	14.036	6.9653
IGK452F	76.738	13.263	6.5868
IGK471F	75.037	14.963	7.4176
IGK458F	82.820	7.181	7.1808

APPENDIX F - UTERINE IMPLANTATION DATA
(INDIVIDUAL INDIVIDUAL UTERINE IMPLANTATION DATA)
(SEE LIST OF ABBREVIATIONS ON PAGE 5-2)
TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER	Live	Male	Female	Resorp	Implants	CL	Dead	Mal	Var
IGK369F	18	8	10	0	18	18	0	0	0
IGK339F	16	8	8	0	16	16	0	0	0
IGK361F	12	8	4	1	13	12	0	0	1
IGK356F	13	7	6	0	13	13	0	0	0
IGK355F	17	10	7	0	17	17	0	0	2
IGK357F	14	9	5	0	14	15	0	0	5
IGK348F	16	9	7	0	16	16	0	0	0
IGK368F	15	8	7	1	16	18	0	1	2
IGK393F	13	8	5	0	13	13	0	0	0
IGK336F	16	6	10	0	16	16	0	0	2
IGK409F	16	5	11	1	17	18	0	0	3
IGK394F NP									
IGK371F	16	10	6	0	16	16	0	1	3
IGK381F	19	6	13	0	19	22	0	0	2
IGK401F	15	7	8	0	15	16	0	0	1
IGK414F	16	7	9	1	17	20	0	0	0
IGK398F	12	8	4	0	12	13	0	0	0
IGK377F	13	6	7	0	13	13	0	0	1
IGK454F	16	8	8	0	16	16	0	0	1
IGK455F	12	6	6	0	12	12	0	0	2
IGK434F	20	8	12	0	20	21	0	0	0
IGK437F	13	6	7	2	15	15	0	0	1
IGK443F	16	8	8	1	17	17	0	1	0
IGK444F	17	10	7	0	17	18	0	0	1
IGK449F	18	11	7	1	19	19	0	0	3

APPENDIX F - UTERINE IMPLANTATION DATA
(INDIVIDUAL INDIVIDUAL UTERINE IMPLANTATION DATA)
(SEE LIST OF ABBREVIATIONS ON PAGE 5-2)
TARGET DOSE: 10,000 MG/M^3

ANIMAL NUMBER	F/I Tran	R/I Tran	D/I Tran
IGK369F	83.232	6.768	6.7681
IGK339F	82.820	7.181	7.1808
IGK361F	73.898	16.102	7.9712
IGK356F	82.029	7.971	7.9712
IGK355F	83.035	6.965	6.9653
IGK357F	82.321	7.679	7.6795
IGK348F	82.820	7.181	7.1808
IGK368F	75.523	14.478	7.1808
IGK393F	82.029	7.971	7.9712
IGK336F	82.820	7.181	7.1808
IGK409F	75.964	14.036	6.9653
IGK394F NP			
IGK371F	82.82	7.181	7.1808
IGK381F	83.414	6.587	6.5868
IGK401F	82.583	7.418	7.4176
IGK414F	75.964	14.036	6.9653
IGK398F	81.702	8.299	8.299
IGK377F	82.029	7.971	7.9712
IGK454F	82.820	7.181	7.1808
IGK455F	81.702	8.299	8.299
IGK434F	83.581	6.419	6.4193
IGK437F	68.584	21.417	7.4176
IGK443F	75.964	14.036	6.9653
IGK444F	83.035	6.965	6.9653
IGK449F	76.738	13.263	6.5868

APPENDIX F - UTERINE IMPLANTATION DATA
(INDIVIDUAL INDIVIDUAL UTERINE IMPLANTATION DATA)
(SEE LIST OF ABBREVIATIONS ON PAGE 5-2)
TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER	Live	Male	Female	Resorp	Implants	CL	Dead	Mal	Var
IGK366F	10	5	5	0	10	10	0	0	1
IGK365F	15	6	9	0	15	15	0	0	1
IGK344F	16	9	7	0	16	16	0	0	6
IGK349F	18	7	11	1	19	19	0	0	0
IGK352F	14	6	8	1	15	16	0	0	1
IGK375F	15	4	11	0	15	15	0	0	1
IGK333F	14	6	8	2	16	19	0	0	0
IGK350F	15	6	9	0	15	28	0	0	0
IGK383F	15	6	9	0	15	15	0	0	0
IGK363F	12	4	8	1	13	15	0	0	5
IGK340F	19	12	7	1	20	20	0	0	2
IGK354F	17	6	11	1	18	20	0	1	4
IGK380F	15	6	9	0	15	16	0	0	1
IGK382F	16	7	9	0	16	16	0	0	2
IGK423F	16	6	10	0	16	16	0	0	0
IGK389F	17	5	12	0	17	18	0	1	0
IGK385F	13	8	5	0	13	13	0	0	1
IGK424F	18	13	5	0	18	18	0	0	2
IGK429F	16	7	9	0	16	16	0	0	0
IGK436F	15	10	5	0	15	15	0	0	3
IGK441F	15	4	11	0	15	15	0	0	0
IGK432F	12	10	2	1	13	16	0	0	2
IGK453F NP									
IGK459F	15	3	12	0	15	15	0	0	1
IGK460F	18	11	7	0	18	18	0	0	2

APPENDIX F - UTERINE IMPLANTATION DATA
(INDIVIDUAL INDIVIDUAL UTERINE IMPLANTATION DATA)
(SEE LIST OF ABBREVIATIONS ON PAGE 5-2)
TARGET DOSE: 20,000 MG/M^3

ANIMAL NUMBER	F/I Tran	R/I Tran	D/I Tran
IGK366F	80.903	9.097	9.0975
IGK365F	82.583	7.418	7.4176
IGK344F	82.820	7.181	7.1808
IGK349F	76.738	13.263	6.5868
IGK352F	75.037	14.963	7.4176
IGK375F	82.583	7.418	7.4176
IGK333F	69.296	20.705	7.1808
IGK350F	82.583	7.418	7.4176
IGK383F	82.583	7.418	7.4176
IGK363F	73.898	16.102	7.9712
IGK340F	77.079	12.921	6.4193
IGK354F	76.367	13.633	6.7681
IGK380F	82.583	7.418	7.4176
IGK382F	82.820	7.181	7.1808
IGK423F	82.820	7.181	7.1808
IGK389F	83.035	6.965	6.9653
IGK385F	82.029	7.971	7.9712
IGK424F	83.232	6.768	6.7681
IGK429F	82.820	7.181	7.1808
IGK436F	82.583	7.418	7.4176
IGK441F	82.583	7.418	7.4176
IGK432F	73.898	16.102	7.9712
IGK453F NP			
IGK459F	82.583	7.418	7.4176
IGK460F	83.232	6.768	6.7681

NOTE: NP - ANIMAL NOT PREGNANT

APPENDIX G - FETAL BODY WEIGHT
(MEAN FETAL BODY WEIGHTS BY TARGET DOSE)

Mean Fetal Weight, the Least Squares Mean Fetal Weight[a]

Dose Group (mg/m^3)	n litters	n fetuses	observed fetus mean (gm)	Least squares fetus mean (gm)*
0	24	358	5.38	5.38
2,000	24	362	5.46	5.45
10,000	24	369	5.29	5.30
20,000	24	366	5.40	5.42

a - The least squares mean accounts for litter size.

Mean Fetal Weight by Sex

	MALES	FEMALES
0 MG/M^3		
MEAN	5.52	5.25
STD. DEV.	0.38	0.45
(N)	24	24
2000 MG/M^3		
MEAN	5.58	5.34
STD. DEV.	0.45	0.53
(N)	24	24
10,000 MG/M^3		
MEAN	5.44	5.13
STD. DEV.	0.39	0.37
(N)	24	24
20,000 MG/M^3		
MEAN	5.56	5.28
STD. DEV.	0.47	0.45
(N)	24	24

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

ANIMAL NUMBER	SEX															Fetus Weights	Males	Females
IGK329F	M	5.4	5.8	6.2	5.6	5.6	6.1	5.8								Mean	5.79	5.49
IGK329F	F	5.6	5.4	5.7	5.1	5.0	5.7	5.7	5.7							S.D.	0.29	0.29
IGK327F	M	6.0	5.5	5.4	5.8	5.6	5.6	5.7								Mean	5.66	5.50
IGK327F	F	5.5	5.5	6.0	5.4	5.0	5.7	5.5	5.4							S.D.	0.20	0.28
IGK332F	M	6.2	6.2	6.2	6.0	5.7										Mean	6.06	5.78
IGK332F	F	5.7	5.6	5.9	6.0	6.1	5.4									S.D.	0.22	0.26
IGK337F	M	5.74	6.20	5.88	5.89											Mean	5.93	5.48
IGK337F	F	5.56	5.34	5.42	5.10	5.48	5.00	5.55	5.78	6.09						S.D.	0.19	0.33
IGK331F	M	5.4	5.3	5.4	5.2	5.3	5.3									Mean	5.32	5.11
IGK331F	F	5.3	5.1	5.3	4.9	5.3	5.2	5.3	4.5	5.5	4.9	4.9				S.D.	0.08	0.28
IGK351F	M	5.45	5.49	5.86	5.55	6.26	5.69									Mean	5.72	5.48
IGK351F	F	5.12	5.31	5.59	5.53	5.55	5.49	5.61	5.52	5.61						S.D.	0.31	0.16
IGK360F	M	5.5	5.7	5.0	5.1	5.4	5.6									Mean	5.38	5.14
IGK360F	F	5.3	5.4	5.3	5.1	5.0	5.1	5.1	5.1	5.3	4.7					S.D.	0.28	0.20
IGK334F	M	5.1	4.8	5.4	5.0	4.7	4.8	5.5	5.0							Mean	5.04	4.72
IGK334F	F	4.6	5.0	4.9	4.7	4.5	4.8	4.5	4.9	4.6						S.D.	0.29	0.19
IGK370F	M	4.8	5.5	5.3	5.1	5.5	5.5	5.6								Mean	5.33	5.23
IGK370F	F	5.1	5.3	5.6	5.2	5.1	5.1									S.D.	0.29	0.20
IGK343F	M	5.2	5.5	5.8	5.8	5.8										Mean	5.62	5.34
IGK343F	F	5.3	5.2	5.3	5.0	5.5	5.6	5.5								S.D.	0.27	0.21
IGK373F	M	5.70	5.98	5.82	5.91	6.06	6.27	6.01								Mean	5.96	5.67
IGK373F	F	5.64	5.80	5.79	5.58	5.71	5.38	5.79								S.D.	0.18	0.15
IGK346F	M	5.11	5.38	5.78	4.94	5.10	4.84	6.11	5.60	5.51	5.14	5.15	5.23	4.93		Mean	5.29	4.98
IGK346F	F	5.31	5.10	5.04	4.76	4.58	5.07	5.02								S.D.	0.37	0.24
IGK379F	M	5.07	4.95	5.03	5.68	5.95	5.79	5.5	5.12	5.76						Mean	5.43	5.13
IGK379F	F	4.69	5.10	5.20	5.30	5.27	4.47	5.55	5.48							S.D.	0.39	0.37
IGK342F	M	5.57	5.64	6.10	5.74	5.31	5.21	5.09	5.39	5.48	5.08					Mean	5.46	4.90
IGK342F	F	5.17	5.30	4.34	5.00	4.71	4.88									S.D.	0.32	0.34

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

ANIMAL NUMBER	SEX														Fetus Weights	Males	Females
IGK378F	M	5.21	5.47	5.24	5.64	5.21	5.23	5.78	5.33	5.68					Mean	5.42	5.28
IGK378F	F	5.28	5.31	5.27	5.20	5.19	5.40								S.D.	0.2	0.08
IGK402F	M	5.60	5.07	5.53											Mean	5.40	5.06
IGK402F	F	5.08	5.48	5.00	5.23	5.06	4.96	5.06	5.07	4.65	4.98				S.D.	0.29	0.21
IGK419F	M	5.63	5.62	5.82	5.44										Mean	5.63	5.28
IGK419F	F	5.41	5.74	5.61	5.37	5.36	5.09	5.40	5.24	5.09	5.53	5.09	4.76	4.97	S.D.	0.16	0.27
IGK388F	M	5.23	5.20	4.32	5.24	5.40	5.20	5.85	4.92	4.82	5.32	5.10			Mean	5.15	4.21
IGK388F	F	2.60	5.36	4.80	4.93	3.36									S.D.	0.38	1.17
IGK417F	NP																
IGK439F	M	5.75	5.78	5.55	5.06	5.33	4.51	5.93	5.74	5.62	5.36	5.47			Mean	5.46	4.49
IGK439F	F	3.71	4.51	5.51	4.23										S.D.	0.40	0.76
IGK431F	M	5.90	6.01	5.88	5.95	5.27									Mean	5.80	5.72
IGK431F	F	5.35	5.88	5.8	6.05	5.76	5.47								S.D.	0.30	0.26
IGK433F	M	5.98	5.67	5.78	5.73	6.00	5.91	5.78	6.12	5.89					Mean	5.87	5.34
IGK433F	F	4.12	5.00	5.73	5.45	5.64	5.83	5.59							S.D.	0.15	0.60
IGK435F	M	5.52	5.32	5.22	5.56	5.65	5.74	5.47	5.28	4.67					Mean	5.38	5.20
IGK435F	F	5.31	5.38	5.22	5.12	5.20	5.07	5.10							S.D.	0.32	0.11
IGK446F	M	5.63	5.67	5.91	5.76	5.78	6.08	5.88							Mean	5.82	5.63
IGK446F	F	5.81	5.58	5.42	5.70	5.62									S.D.	0.15	0.14
IGK447F	M	5.26	5.57	5.54	5.24										Mean	5.40	5.38
IGK447F	F	5.32	5.42	5.61	5.38	5.56	5.28	5.61	5.49	5.45	5.32	5.37	4.69		S.D.	0.18	5.38

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

ANIMAL NUMBER	SEX																		Fetus Weights Males	Fetus Weights Females
IGK328F	M	5.5	5.4	5.7	5.8	5.8	5.7	5.8										Mean	5.67	5.31
IGK328F	F	4.5	5.3	5.2	5.5	5.6	5.6	5.5										S.D.	0.16	5.31
IGK338F	M	7.0	5.7	5.9	7.0	7.3	5.4	7.1										Mean	6.49	5.89
IGK338F	F	7.4	5.2	5.2	5.5	6.7	6.7	5.1	5.3									S.D.	0.79	5.89
IGK330F	M	5.9	6.6	5.9	6.3	6.0	6.0											Mean	6.12	5.89
IGK330F	F	5.6	5.7	5.8	6.1	6.2	6.1	5.9	5.8	5.8								S.D.	0.28	5.89
IGK341F	M	5.3	5.2	4.9	5.1	5.5	5.6											Mean	5.27	5.00
IGK341F	F	4.8	5.1	4.5	5.0	5.5	5.1											S.D.	0.26	5.00
IGK362F	M	5.6	5.4	5.8	6.3	5.7	5.6											Mean	5.73	5.32
IGK362F	F	5.1	5.7	5.2	5.2	5.3	5.4											S.D.	0.31	5.32
IGK364F	M	6.0	5.8	5.4	6.0	5.2	5.5	5.9										Mean	5.69	5.47
IGK364F	F	5.5	5.7	5.9	5.3	5.4	4.9	5.5	5.2	5.8								S.D.	0.32	5.47
IGK358F	M	5.2	5.2	5.6	5.4	5.4	5.5											Mean	5.38	5.23
IGK358F	F	5.3	5.5	4.7	5.4	5.1	5.1	5.1	5.7	5.0	5.4							S.D.	0.16	5.23
IGK412F	NP																			
IGK416F	M	5.84	5.66	6.11	5.91	5.77												Mean	5.86	5.68
IGK416F	F	5.65	5.79	5.51	5.85	5.64	5.62											S.D.	0.17	5.68
IGK359F	M	5.21	5.28	5.74	5.01	5.46	5.34											Mean	5.34	5.17
IGK359F	F	4.88	5.29	5.29	5.24	4.84	5.28	5.00	5.35	5.36	5.27	5.11						S.D.	0.25	5.17
IGK347F	M	6.31	6.10	5.82	6.03	5.69												Mean	5.99	5.40
IGK347F	F	5.60	5.97	3.86	5.15	5.40	5.60	5.70	5.89									S.D.	0.24	5.40
IGK335F	M	5.71	4.80	5.33	5.58	5.05	5.05	5.10	5.30	4.97								Mean	5.21	5.04
IGK335F	F	4.61	5.15	5.37	4.93	5.03	5.23	4.93										S.D.	0.30	5.04
IGK418F	M	4.87	5.19	4.99	5.16	4.62	5.19	5.19	4.94	4.96								Mean	5.01	4.39
IGK418F	F	2.27	5.22	4.78	4.68	4.55	4.82											S.D.	0.19	4.39
IGK413F	M	5.39	5.43	5.59	5.35	5.91	5.62	5.65	5.71	5.74	5.64	5.68	5.60	5.66	5.14	5.50	5.74	Mean	5.58	5.38
IGK413F	F	5.16	5.60															S.D.	0.19	5.38
IGK425F	M	6.08	6.17	5.82	5.90	5.72	6.38	6.27	5.70	5.83								Mean	5.99	5.69
IGK425F	F	5.65	5.35	5.76	5.91	5.52	6.13	5.53										S.D.	0.25	5.69

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

ANIMAL NUMBER	SEX			Fetus Weights Males	Females
IGK422F	M	6.06 5.07 5.40 5.62 5.50 5.60	Mean	5.54	5.37
IGK422F	F	5.26 5.52 5.29 5.56 5.59 5.49 5.38 5.12 5.10	S.D.	0.32	5.37
IGK384F	M	5.29 5.25 4.89 5.26	Mean	5.17	5.29
IGK384F	F	4.91 5.18 5.35 5.30 5.43 4.84 5.22 5.25 5.48 5.60 5.54 5.34	S.D.	0.19	5.29
IGK386F	M	5.77 4.21 6.91 5.76 5.53 5.84	Mean	5.67	5.90
IGK386F	F	7.25 5.62 6.78 5.43 6.52 5.64 5.54 5.37 5.33 5.48	S.D.	0.86	5.90
IGK442F	M	5.90 5.74 5.45 5.66 5.67 5.40 5.59	Mean	5.63	4.81
IGK442F	F	5.39 5.59 2.89 5.36	S.D.	0.17	4.81
IGK466F	M	5.14 5.47 5.57 5.39 5.43 5.96 5.41 5.62	Mean	5.50	5.27
IGK466F	F	5.33 5.03 5.38 5.42 5.04 5.44 4.87 5.72 5.21 5.30	S.D.	0.23	5.27
IGK430F	M	4.83 5.29 5.44 5.11 5.62 5.22 5.70 5.48 5.14 5.05	Mean	5.29	4.99
IGK430F	F	5.20 4.92 5.18 4.86 5.00 4.80	S.D.	0.27	4.99
IGK445F	M	5.55 5.49 5.98 6.13 5.46 5.43 5.35 5.75 5.24 5.41	Mean	5.58	5.26
IGK445F	F	5.43 5.62 5.02 5.06 5.17 5.28	S.D.	0.29	5.26
IGK452F	M	5.11 4.93 5.66 6.16 5.25 5.80	Mean	5.49	5.40
IGK452F	F	5.41 5.30 5.43 5.34 5.56 5.66 5.58 5.28 5.40 5.59 5.09 5.16	S.D.	0.47	5.40
IGK471F	M	5.33 5.50 5.61 5.95 5.45 5.77 5.42	Mean	5.58	5.16
IGK471F	F	4.18 5.70 5.33 5.20 5.41 5.25 5.08	S.D.	0.22	5.16
IGK458F	M	5.37 5.52 5.00 5.67 5.08 5.59 6.27 5.42	Mean	5.49	5.10
IGK458F	F	5.01 5.05 4.87 5.16 4.90 5.03 5.30 5.45	S.D.	0.39	5.10

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

ANIMAL NUMBER	SEX														Fetus Weights	Males	Females
IGK369F	M	4.5	4.9	5.3	5.4	4.8	5.1	5.6	5.5						Mean	5.14	4.94
IGK369F	F	4.8	4.9	5.0	5.1	4.7	4.8	5.0	4.9	5.1	5.1				S.D.	0.38	4.94
IGK339F	M	5.1	5.2	5.2	5.9	5.9	5.6	5.8	5.8						Mean	5.56	5.25
IGK339F	F	4.9	5.4	5.1	5.2	5.1	5.6	5.3	5.4						S.D.	0.34	5.25
IGK361F	M	5.8	5.8	6.2	5.6	5.5	5.9	5.9	6.0						Mean	5.84	5.43
IGK361F	F	5.4	5.6	5.3	5.4										S.D.	0.22	5.43
IGK356F	M	5.8	5.8	5.6	5.2	5.4	5.5	5.7							Mean	5.57	5.30
IGK356F	F	5.4	5.2	5.1	5.1	5.6	5.4								S.D.	0.22	5.30
IGK355F	M	5.4	5.7	3.8	5.2	6.1	6.0	5.5	5.7	5.4	5.7				Mean	5.45	5.13
IGK355F	F	5.2	5.2	4.6	5.2	5.0	5.6	5.1							S.D.	0.64	5.13
IGK357F	M	4.8	5.5	5.2	5.6	5.3	5.3	5.4	5.2	5.3					Mean	5.29	4.86
IGK357F	F	5.3	5.2	4.7	4.8	4.3									S.D.	0.23	4.86
IGK348F	M	5.7	5.4	5.9	5.7	5.8	5.4	5.7	5.5	6.0					Mean	5.68	5.54
IGK348F	F	5.5	5.7	5.2	5.8	5.9	5.4	5.3							S.D.	0.21	5.54
IGK368F	M	5.2	5.8	5.3	5.9	5.4	5.3	5.4	5.5						Mean	5.48	5.10
IGK368F	F	4.7	5.3	5.4	5.3	5.0	5.0	5.0							S.D.	0.25	5.10
IGK393F	M	5.13	5.58	5.87	5.56	5.60	5.66	5.51	5.42						Mean	5.54	5.33
IGK393F	F	5.23	5.35	5.31	5.36	5.38									S.D.	0.21	5.33
IGK336F	M	4.73	5.21	4.41	4.90	4.82	4.81								Mean	4.81	4.60
IGK336F	F	4.61	4.84	4.53	4.70	4.60	4.84	4.34	4.64	4.60	4.30				S.D.	0.26	4.60
IGK409F	M	5.67	5.58	5.68	5.47	5.24									Mean	5.53	5.28
IGK409F	F	4.79	5.37	5.17	5.11	5.21	5.12	5.20	5.40	5.68	5.61	5.45			S.D.	0.18	5.28
IGK394F	NP																
IGK371F	M	5.39	5.44	5.65	5.77	5.42	5.51	5.56	6.12	6.21	5.98				Mean	5.71	5.30
IGK371F	F	5.20	5.78	5.31	4.70	5.42	5.41								S.D.	0.30	5.30
IGK381F	M	4.84	5.46	5.99	5.47	5.49	5.70								Mean	5.49	5.26
IGK381F	F	4.42	5.25	4.99	5.28	5.00	5.19	5.49	5.67	5.46	5.29	5.96	4.74	5.61	S.D.	0.38	5.26
IGK401F	M	4.79	4.75	5.14	5.02	5.08	5.20	5.19							Mean	5.02	4.74
IGK401F	F	4.34	4.42	4.95	5.18	4.93	5.03	4.58	4.45						S.D.	0.18	4.74

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

ANIMAL NUMBER	SEX														Fetus Weights	Males	Females
IGK414F	M	5.06	4.89	5.12	4.93	5.39	5.41	5.26							Mean	5.15	4.97
IGK414F	F	4.81	4.77	5.11	5.05	4.75	4.78	5.08	5.12	5.23					S.D.	0.21	4.97
IGK398F	M	5.06	5.57	5.27	5.23	5.38	5.19	5.31	5.34						Mean	5.29	5.02
IGK398F	F	5.05	5.01	5.04	4.99										S.D.	0.15	5.02
IGK377F	M	4.96	6.10	5.99	5.92	5.99	6.35								Mean	5.89	5.69
IGK377F	F	5.35	5.79	5.91	5.59	5.8	5.66	5.72							S.D.	0.48	5.69
IGK454F	M	5.43	5.57	5.60	5.67	5.01	5.35	5.14	5.42						Mean	5.40	5.07
IGK454F	F	5.62	4.82	4.98	4.89	5.14	5.23	5.23	4.61						S.D.	0.23	5.07
IGK455F	M	5.31	5.69	5.55	5.85	6.17	5.43								Mean	5.67	5.28
IGK455F	F	4.89	4.96	5.45	5.44	5.35	5.59								S.D.	0.31	5.28
IGK434F	M	5.12	5.07	4.78	4.73	4.90	5.45	4.90	4.77						Mean	4.97	4.70
IGK434F	F	4.52	4.75	4.76	4.56	4.80	4.85	5.04	4.85	4.65	4.63	4.08	4.90		S.D.	0.24	4.70
IGK437F	M	5.87	6.36	6.00	6.02	6.48	5.42								Mean	6.03	5.64
IGK437F	F	5.53	5.08	5.66	5.70	5.86	5.81	5.86							S.D.	0.38	5.64
IGK443F	M	5.35	5.52	5.71	5.41	5.52	5.67	5.25	5.42						Mean	5.48	5.10
IGK443F	F	4.76	4.79	5.24	5.26	5.44	5.17	5.07	5.09						S.D.	0.16	5.10
IGK444F	M	5.24	5.47	5.51	5.4	5.34	5.23	5.42	4.94	5.07	5.11				Mean	5.27	5.19
IGK444F	F	4.97	5.24	5.41	5.54	5.24	5.02	4.92							S.D.	0.19	5.19
IGK449F	M	5.54	5.73	5.20	5.70	5.57	5.65	5.26	5.32	5.28	5.68	5.49			Mean	5.49	5.18
IGK449F	F	5.18	4.91	5.20	5.09	4.97	5.43	5.48							S.D.	0.20	5.18

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

ANIMAL NUMBER	SEX													Fetus Weights	Males	Females
IGK366F	M	5.8	5.7	5.8	5.7	5.8								Mean	5.76	5.36
IGK366F	F	5.3	5.8	5.2	5.1	5.4								S.D.	0.05	5.36
IGK365F	M	6.0	6.0	5.5	5.3	5.4	5.6							Mean	5.63	5.53
IGK365F	F	5.3	5.5	5.4	6.2	5.9	5.5	5.4	5.3	5.3				S.D.	0.30	5.53
IGK344F	M	5.2	7.0	5.6	7.1	6.8	7.2	6.7	5.7	7.4				Mean	6.52	5.87
IGK344F	F	5.3	6.7	5.9	5.1	5.5	6.1	6.5						S.D.	0.80	5.87
IGK349F	M	5.4	5.8	5.7	5.8	5.6	5.1	5.5						Mean	5.56	5.28
IGK349F	F	5.6	5.3	5.4	5.5	5.9	5.0	5.4	4.8	4.8	5.2	5.2		S.D.	0.25	5.28
IGK352F	M	5.0	6.1	5.9	5.5	5.8	5.7							Mean	5.67	5.41
IGK352F	F	5.0	5.5	5.3	5.9	5.7	5.1	5.4	5.4					S.D.	0.38	5.41
IGK375F	M	5.6	5.8	5.6	5.7									Mean	5.68	5.50
IGK375F	F	5.1	5.5	6.2	5.8	5.4	5.2	5.3	5.5	5.3	5.8	5.4		S.D.	0.10	5.50
IGK333F	M	5.74	6.04	5.62	5.61	5.98	5.40							Mean	5.73	5.19
IGK333F	F	5.20	5.23	5.13	5.03	5.19	4.82	5.29	5.63					S.D.	0.24	5.19
IGK350F	M	4.24	4.73	4.36	5.32	5.30	5.18							Mean	4.86	4.77
IGK350F	F	4.93	4.78	4.96	4.90	4.84	3.44	5.12	4.97	4.99				S.D.	0.48	4.77
IGK383F	M	4.67	4.93	4.80	4.59	4.81	5.12							Mean	4.82	4.49
IGK383F	F	4.49	4.21	4.70	4.33	4.15	4.93	4.73	4.29	4.61				S.D.	0.19	4.49
IGK363F	M	5.83	5.94	6.01	5.76									Mean	5.89	5.60
IGK363F	F	5.86	6.37	5.35	5.75	5.61	5.39	5.53	4.93					S.D.	0.11	5.60
IGK340F	M	4.60	4.77	5.29	5.40	5.29	5.09	5.25	5.37	5.30	5.81	5.62	4.75	Mean	5.21	5.12
IGK340F	F	4.82	5.15	5.38	4.88	5.40	5.35	4.88						S.D.	0.36	5.12
IGK354F	M	5.05	5.14	5.42	5.52	5.22	5.45							Mean	5.30	5.12
IGK354F	F	4.68	5.19	5.12	5.25	5.24	5.23	4.78	5.02	5.21	5.35	5.20		S.D.	0.19	5.12
IGK380F	M	5.48	5.91	5.72	5.45	5.82	5.83							Mean	5.70	5.38
IGK380F	F	5.30	5.49	5.51	5.21	5.30	5.52	5.40	5.21	5.47				S.D.	0.19	5.38
IGK382F	M	5.07	5.60	5.45	4.93	5.38	5.36	5.39						Mean	5.31	4.85
IGK382F	F	4.70	4.73	5.24	4.83	4.47	5.11	5.13	4.97	4.49				S.D.	0.23	4.85
IGK423F	M	5.35	5.68	5.70	5.56	5.51	5.43							Mean	5.54	5.46
IGK423F	F	5.54	5.51	5.36	5.42	5.58	5.12	5.17	5.69	5.58	5.63			S.D.	0.14	5.46

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

ANIMAL NUMBER	SEX			Fetus Weights Males	Fetus Weights Females
IGK389F	M	5.43 5.46 5.67 5.26 5.36	Mean	5.44	5.31
IGK389F	F	5.59 5.19 5.05 5.22 5.46 5.15 5.02 5.56 5.26 5.18 5.34 5.64	S.D.	0.15	5.31
IGK385F	M	5.67 5.51 5.65 5.50 5.50 5.98 5.87 6.11	Mean	5.72	5.44
IGK385F	F	5.29 5.53 5.43 5.10 5.83	S.D.	0.24	5.44
IGK424F	M	5.17 5.70 5.80 5.54 4.98 5.22 5.73 5.48 5.50 5.77 5.42 5.24 4.89	Mean	5.42	4.77
IGK424F	F	4.99 5.30 5.45 2.77 5.35	S.D.	0.30	4.77
IGK429F	M	5.59 5.62 5.66 5.87 5.49 5.76 5.59	Mean	5.65	5.26
IGK429F	F	5.03 5.54 5.24 5.31 4.81 4.89 5.32 5.68 5.51	S.D.	0.13	5.26
IGK436F	M	4.76 6.07 5.84 5.73 5.73 5.73 5.72 5.86 5.58 3.93	Mean	5.50	5.48
IGK436F	F	5.51 5.45 5.41 5.63 5.39	S.D.	0.65	5.48
IGK441F	M	5.38 5.44 5.47 5.53	Mean	5.46	5.16
IGK441F	F	5.37 5.06 5.04 4.97 4.98 4.92 4.85 5.26 5.22 5.45 5.59	S.D.	0.06	5.16
IGK432F	M	5.46 5.92 5.94 5.73 5.95 5.50 6.12 6.14 5.88 5.55	Mean	5.82	5.33
IGK432F	F	5.38 5.28	S.D.	0.25	5.33
IGK453F	NP				
IGK459F	M	5.85 5.93 5.78	Mean	5.85	5.75
IGK459F	F	5.23 5.68 5.43 5.89 6.16 5.53 5.81 6.08 5.78 5.99 5.88 5.52	S.D.	0.08	5.75
IGK460F	M	5.66 5.65 5.36 5.22 5.70 5.13 5.63 5.94 5.45 5.69 5.19	Mean	5.51	5.18
IGK460F	F	5.22 5.13 5.30 4.71 5.37 5.53 5.00	S.D.	0.26	5.18

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	0/358	0/362	0/369	0/366
TOTAL LITTERS WITH EXTERNAL VARIATIONS	[0/24]	[0/24]	[0/24]	[0/24]
TOTAL FETUSES WITH EXTERNAL MALFORMATIONS	2/358	1/362	1/369	1/366
TOTAL LITTERS WITH EXTERNAL MALFORMATIONS	[2/24]	[1/24]	[1/24]	[1/24]
TOTAL FETUSES WITH VISCERAL VARIATIONS	0/181	1/179	0/186	0/184
TOTAL LITTERS WITH VISCERAL VARIATIONS	[0/24]	[1/24]	[0/24]	[0/24]
TOTAL FETUSES WITH VISCERAL MALFORMATIONS	4/181	3/179	2/186	1/184
TOTAL LITTERS WITH VISCERAL MALFORMATIONS	[4/24]	[3/24]	[2/24]	[1/24]
TOTAL FETUSES WITH SKELETAL VARIATIONS	27/177	32/183	30/183	35/182
TOTAL LITTERS WITH SKELETAL VARIATIONS	[13/24]	[16/24]	[15/24]	[16/24]
TOTAL FETUSES WITH SKELETAL MALFORMATIONS	2/177	2/183	0/183	0/182
TOTAL LITTERS WITH SKELETAL MALFORMATIONS	[2/24]	[2/24]	[0/24]	[0/24]
EXTERNAL EXAMINATIONS				
- TOTAL FETUSES EXAMINED:	358	362	369	366
- TOTAL LITTERS EXAMINED:	[24]	[24]	[24]	[24]
INDIVIDUAL EXTERNAL OBSERVATIONS				
STUNTED (<4.0 grams)	3	3	1	3
	[2]	[3]	[1]	[3]
FETUS DISCOLORED RED	0	2	0	0
	[0]	[2]	[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 MALFORMATIONS				
MALROTATED PAW	1	0	1	1
	[1]	[0]	[1]	[1]
FILAMENTOUS TAIL	1	0	0	0
	[1]	[0]	[0]	[0]
MICROSTOMIA	0	1	0	0
	[0]	[1]	[0]	[0]
CLEFT PALATE	0	1	0	0
	[0]	[1]	[0]	[0]
VISCERAL EXAMINATIONS				
- TOTAL FETUSES EXAMINED:	181	179	186	184
- TOTAL LITTERS EXAMINED:	[24]	[24]	[24]	[24]
INDIVIDUAL VISCERAL VARIATIONS				
DILATED CEREBRAL VENTRICLE	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 VISCERAL MALFORMATIONS				
ANOPHTHALMIA	0	1	0	0
	[0]	[1]	[0]	[0]
HYDROURETER	1	0	0	0
	[1]	[0]	[0]	[0]
HYDRONEPHROSIS	3	1	1	1
	[3]	[1]	[1]	[1]
MALPOSITIONED NASAL SEPTUM	0	1	0	0
	[0]	[1]	[0]	[0]
RETINA FOLD	0	1	0	0
	[0]	[1]	[0]	[0]
HYDROCEPHALY	0	0	1	0
	[0]	[0]	[1]	[0]
SKELETAL EXAMINATIONS				
- TOTAL FETUSES EXAMINED:	177	183	183	182
- TOTAL LITTERS EXAMINED:	[24]	[24]	[24]	[24]
INDIVIDUAL OSSIFICATION VARIATIONS				
STERNEBRAE:				
ASYMMETRIC	0	1	1	1
	[0]	[1]	[1]	[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)				
BIFID	0	1	1	0
	[0]	[1]	[1]	[0]
HYPOPLASTIC	0	1	1	0
	[0]	[1]	[1]	[0]
DUMBBELL / 8 SHAPED	0	0	1	0
	[0]	[0]	[1]	[0]
SUPERNUMERARY OSSIFICATION SITE	0	1	0	0
	[0]	[1]	[0]	[0]
UNOSSIFIED	3	1	0	3
	[2]	[1]	[0]	[2]
RIBS:				
SHORT LAST THORACIC	0	0	0	1
	[0]	[0]	[0]	[1]
RUDIMENTARY LUMBAR	3	5	6	11
	[3]	[5]	[4]	[5]
WELL-FORMED CERVICAL	0	1	0	0
	[0]	[1]	[0]	[0]
WELL-FORMED LUMBAR	0	1	0	1
	[0]	[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)				
VERTEBRAE:				
EXTRA CERVICAL VERTEBRAE	0	1	0	0
	[0]	[1]	[0]	[0]
THORACIC CENTRA BIFID	12	14	9	9
	[7]	[6]	[8]	[7]
THORACIC CENTRA DUMBBELL / 8 SHAPED	0	0	3	0
	[0]	[0]	[3]	[0]
THORACIC CENTRA HYPOPLASTIC	0	1	1	0
	[0]	[1]	[1]	[0]
EXTRA LUMBAR VERTEBRAE	1	0	0	0
	[1]	[0]	[0]	[0]
LUMBAR CENTRA BIFID	0	1	0	0
	[0]	[1]	[0]	[0]
SACRAL CENTRA UNOSSIFIED	1	0	0	0
	[1]	[0]	[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 CARTILAGINOUS VARIATIONS				
STERNEBRAE ANLAGE:				
MULTIPLE BONES HYPOPLASTIC	5	2	3	2
	[3]	[1]	[1]	[2]
RIB ANLAGE:				
MULTIPLE BONES HYPOPLASTIC	5	4	7	6
	[3]	[3]	[4]	[4]
SUPERNUMERARY ANLAGE	2	2	1	6
	[1]	[1]	[1]	[2]
VERTEBRAE ANLAGE:				
CERVICAL CENTRA HYPOPLASTIC	1	0	1	0
	[1]	[0	[1]	[0]
THORACIC CENTRA HYPOPLASTIC	2	8	8	8
	[2]	[4]	[4]	[5]
THORACIC CENTRA DUMBBELL / 8 SHAPED	0	9	5	2
	[0]	[3]	[5]	[2]
THORACIC CENTRA BIFID	0	2	1	2
	[0]	[2]	[1]	[2]

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				
VERTEBRAE:				
CERVICAL MULTIPLE BONES MALFORMED	0	1	0	0
	[0]	[1]	[0]	[0]
THORACIC CENTRA MISSHAPEN	1	0	0	0
	[1]	[0]	[0]	[0]
LUMBAR ONE LESS PRESACRAL	0	1	0	0
	[0]	[1]	[0]	[0]
SACRAL MULTIPLE BONES ABSENT	1	0	0	0
	[1]	[0]	[0]	[0]
CAUDAL MULTIPLE BONES ABSENT	1	0	0	0
	[1]	[0]	[0]	[0]
INDIVIDUAL CARTILAGINOUS MALFORMATIONS				
VERTEBRAE:				
THORACIC CENTRA MISSHAPEN	1	0	0	0
	[1]	[0]	[0]	[0]

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK329F

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	M	+	+	+	
10	A	F	+			+
11	A	M	+	+	+	
12C E	A	M	+			+
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 - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK327F

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 1
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	+			(b,c)
3	A	M	+	+	+	
4	A	F	+			+
5	A	F	+	+	+	
6	A	M	+			+
7C	A	M	+	+	+	
E						
8	A	F	+			+
9	A	F	+	+	+	
10	A	M	+			(b,c)
11	A	M	+	+	(A)	
12	A	M	+			(d)
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

NOTE:
(A) - ABDOMEN/THORAX: Hydroureter; Left
(b) - SKELETAL/STERNEBRAE (Anlage): Multiple hypoplastic
(c) - SKELETAL/RIBS (Anlage): Multiple hypoplastic
(d) - SKELETAL/VERTEBRAE (T2-3 Anlage): Hypoplastic centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK332F

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: 1

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

NOTE:
(A) - SKELETAL/VERTEBRAE (T5): Misshapen centra
(B) - SKELETAL/VERTEBRAE (T5 Anlage): Misshapen centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK337F

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 1
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 1
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	+	+	+	
E						
4	A	F	+			+
5	A	F	+	+	+	
6	A	F	+			+
7	A	F	+	+	+	
8C	A	F	+			+
9	A	F	(A)	+	+	
10	A	M	+			+
11	A	F	+	+	+	
12	A	F	+			+
E						
13	A	M	+	+	(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) - ABDOMEN/THORAX: Hydronephrosis; Right

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK331F

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	F	+			+
5	A	M	+	+	+	
6	A	F	+			(a)
7	A	M	+	+	+	
8C	A	F	+			+
9	A	F	+	+	+	
10	A	F	+			+
11	A	F	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	
14	A	M	+			(b)
15	A	M	+	+	+	
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 (V): Unossified
(b) - SKELETAL/STERNEBRAE (I): Unossified

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK351F

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	M	+			+
7	A	F	+	+	+	
8C	A	M	+			+
9	A	M	+	+	+	
E						
10	A	M	+			+
11	A	F	+	+	+	
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 - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK360F

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	+	+	+	
5C	A	F	+			+
6	A	F	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9	A	F	+			+
10	A	F	+	+	+	
11	A	F	+			+
12	A	F	+	+	+	
13	A	M	+			+
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) - SKELETAL/VERTEBRAE (T13): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK334F

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 1
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	+	+	(A)	
3	A	F	+			+
4	A	M	+	+	+	
5	A	F	+			+
6	A	M	+	+	+	
7	A	F	+			+
8C	A	M	+	+	+	
9	A	M	+			+
10	A	M	+	+	+	
11	A	F	+			+
12	A	F	+	+	+	
13	A	F	+			+
14	A	M	+	+	+	
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) - ABDOMEN THORAX: Hydronephrosis; Bilateral

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK370F

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	F	+			+
E						
6C	A	F	+	+	+	
7	A	F	+			+
8	A	M	+	+	+	
9	A	F	+			+
10	A	F	+	+	+	
11	A	M	+			+
12	A	M	+	+	+	
13	A	M	+			(a)

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

NOTE: Fetus numbers 11 and 13 found with identification tags detached, numbers
arbitrarily assigned for skeletal exams
(a) - SKELETAL/VERTEBRAE (T11): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK343F

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,b)
3	A	M	+	+	+	
4	A	M	+			+
E						
5	A	F	+	+	+	
6	A	F	+			(c)
7	A	F	+	+	+	
8C	A	F	+			(c)
9	A	F	+	+	+	
10	A	M	+			(b)
11	A	M	+	+	+	
12	A	M	+			(c)

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
(b) - SKELETAL/VERTEBRAE (T11): Bifid centra
(c) - SKELETAL/VERTEBRAE (T12): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK373F

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	F	+			(a)
5	A	F	+	+	+	
6	A	F	+			+
7	A	M	+	+	+	
8	A	M	+			(a)
9C	A	F	+	+	+	
10	A	F	+			+
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): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK346F

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	+			+
2	A	F	+	+	+	
3	A	F	+			+
4	A	F	+	+	+	
5	A	M	+			(c)
6	A	M	+	+	+	
7	A	F	+			+
8	A	M	+	+	+	
9	A	M	+			+
10C	A	M	+	+	+	
11	A	M	+			+
12	A	F	+	+	+	
13	A	M	+			(b)
14	A	F	+	+	+	
15	A	F	+			(a)
16	A	M	+	+	+	
17	A	M	+			+
18	A	M	+	+	+	
19	A	M	+			+
20	A	M	+	+	+	

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

NOTE: Fetus numbers 7 and 13 found with identification tags detached, numbers arbitrarily assigned for skeletal exams
(a) - SKELETAL/RIBS (T11 Anlage): Site of extra rudimentaty anlage; Left
(b) - SKELETAL/RIBS (T11 Anlage): Site of extra rudimentary anlage; Bilateral
(c) - SKELETAL/VERTEBRAE (T10): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK379F

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	+			+
5	A	F	+	+	+	
6	A	F	+			+
7	A	M	+	+	+	
8	A	F	+			+
9	A	F	+	+	+	
10	A	M	+			+
11	A	F	+	+	+	
12C	A	M	+			+
13	A	M	+	+	+	
E						
14	A	F	+			(a)
15	A	M	+	+	+	
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/VERTEBRAE (T11,12): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK342F

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	F	+	+	+	
9	A	F	+			+
10	A	M	+	+	+	
11	A	F	+			+
12	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: Fetus numbers 1, 3, 7, 9, and 13 found with identification tags detached, numbers arbitrarily assigned for skeletal exams
(a) - SKELETAL/RIBS (L1): Rudimentary; Right

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK378F

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	+			+
E						
4	A	M	+	+	+	
5	A	F	+			+
6	A	M	+	+	+	
7	A	F	+			+
8	A	M	+	+	+	
9C	A	F	+			+
10	A	M	+	+	+	
11	A	M	+			+
12	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 - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK402F

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 1
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	+	+	+	
E						
3	A	F	+			+
4	A	F	+	+	+	
5C	A	F	+			+
6	A	M	+	+	(A)	
7	A	F	+			+
8	A	M	+	+	+	
9	A	F	+			+
10	A	F	+	+	+	
11	A	F	+			+
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

NOTE: Fetus numbers 1, 9, 11, and 13 found with identification tags detached, numbers arbitrarily assigned for skeletal exams
(A) - ABDOMEN/THORAX: Hydronephrosis; Bilateral

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK419F

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	+	+	+	
6C	A	M	+			+
7	A	F	+	+	+	
8	A	F	+			+
9	A	F	+	+	+	
10	A	F	+			+
11	A	M	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	
14	A	M	+			+
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 - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK388F

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	+	+	+	
5	A	F	+			+
6	A	F	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9C	A	M	+			+
10	A	M	+	+	+	
11	A	M	+			+
12	A	M	+	+	+	
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 - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK439F

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	+	+	+	
6	A	M	(A)			(d,E,F)
7	A	F	+	+	+	
8C	A	M	+			(b,c)
E						
9	A	M	+	+	+	
10	A	M	+			+
11	A	F	+	+	+	
12	A	M	+			+
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: Filamentous tail
(b) - SKELETAL/RIBS (L1): Rudimentary; Bilateral
(c) - SKELETAL/VERTEBRAE (L): Extra presacral vertebae
(d) - SKELETAL/VERTEBRAE (S4): Unossified centra
(E) - SKELETAL/VERTEBRAE (S CENTRA, ARCH): Multiple bones absent
(F) - SKELETAL/VERTEBRAE (CA CENTRA, ARCH): Multiple bones absent

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK431F

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	F	+			+
5	A	M	+	+	+	
6	A	F	+			+
7C	A	M	+	+	+	
8	A	F	+			+
E						
9	A	F	+	+	+	
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

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK433F

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	+			(c,d)
3	A	F	+	+	+	
4	A	M	+			+
5	A	F	+	+	+	
6	A	F	+			+
7	A	M	+	+	+	
8	A	M	+			+
9C	A	F	+	+	+	
10	A	F	+			(a,b)
11	A	M	+	+	+	
12	A	M	+			+
13	A	M	+	+	+	
14	A	M	+			+
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: Fetus numbers 4, 10, and 16 found with identification tags detached, numbers arbitrarily assigned for skeletal exams
(a) - SKELETAL/STERNEBRAE (Anlage): Multiple hypoplastic
(b) - SKELETAL/RIBS (Anlage): Multiple hypoplastic
(c) - SKELETAL/RIBS (L1): Rudimentary; Bilateral
(d) - SKELETAL/VERTEBRAE (CE4,7 Anlage): Hypoplastic centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK435F

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	+	+	+	
4C	A	M	+			(a)
5	A	M	+	+	+	
6	A	M	+			+
7	A	M	+	+	+	
8	A	F	+			+
9	A	F	+	+	+	
10	A	F	+			+
11	A	F	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	
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/VERTEBRAE (T11,12): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK446F

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	+			+
2	A	M	+	+	+	
3	A	M	+			+
4	A	F	+	+	+	
5	A	M	+			+
6	A	M	+	+	+	
7C	A	F	+			(b,c)
8	A	F	+	+	+	
9	A	M	+			(a)
10	A	F	+	+	+	
11	A	F	+			(a,b)
12	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 (Anlage): Multiple hypoplastic
(b) - SKELETAL/RIBS (Anlage): Multiple hypoplastic
(c) - SKELETAL/VERTEBRAE (T6-9 Anlage): Hypoplastic centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 0 MG/M3

ANIMAL NUMBER: IGK447F

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	+	+	+	
8C	A	F	+			+
9	A	F	+	+	+	
10	A	F	+			+
11	A	M	+	+	+	
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

NOTE: Fetus numbers 8, 12, and 14 found with identification tags detached, numbers arbitrarily assigned for skeletal exams

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK328F

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	F	+	+	+	
3	A	F	+			(b,c)
4	A	M	+	+	+	
5	A	F	+			+
6	A	M	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9	A	F	+			+
10	A	F	+	+	+	
11	A	M	+			(d,e,f)
12	A	M	+	+	+	
13C	A	F	+			+
14	A	F	+	+	+	
E						

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

NOTE:
(a) - SKELETAL/VERTEBRAE (T6-9 Anlage): Hypoplastic centra
(b) - SKELETAL/VERTEBRAE (T9): Bifid centra
(c) - SKELETAL/VERTEBRAE (T5-6 Anlage): Hypoplastic centra
(d) - SKELETAL/VERTEBRAE (T11): Bifid centra
(e) - SKELETAL/VERTEBRAE (T11 Anlage): Bifid centra
(f) - SKELETAL/VERTEBRAE (T5-7 Anlage): Hypoplastic centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK338F

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	F	+			(a,h)
4	A	F	+	+	+	
5	A	M	+			+
6	A	M	+	+	+	
7C	A	F	+			(b,c)
8	A	F	+	+	+	
9	A	M	+			(d,e)
10	A	F	+	+	+	
11	A	F	+			(f,g)
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: Fetus numbers 1, 5, and 7 found with identification tags detached, numbers arbitrarily assigned for skeletal exams
(a) - SKELETAL/VERTEBRAE (T11,12): Bifid centra
(b) - SKELETAL/VERTEBRAE (T11): Bifid centra
(c) - SKELETAL/VERTEBRAE (T11 Anlage): Dumbbell centra
(d) - SKELETAL/VERTEBRAE (T9-13): Bifid centra
(e) - SKELETAL/VERTEBRAE (T9-13 Anlage): Dumbbell centra
(f) - SKELETAL/VERTEBRAE (T11-13): Bifid centra
(g) - SKELETAL/VERTEBRAE (T11-13 Anlage): Dumbbell centra
(h) - SKELETAL/VERTEBRAE (L1): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK330F

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	M	+			+
6	A	F	+	+	+	
7C	A	F	+			(a)
8	A	M	+	+	+	
9	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

NOTE:
(a) - SKELETAL/VERTEBRAE (T3-7 Anlage): Hypoplastic centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK341F

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	+			(d)
3	A	F	+	+	+	
4	A	F	+			+
5	A	M	+	+	+	
6	A	M	+			(e)
7	A	M	+	+	+	
8C	A	M	+			(a,b)
9	A	M	+	+	+	
10	A	M	+			(a,b,c)
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/STERNEBRAE (Anlage): Multiple hypoplastic
(b) - SKELETAL/RIBS (Anlage): Multiple hypoplastic
(c) - SKELETAL/RIBS (L1): Rudimentary; Bilateral
(d) - SKELETAL/VERTEBRAE (T4-5 Anlage): Hypoplastic centra
(e) - SKELETAL/VERTEBRAE (T3-6 Anlage): Hypoplastic centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK362F

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	
E						
1	A	M	+			+
2	A	F	+	+	+	
3	A	F	+			+
4	A	F	+	+	+	
5	A	F	+			+
E						
6C	A	M	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9	A	M	+			+
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

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK364F

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	M	+			+
2	A	M	+	+	+	
3	A	F	+			+
4	A	F	+	+	+	
5	A	M	+			(c,d,e,g)
6	A	M	+	+	+	
EC						
7	A	F	+			+
8	A	M	+	+	+	
9	A	M	+			(d,e)
10	A	M	+	+	+	
11	A	F	+			(c,d,e,g)
12	A	F	+	+	+	
13	A	F	+			(a,b,f)
14	A	F	+	+	+	
15	A	F	+			(c,g)
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; Bilateral
(b) - SKELETAL/VERTEBRAE (T13): Bifid centra
(c) - SKELETAL/VERTEBRAE (T11): Bifid centra
(d) - SKELETAL/VERTEBRAE (T12): Bifid centra
(e) - SKELETAL/VERTEBRAE (T12 Anlage): Dumbbell centra
(f) - SKELETAL/VERTEBRAE (T13 Anlage): Dumbbell centra
(g) - SKELETAL/VERTEBRAE (T11 Anlage): Dumbbell centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK358F

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	+			+
E						
2	A	F	+	+	+	
3	A	M	+			+
4	A	M	+	+	+	
5C	A	F	+			(b)
6	A	F	+	+	+	
7	A	M	+			(a)
8	A	M	+	+	+	
9	A	F	+			+
10	A	F	+	+	+	
11	A	F	+			+
12	A	F	+	+	+	
13	A	M	+			+
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/RIBS (L1): Rudimentary; Left
(b) - SKELETAL/VERTEBRAE (T11-12, T11-12 Anlage): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK416F

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	F	+			+
8C	A	F	+	+	+	
9	A	M	+			+
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

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK359F

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	F	+			(a)
5	A	M	+	+	+	
6	A	F	+			+
7	A	F	+	+	+	
8C	A	M	+			+
9	A	M	+	+	+	
10	A	F	+			+
11	A	M	+	+	+	
12	A	F	+			(b)
13	A	F	+	+	+	
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/VERTEBRAE (T4-10 Anlage): Hypoplastic centra
(b) - SKELETAL/VERTEBRAE (T5-9 Anlage): Hypoplastic centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK347F

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	F	+			(a)
5	A	M	+	+	+	
6	A	F	+			+
7	A	F	+	+	+	
8	A	F	+			+
9	A	M	+	+	+	
E						
E						
10	A	M	+			+
11	A	F	+	+	+	
E						
12	A	M	+			+
13	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 - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK335F

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	+			+
E						
3	A	M	+	+	+	
4	A	M	+			+
5	A	F	+	+	+	
E						
6C	A	M	+			+
7	A	F	+	+	+	
8	A	F	+			+
9	A	F	+	+	+	
10	A	F	+			+
E						
11	A	M	+	+	+	
12	A	M	+			+
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 - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK418F

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 1
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 1
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	(A,B,**)	(C,D)	+	
3	A	M	+			+
4	A	M	+	+	+	
5	A	M	+			+
6	A	F	+	+	+	
7	A	F	+			+
8	A	F	+	+	+	
9	A	F	+			+
10C	A	M	+	+	+	
11	A	F	+			+
12	A	M	+	+	+	
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) - EXTERNAL: Microstomia
(B) - EXTERNAL: Cleft palate (confirmed internally)
(**) - EXTERNAL: Fetus discolored red
(C) - HEAD: Anophthalmia
(D) - HEAD: Malpositioned nasal septum

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK413F

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 1 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	+			+
5	A	M	+	+	+	
6	A	M	+			+
7	A	M	+	+	+	
8	A	M	+			+
9C	A	M	+	+	+	
10	A	M	+			+
11	A	M	+	(a)	+	
12	A	M	+			+
13	A	M	+	+	+	
14	A	F	+			+
15	A	M	+	+	+	
16	A	M	+			+
17	A	M	+	+	+	
18	A	M	+			+

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

NOTE: Fetus numbers 6, 12, and 14 found with identification tags detached, numbers arbitrarily assigned for skeletal exams
(a) - HEAD: Dilated cerebral ventricle

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK425F

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	M	+			+
5	A	M	+	+	+	
6	A	F	+			(a)
7	A	M	+	+	+	
8C	A	F	+			+
9	A	F	+	+	+	
10	A	M	+			(b)
11	A	M	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	
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 (T11 Anlage): Site of extra rudimentary anlage; Bilateral
(b) - SKELETAL/RIBS (T11 Anlage): Site of extra rudimentary anlage; Left

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK422F

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	+			+
6C	A	F	+	+	+	
7	A	F	+			+
8	A	F	+	+	+	
9	A	M	+			+
10	A	F	+	+	+	
11	A	M	+			+
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 - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK384F

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,b)
2	A	M	+	+	+	
3	A	F	+			+
4	A	F	+	+	+	
5	A	F	+			+
6	A	F	+	+	+	
7	A	M	+			+
E						
8	A	F	+	+	+	
9C	A	M	+			+
10	A	F	+	+	+	
11	A	M	+			+
12	A	F	+	+	+	
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/RIBS (Anlage): Multiple hypoplastic
(b) - SKELETAL/RIBS (L1): Rudimentary; Bilateral

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK386F

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	F	+	+	+	
5	A	F	+			+
6	A	F	+	+	+	
7	A	M	+			+
8C	A	M	+	+	+	
9	A	F	+			+
10	A	F	+	+	+	
11	A	M	+			+
12	A	F	+	+	+	
13	A	M	+			+
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: Fetus numbers 1 and 7 found with identification tags detached, numbers arbitrarily assigned for skeletal exams

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK442F

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: 1

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/THORAX	
1	A	F	+			+
2	A	M	+	+	+	
3	A	M	+			+
4	A	F	+	+	+	
5*	A	F	(**)			(a,b,c,d,e,f,G,h)
E						
6	A	M	+	+	+	
7	A	M	+			+
EC						
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: * - Stunted
(**) - EXTERNAL: Fetus discolored red
(a) - SKELETAL/STERNEBRAE (I-III): Assymetric form
(b) - SKELETAL/STERNEBRAE (IV): Bifid centra
(c) - SKELETAL/STERNEBRAE (V-VI): Unossified
(d) - SKELETAL/RIBS (CE8): Well-formed; Right
(e) - SKELETAL/RIBS (L1): Well-formed: Left
(f) - SKELETAL/VERTEBRAE (CE): Extra presacral vertebae (Note: The testing laboratory considers all extra presacral vertebrae as variations. Some other laboratories consider extra presacral vertebrae in the cervical region as malformations because they are rare.
(G) - SKELETAL/VERTEBRAE (CE): Multiple bones malformed
(h) - SKELETAL/VERTEBRAE (T3-6): Hypoplastic centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK466F

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 1
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	F	+			+
4	A	M	+	+	+	
5	A	F	+			(c,D)
6	A	F	+	+	+	
7	A	F	+			+
8	A	M	+	+	(A)	
9	A	M	+			+
10	A	F	+	+	+	
11	A	M	+			+
12C	A	M	+	+	+	
13	A	F	+			+
14	A	M	+	+	+	
15	A	M	+			(b)
16	A	M	+	+	+	
17	A	F	+			+
18	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: Hydronephrosis; Bilateral
(b) - SKELETAL/STERNEBRAE (Between V and VI): Site of extra ossification site
(c) - SKELETAL/RIBS (Anlage): Multiple hypoplastic
(D) - SKELETAL/VERTEBRAE (L): One less presacral vertebrae

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK430F

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	M	+			
2	A	F	+	+	+	+
3	A	M	+			
4	A	M	+	+	+	+
L						
5	A	F	+			+
6	A	M	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9C	A	F	+			+
10	A	M	+	(A)	+	
11	A	M	+			+
12	A	F	+	+	+	
13	A	F	+			(b)
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:
(A) - HEAD: Retina fold; Right
(b) - SKELETAL/RIBS (L1): Rudimentary; Bilateral

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK445F

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	+			(a)
5	A	M	+	+	+	
6	A	M	+			+
7	A	M	+	+	+	
8	A	F	+			+
9	A	M	+	+	+	
10	A	F	+			+
11C	A	M	+	+	+	
12	A	M	+			+
13	A	M	+	+	+	
14	A	F	+			+
E						
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/VERTEBRAE (T12): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK452F

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	F	+			+
8	A	F	+	+	+	
9C	A	F	+			+
10	A	M	+	+	+	
11	A	F	+			+
12	A	F	+	+	+	
13	A	M	+			+
14	A	F	+	+	+	
15	A	F	+			+
E						
16	A	M	+	+	+	
17	A	F	+			(a)
18	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

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK471F

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	
E						
1	A	F	+	+	+	
2	A	M	+			+
3	A	M	+	+	+	
4	A	F	+			+
5	A	F	+	+	+	
6C	A	M	+			+
7	A	M	+	+	+	
8	A	F	+			+
9	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 - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 2000 MG/M3

ANIMAL NUMBER: IGK458F

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	F	+			+
4	A	M	+	+	+	
5	A	M	+			+
6	A	M	+	+	+	
7	A	F	+			+
8	A	F	+	+	+	
9	A	M	+			+
10	A	M	+	+	+	
11	A	M	+			+
12C	A	F	+	+	+	
13	A	F	+			+
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 5, 7, 11, and 15 found with identification tags detached, numbers arbitrarily assigned for skeletal exams
(a) - SKELETAL/VERTEBRAE (T10 Anlage): Dumbbell centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK369F

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	M	+			+
5	A	M	+	+	+	
6	A	F	+			+
7	A	M	+	+	+	
8	A	M	+			+
9	A	F	+	+	+	
10	A	F	+			+
11	A	F	+	+	+	
12C	A	M	+			+
13	A	F	+	+	+	
14	A	F	+			+
15	A	F	+	+	+	
16	A	M	+			+
17	A	F	+	+	+	
18	A	M	+			+

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

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK339F

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	F	+	+	+	
6	A	M	+			+
7	A	M	+	+	+	
8C	A	M	+			+
9	A	M	+	+	+	
10	A	F	+			+
11	A	F	+	+	+	
12	A	F	+			+
13	A	M	+	+	+	
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

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK361F

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	+	+	+	
E						
2	A	F	+			+
3	A	M	+	+	+	
4C	A	F	+			+
5	A	M	+	+	+	
6	A	M	+			+
7	A	M	+	+	+	
8	A	M	+			+
9	A	M	+	+	+	
10	A	M	+			+
11	A	F	+	+	+	
12	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/VERTEBRAE (T12): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK356F

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	+			+
6C	A	F	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9	A	F	+			+
10	A	F	+	+	+	
11	A	M	+			+
12	A	M	+	+	+	
13	A	F	+			+

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

NOTE: Fetus numbers 3, 9, and 13 found with identification tags detached, numbers arbitrarily assigned for skeletal exams

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK355F

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	M	+	+	+	
4*	A	M	+			(a)
5	A	F	+	+	+	
6	A	F	+			+
7	A	F	+	+	+	
8	A	M	+			+
9	A	F	+	+	+	
10C	A	M	+			+
11	A	F	+	+	+	
12	A	M	+			(b,c)
13	A	M	+	+	+	
14	A	M	+			+
15	A	M	+	+	+	
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:
* - Stunted
(a) - SKELETAL/RIBS (Anlage): Multiple hypoplastic
(b) - SKELETAL/VERTEBRAE (T9): Dumbbell centra
(c) - SKELETAL/VERTEBRAE (T9 Anlage): Dumbbell centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK357F

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	M	+	+	+	
2	A	F	+			+
3	A	M	+	+	+	
4	A	M	+			(d)
5C	A	F	+	+	+	
6	A	M	+			(a,b,e)
7	A	F	+	+	+	
8	A	M	+			(b,c,f)
9	A	M	+	+	+	
10	A	M	+			(a,b)
11	A	M	+	+	+	
12	A	M	+			(a,b,g)
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/STERNEBRAE (Anlage): Multiple hypoplastic
(b) - SKELETAL/RIBS (Anlage): Multiple hypoplastic
(c) - SKELETAL/VERTEBRAE (CE7 Anlage): Hypoplastic centra
(d) - SKELETAL/VERTEBRAE (T3-5 Anlage): Hypoplastic centra
(e) - SKELETAL/VERTEBRAE (T3-4 Anlage): Hypoplastic centra
(f) - SKELETAL/VERTEBRAE (T1-3 Anlage): Hypoplastic centra
(g) - SKELETAL/VERTEBRAE (T1-5 Anlage): Hypoplastic centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK348F

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	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9	A	M	+			+
10C	A	F	+	+	+	
11	A	F	+			+
12	A	M	+	+	+	
13	A	M	+			+
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 - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK368F

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: 0

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

NOTE: Fetus numbers 3, 5, 7, 9, and 15 found with identification tags detached, numbers arbitrarily assigned for skeletal exams
(A) - EXTERNAL: Malrotated forepaw; Left
(b) - SKELETAL/VERTEBRAE (T10,13): Bifid centra
(c) - SKELETAL/VERTEBRAE (T11,12): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK393F

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	F	+	+	+	
6C	A	M	+			+
7	A	M	+	+	+	
8	A	F	+			+
9	A	F	+	+	+	
10	A	F	+			+
11	A	M	+	+	+	
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

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK336F

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	+			(b,c)
6	A	F	+	+	+	
7C	A	F	+			+
8	A	F	+	+	+	
9	A	M	+			+
10	A	M	+	+	+	
11	A	M	+			(a)
12	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:
(a) - SKELETAL/RIBS (Anlage): Multiple hypoplastic
(b) - SKELETAL/VERTEBRAE (T12): Bifid centra
(c) - SKELETAL/VERTEBRAE (T12 Anlage): Dumbbell centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK409F

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	M	+			+
5	A	M	+	+	+	
6	A	M	+			+
7	A	F	+	+	+	
8	A	M	+			(a)
9	A	F	+	+	+	
10	A	M	+			(b)
11	A	F	+	+	+	
12C	A	F	+			+
13	A	F	+	+	+	
14	A	F	+			(c)
15	A	F	+	+	+	
16	A	F	+			+
E						

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

NOTE:
(a) - SKELETAL/VERTEBRAE (T4-7 Anlage): Hypoplastic centra
(b) - SKELETAL/VERTEBRAE (T6-7 Anlage): Hypoplastic centra
(c) - SKELETAL/VERTEBRAE (T12 Anlage): Dumbbell centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK371F

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

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/THORAX	
1	A	M	+	+	+	
2	A	M	+			(f,g)
3	A	M	+	+	+	
4	A	M	+			+
5	A	M	+	+	+	
6	A	M	+			(h)
7	A	M	+	(A)	+	
8	A	F	+			+
9C	A	F	+	+	+	
10	A	M	+			+
11	A	F	+	+	+	
12	A	F	+			(b,c,d,e,
13	A	F	+	+	+	j,k,i)
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:
(A) - HEAD: Hydrocephaly; Right
(b) - SKELETAL/STERNEBRAE (I-V): Asymmetric form (Rib pairs attach to the sternum in an alternate pattern rather than opposite)
(c) - SKELETAL/STERNEBRAE (II): Hypoplastic
(d) - SKELETAL/STERNEBRAE (III): Dumbbell centra
(e) - SKELETAL/STERNEBRAE (IV): Bifid centra
(f) - SKELETAL/RIBS (Anlage): Multiple hypoplastic
(g) - SKELETAL/RIBS (L1): Rudimentary; Left
(h) - SKELETAL/RIBS (L1): Rudimentary; Right
(i) - SKELETAL/VERTEBRAE (T9): Dumbbell centra
(j) - SKELETAL/VERTEBRAE (T4): Bifid centra
(k) - SKELETAL/VERTEBRAE (T4 Anlage): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK381F

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	M	+			+
7	A	F	+	+	+	
8	A	F	+			(a)
9	A	F	+	+	+	
10C	A	M	+			+
11	A	F	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	
14	A	F	+			(b,c)
15	A	M	+	+	+	
16	A	F	+			+
17	A	M	+	+	+	
18	A	M	+			+
19	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; Bilateral
(c) - SKELETAL/VERTEBRAE (T3-5 Anlage): Hypoplastic centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK401F

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	F	+			(a,b)
5	A	M	+	+	+	
6	A	M	+			+
7	A	M	+	+	+	
8	A	F	+			+
9C	A	F	+	+	+	
10	A	F	+			+
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

NOTE: Fetus numbers 2 and 10 found with identification tags detached, numbers
arbitrarily assigned for skeletal exams
(a) - SKELETAL/VERTEBRAE (T11): Bifid centra
(b) - SKELETAL/VERTEBRAE (T11 Anlage): Dumbbell centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK414F

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	+	+	+	
7	A	F	+			
8	A	F	+	+	+	+
E						
9	A	M	+			+
10	A	F	+	+	+	
11C	A	F	+			+
12	A	F	+	+	+	
13	A	F	+			+
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

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK398F

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	+			+
8	A	M	+	+	+	
9C	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 - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK377F

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	+	+	+	
6	A	F	+			+
7	A	F	+	+	+	
8	A	M	+			(a)
9C	A	M	+	+	+	
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

NOTE: Fetus numbers 4 and 8 found with identification tags detached, numbers
arbitrarily assigned for skeletal exams
(a) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK454F

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	+			+
6C	A	F	+	+	+	
7	A	F	+			+
8	A	M	+	+	+	
9	A	F	+			+
10	A	M	+	+	+	
11	A	F	+			(a)
12	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:
(a) - SKELETAL/VERTEBRAE (T4,5 Anlage): Hypoplastic centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK455F

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	M	+	+	+	
4	A	M	+			+
5	A	F	+	+	+	
6	A	M	+			+
7C	A	F	+	+	+	
8	A	F	+			+
9	A	M	+	+	+	
10	A	M	+			(b)
11	A	F	+	+	+	
12	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 (T11 Anlage): Site of extra rudimentary anlage; Left
(b) - SKELETAL/VERTEBRAE (T6): Hypoplastic centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK434F

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	F	+	+	+	
5	A	M	+			+
6	A	F	+	+	+	
7	A	F	+			(*)
8	A	M	+	+	+	
9	A	F	+			+
10	A	F	+	+	+	
11C	A	M	+			+
12	A	F	+	+	+	
13	A	M	+			+
14	A	M	+	+	+	
15	A	F	+			+
16	A	F	+	+	+	
17	A	F	+			+
18	A	M	+	+	+	
19	A	F	+			+
20	A	F	+	+	+	

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

NOTE:
(*) - Head inadvertently removed, no skeletal performed

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK437F

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	+			+
5	A	F	+	+	+	
6	A	F	+			+
7	A	M	+	+	+	
8	A	F	+			(a)
9	A	M	+	+	+	
10C	A	M	+			+
11	A	M	+	+	+	
E						
E						
12	A	M	+			+
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): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK443F

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 1
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	+	+	(A)	
4	A	M	+			+
E						
5	A	F	+	+	+	
6	A	F	+			+
7	A	M	+	+	+	
8C	A	F	+			+
9	A	M	+	+	+	
10	A	F	+			+
11	A	M	+	+	+	
12	A	F	+			+
13	A	M	+	+	+	
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) - ABDOMEN/THORAX: Hydronephrosis; Bilateral

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK444F

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	+			(a)
4	A	F	+	+	+	
5	A	F	+			+
6	A	M	+	+	+	
7	A	F	+			+
8	A	F	+	+	+	
9C	A	M	+			+
10	A	F	+	+	+	
11	A	M	+			+
12	A	M	+	+	+	
13	A	M	+			+
14	A	M	+	+	+	
15	A	F	+			+
16	A	M	+	+	+	
17	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 - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 10000 MG/M3

ANIMAL NUMBER: IGK449F

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	
E						
1	A	M	+	+	+	
2	A	M	+			+
3	A	F	+	+	+	
4	A	M	+			(a)
5	A	M	+	+	+	
6	A	F	+			(b,d)
7	A	F	+	+	+	
8	A	M	+			+
9C	A	M	+	+	+	
10	A	M	+			+
11	A	M	+	+	+	
12	A	M	+			+
13	A	F	+	+	+	
14	A	F	+			(c)
15	A	F	+	+	+	
16	A	M	+			+
17	A	F	+	+	+	
18	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
(b) - SKELETAL/VERTEBRAE (T11 Anlage): Dumbbell centra
(c) - SKELETAL/VERTEBRAE (T6): Dumbbell centra
(d) - SKELETAL/VERTEBRAE (T11): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK366F

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,b)
2	A	M	+	+	+	
3	A	F	+			+
4	A	M	+	+	+	
5	A	F	+			+
6	A	M	+	+	+	
7	A	M	+			+
8	A	F	+	+	+	
9C	A	M	+			+
10	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 (Anlage): Multiple hypoplastic
(b) - SKELETAL/VERTEBRAE (T3-10 Anlage): Hypoplastic centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK365F

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	F	+	+	+	
6	A	M	+			(a)
7C	A	F	+	+	+	
8	A	M	+			+
9	A	M	+	+	+	
10	A	F	+			+
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:
(a) - SKELETAL/VERTEBRAE (T4-6 Anlage): Hypoplastic centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK344F

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH SKELETAL VARIATIONS: 6 MALFORMATIONS: 0

FETUS NO.	STATUS	SEX	EXTERNAL	VISCERAL		SKELETAL
				HEAD	ABDOMEN/THORAX	
1	A	F	+			(b,h)
2	A	F	+	+	+	
3	A	M	+			(a,b,d)
4	A	F	+	+	+	
5	A	F	+			+
6	A	M	+	+	+	
7	A	M	+			+
8C	A	F	+	+	+	
9	A	M	+			(c)
10	A	F	+	+	+	
11	A	M	+			(e,f,c)
12	A	F	+	+	+	
13	A	M	+			(b,c,i)
14	A	M	+	+	+	
15	A	M	+			(g)
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 (Anlage): Multiple hypoplastic
(b) - SKELETAL/RIBS (Anlage): Multiple hypoplastic
(c) - SKELETAL/RIBS (L1): Rudimentary; Bilateral
(d) - SKELETAL/VERTEBRAE (T1-8 Anlage): Hypoplastic centra
(e) - SKELETAL/VERTEBRAE (T2-5 Anlage): Hypoplastic centra
(f) - SKELETAL/VERTEBRAE (T12): Bifid centra
(g) - SKELETAL/VERTEBRAE (T12-13 Anlage): Hypoplastic centra
(h) - SKELETAL/VERTEBRAE (T3-8 Anlage): Hypoplastic centra
(i) - SKELETAL/VERTEBRAE (T12 Anlage): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK349F

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	+	+	+	
6	A	F	+			+
7	A	M	+	+	+	
8C	A	F	+			+
9	A	F	+	+	+	
E						
10	A	F	+			+
11	A	M	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	
14	A	F	+			+
15	A	M	+	+	+	
16	A	M	+			+
17	A	F	+	+	+	
18	A	F	+			+

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

NOTE: Fetus numbers 2, 6, 12, and 14 found with identification tags detached, numbers arbitrarily assigned for skeletal exams

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK352F

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	+			+
6C	A	M	+	+	+	
7	A	F	+			(a)
8	A	F	+	+	+	
E						
9	A	F	+			+
10	A	F	+	+	+	
11	A	F	+			+
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 (T13): Short Last; Bilateral

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK375F

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	+			(a)
7	A	M	+	+	+	
8	A	F	+			+
9C	A	F	+	+	+	
10	A	F	+			+
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/VERTEBRAE (T11,T11 Anlage): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK333F

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	
E						
1	A	F	+	+	+	
2	A	M	+			+
3	A	M	+	+	+	
4	A	F	+			+
5C	A	F	+	+	+	
6	A	M	+			+
7	A	M	+	+	+	
8	A	F	+			+
9	A	F	+	+	+	
E						
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

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK350F

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	F	+	+	+	
9	A	M	+			+
10C	A	F	+	+	+	
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

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK383F

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	+			+
7C	A	M	+	+	+	
8	A	F	+			+
9	A	M	+	+	+	
10	A	F	+			+
11	A	F	+	+	+	
12	A	F	+			+
13	A	F	+	+	+	
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

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK363F

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	M	+			(a)
3	A	F	+	+	+	
EC						
4	A	M	+			+
5	A	F	+	+	+	
6	A	M	+			(b)
7	A	F	+	+	+	
8	A	F	+			(d,e)
9	A	F	+	+	+	
10	A	F	+			(c)
11	A	M	+	+	+	
12	A	F	+			(b)

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

NOTE:
(a) - SKELETAL/RIBS (T11 Anlage): Site of extra rudimentary anlage; Right
(b) - SKELETAL/RIBS (T11 Anlage): Site of extra rudimentary anlage; Bilateral
(c) - SKELETAL/RIBS (T10 Anlage): Site of extra rudimentary anlage; Right
(d) - SKELETAL/RIBS (T11 Anlage): Site of extra rudimentary anlage; Left
(e) - SKELETAL/VERTEBRAE (T12): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK340F

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	+	+	+	
E						
3	A	M	+			+
4	A	M	+	+	+	
5	A	F	+			+
6	A	M	+	+	+	
7	A	M	+			(a)
8	A	M	+	+	+	
9	A	M	+			+
10	A	M	+	+	+	
11	A	M	+			+
12C	A	M	+	+	+	
13	A	F	+			+
14	A	M	+	+	+	
15	A	F	+			+
16	A	F	+	+	+	
17	A	F	+			(a)
18	A	F	+	+	+	
19	A	M	+			+

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

NOTE: Fetus numbers 5, 7, 9, 13, and 17 found with identification tags detached, numbers arbitrarily assigned for skeletal exams
(a) - SKELETAL/STERNEBRAE (V): Unossified

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK354F

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 1
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	
E						
1	A	F	+			+
2	A	F	+	+	+	
3	A	M	+			(c)
4	A	F	+	+	+	
5	A	F	+			+
6	A	F	+	+	+	
7	A	F	+			+
8	A	F	(A)	+	+	
9	A	F	+			+
10	A	M	+	+	+	
11	A	M	+			(b,d)
12C	A	F	+	+	+	
13	A	F	+			(e)
14	A	F	+	+	+	
15	A	M	+			(e)
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: Fetus numbers 1, 7, 11, 13, 15, and 17 found with identification tags detached, numbers arbitrarily assigned for skeletal exams
(A) - EXTERNAL: Malrotated hindpaw; Left
(b) - SKELETAL/RIBS (Anlage): Multiple hypoplastic
(c) - SKELETAL/RIBS (L1): Rudimentary; Bilateral
(d) - SKELETAL/RIBS (L1): Rudimentary; Right
(e) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK380F

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	+	+	+	
5	A	M	+			+
6	A	M	+	+	+	
7	A	F	+			+
8C	A	F	+	+	+	
9	A	F	+			+
10	A	M	+	+	+	
11	A	F	+			(a)
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: Fetus numbers 3, 7, 9, and 11 found with identification tags detached, numbers arbitrarily assigned for skeletal exams
(a) - SKELETAL/VERTEBRAE (T11,12): Bifid centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK382F

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	F	+	+	+	
5	A	M	+			+
6C	A	M	+	+	+	
7	A	M	+			(a,b)
8	A	M	+	+	+	
9	A	M	+			(c)
10	A	F	+	+	+	
11	A	F	+			+
12	A	F	+	+	+	
13	A	M	+			+
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 (Anlage): Multiple hypoplastic
(b) - SKELETAL/RIBS (Anlage): Multiple hypoplastic
(c) - SKELETAL/VERTEBRAE (T3-4 Anlage): Hypoplastic centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK423F

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	+	+	+	
6C	A	F	+			+
7	A	M	+	+	+	
8	A	F	+			+
9	A	M	+	+	+	
10	A	F	+			+
11	A	F	+	+	+	
12	A	F	+			+
13	A	M	+	+	+	
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

NOTE: Fetus numbers 2, 4, 6, 8, 10, 12, 14, and 16 found with identification tags detached, numbers arbitrarily assigned for skeletal exams

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK389F

NUMBER OF FETUSES WITH EXTERNAL VARIATIONS: 0 MALFORMATIONS: 0
NUMBER OF FETUSES WITH VISCERAL VARIATIONS: 0 MALFORMATIONS: 1
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	F	+	+	+	
6	A	F	+			+
7	A	F	+	+	+	
8C	A	F	+			+
9	A	F	+	+	+	
10	A	F	+			+
11	A	F	+	+	+	
12	A	F	+			+
13	A	M	+	+	+	
14	A	F	+			+
15	A	F	+	+	+	
16	A	F	+			+
17	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 2, 12, 14, and 16 found with identification tags detached, numbers arbitrarily assigned for skeletal exams
(A) - ABDOMEN/THORAX: Hydronephrosis; Right

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK385F

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	M	+			(a,b)
5	A	F	+	+	+	
6C	A	M	+			+
7	A	M	+	+	+	
8	A	F	+			+
9	A	M	+	+	+	
10	A	M	+			+
11	A	M	+	+	+	
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: Fetus numbers 2, 4, 6, 8, and 10 found with identification tags detached, numbers arbitrarily assigned for skeletal exams
(a) - SKELETAL/RIBS (L1): Rudimentary; Right
(b) - SKELETAL/RIBS (L1): Well-formed; Left

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK424F

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	M	+			+
6*	A	F	+	+	+	
7	A	M	+			+
8	A	M	+	+	+	
9	A	M	+			(a)
10C	A	F	+	+	+	
11	A	M	+			+
12	A	M	+	+	+	
13	A	M	+			(b)
14	A	M	+	+	+	
15	A	M	+			+
16	A	M	+	+	+	
17	A	M	+			+
18	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/RIBS (L1): Rudimentary; Bilateral
(b) - SKELETAL/RIBS (L1): Rudimentary; Left

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK429F

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	M	+			+
7	A	F	+	+	+	
8C	A	F	+			+
9	A	M	+	+	+	
10	A	F	+			+
11	A	M	+	+	+	
12	A	M	+			+
13	A	M	+	+	+	
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 - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK436F

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	+			+
2	A	M	+	+	+	
3	A	M	+			(d,e)
4	A	F	+	+	+	
5	A	M	+			+
6	A	M	+	+	+	
7C	A	F	+			(a,b,c)
8	A	F	+	+	+	
9	A	F	+			(d)
10	A	M	+	+	+	
11	A	M	+			+
12	A	M	+	+	+	
13	A	F	+			+
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: Fetus numbers 5, 7, and 15 found with identification tags detached, numbers arbitrarily assigned for skeletal exams
* - Stunted
(a) - SKELETAL/STERNEBRAE (II): Unossified
(b) - SKELETAL/STERNEBRAE (III-IV): Asymmetric form
(c) - SKELETAL/RIBS (T11 Anlage): Site of extra rudimentary anlage; Bilateral
(d) - SKELETAL/VERTEBRAE (T12): Bifid centra
(e) - SKELETAL/VERTEBRAE (T12 Anlage): Dumbbell centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK441F

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	+			+
9	A	F	+	+	+	
10C	A	F	+			+
11	A	F	+	+	+	
12	A	M	+			+
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 - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK432F

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	M	+	+	+	
3	A	M	+			+
4	A	M	+	+	+	
E						
5	A	F	+			+
6	A	M	+	+	+	
7	A	M	+			(b,c)
8C	A	F	+	+	+	
9	A	M	+			+
10	A	M	+	+	+	
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

NOTE:
(a) - SKELETAL/VERTEBRAE (T5-7 Anlage): Hypoplastic centra
(b) - SKELETAL/VERTEBRAE (T13): Bifid centra
(c) - SKELETAL/VERTEBRAE (T13 Anlage): Dumbbell centra

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK459F

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	+			(a)
5	A	F	+	+	+	
6	A	M	+			+
7	A	F	+	+	+	
8	A	F	+			+
9C	A	M	+	+	+	
10	A	F	+			+
11	A	F	+	+	+	
12	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

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

APPENDIX H - INDIVIDUAL FETAL OBSERVATIONS
(ABBREVIATIONS PRESENTED BELOW OBSERVATIONS)

TARGET DOSE: 20000 MG/M3

ANIMAL NUMBER: IGK460F

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	+	+	+	
5	A	F	+			+
6	A	F	+	+	+	
7	A	M	+			(a)
8C	A	M	+	+	+	
9	A	M	+			+
10	A	M	+	+	+	
11	A	M	+			(b)
12	A	M	+	+	+	
13	A	M	+			+
14	A	M	+	+	+	
15	A	F	+			+
16	A	M	+	+	+	
17	A	F	+			+
18	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 (T10,12): Bifid centra
(b) - SKELETAL/VERTEBRAE (T12): Bifid centra

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. A 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 curve: Figure I-3
Gas chromatograph operating conditions: Table I-2
Mean exposure data: Table I-2
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 the test substance from a gas-tight syringe into a closed loop system of a known air volume (see schematical 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 five 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)

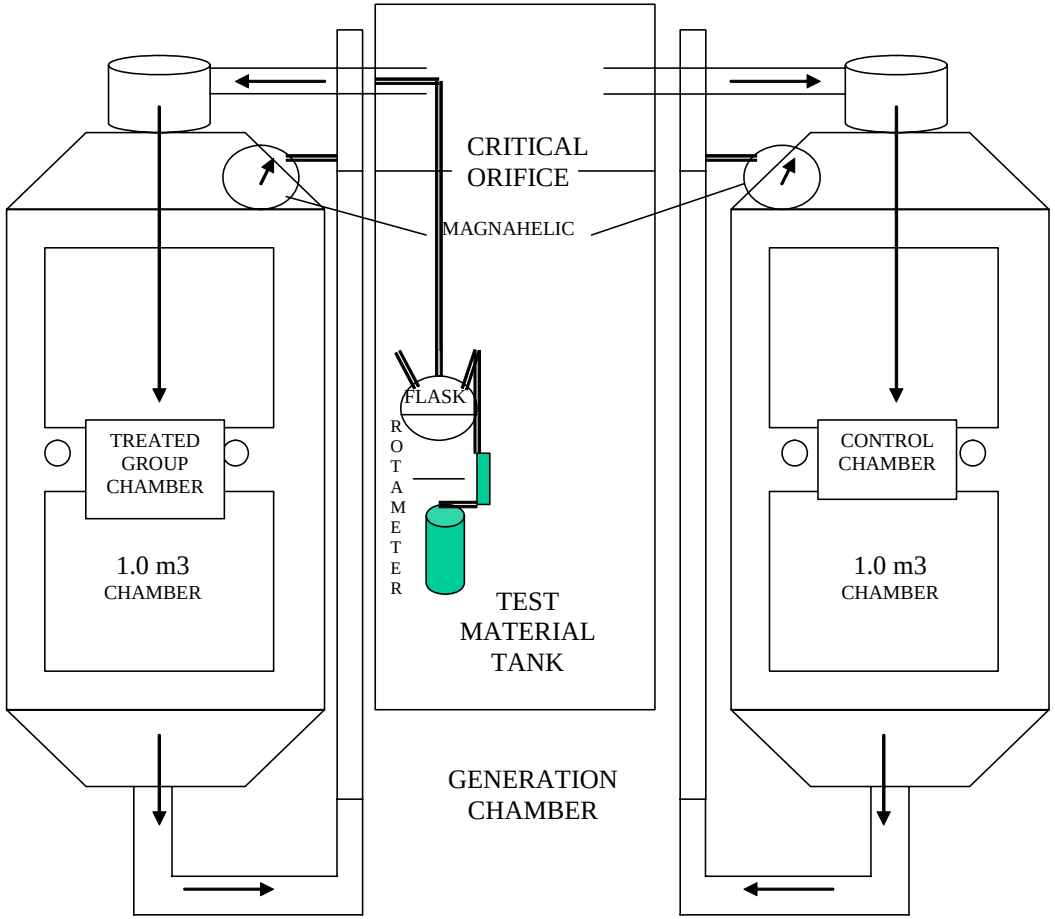
Chamber Homogeneity

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.

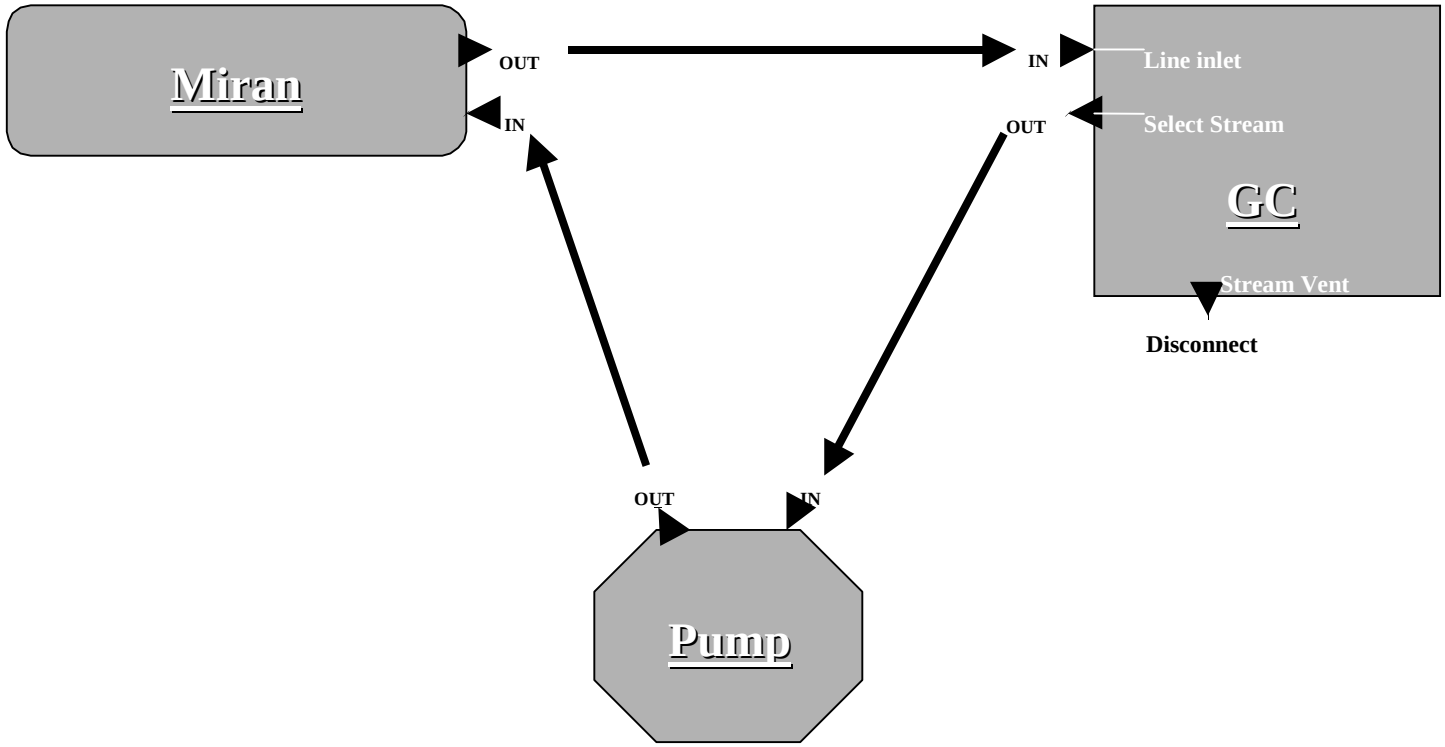
APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

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

TARGET DOSE:	**0 mg/m^3**	**2000 mg/m^3**	**10,000 mg/m^3**	**20,000 mg/m^3**
Target Exposure Concentration (mg/m^3)	0	2000	10000	20000
Mean Analytical Exposure Concentration (mg/m^3)	0	2101	10725	20409
Average Chamber Temperature (^{O}F)	68	71	75	71
Average Chamber Relative Humidity (% RH)	71	65	60	68

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

TABLE I-1 - MEAN EXPOSURE DATA (CONT'D)

TargetDose	0 mg/m^3				2000 mg/m^3				10,000 mg/m^3				20,000 mg/m^3			
	Mean	Nominal	Chamber		Mean	Nominal	Chamber		Mean	Nominal	Chamber		Mean	Nominal	Chamber	
Date	(mg/m^3)	(mg/m^3)	^{o}F	% Rh	(mg/m^3)	(mg/m^3)	^{o}F	% Rh	(mg/m^3)	(mg/m^3)	^{o}F	% Rh	(mg/m^3)	(mg/m^3)	^{o}F	% Rh
25-Aug-01	0	0	66	79	2006	1738	69	75	10815	10321	73	74	19974	18061	69	79
26-Aug-01	0	0	67	80	2119	1772	69	74	10536	9501	72	71	21394	17626	68	75
27-Aug-01	0	0	68	73	2104	1771	70	68	11180	9822	74	66	20478	17408	70	68
28-Aug-01	0	0	68	73	2021	1772	72	67	10302	9336	75	62	20574	16936	70	72
29-Aug-01	0	0	68	75	2148	1722	71	68	10635	9317	75	62	19891	16597	71	64
30-Aug-01	0	0	66	80	2017	1689	71	66	10799	9483	75	60	21344	17625	71	66
31-Aug-01	0	0	68	73	2055	1861	71	67	10898	9622	75	60	20805	17389	70	66
1-Sep-01	0	0	68	72	2100	1793	71	67	10977	9710	73	65	21567	17790	70	66
2-Sep-01	0	0	68	72	2079	1789	72	66	10886	9525	75	62	20577	17444	71	69
3-Sep-01	0	0	70	65	2059	1672	72	66	11161	9271	75	60	20079	18504	71	67
4-Sep-01	0	0	68	73	2236	1864	73	61	11075	9481	76	59	20331	17393	72	67
5-Sep-01	0	0	70	74	2455	1940	71	70	10770	9321	77	59	20325	17475	72	72
6-Sep-01	0	0	70	65	1956	1663	71	67	10810	9364	77	55	19947	17318	73	62
7-Sep-01	0	0	70	73	2007	1657	73	64	12790	8631	77	61	16100	18944	72	69
8-Sep-01	0	0	70	69	2117	1851	73	66	10735	9856	77	61	20613	17764	72	71
9-Sep-01	0	0	69	81	2152	1822	72	72	10363	9817	74	75	19959	18550	71	79
10-Sep-01	0	0	69	67	2144	1817	74	65	10216	9563	77	61	20323	17185	71	68
11-Sep-01	0	0	68	72	2065	1817	72	65	10444	9690	76	57	20802	17553	72	67
12-Sep-01	0	0	68	67	2125	1763	73	60	10203	9368	75	53	20673	17256	71	66
13-Sep-01	0	0	68	72	2094	1699	71	65	10179	9400	76	59	20813	17279	70	70
14-Sep-01	0	0	68	65	2145	1664	71	60	10500	9469	75	54	20160	17467	70	66
15-Sep-01	0	0	67	54	2071	1767	70	48	10104	9431	75	42	20723	17676	69	53
16-Sep-01	0	0	67	58	2054	1718	70	54	10596	9715	73	53	21199	17736	69	58
17-Sep-01	0	0	66	70	2107	1658	71	63	10418	9285	75	51	21167	17392	69	65
MEAN	0	0	68	71	2101	1762	71	65	10725	9512	75	60	20409	17599	71	68
SD	0	0	1.3	6.5	96.6	76.4	1.3	5.8	541.2	305.4	1.4	7.2	1037.6	509.7	1.2	5.7
Min.	0	0	66	54	1956	1657	69	48	10104	8631	72	42	16100	16597	68	53
Max.	0	0	70	81	2455	1940	74	75	12790	10321	77	75	21567	18944	73	79

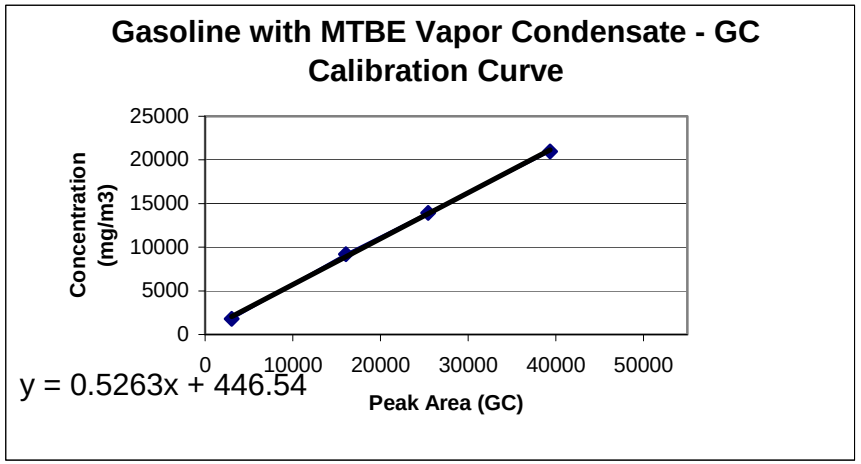
APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

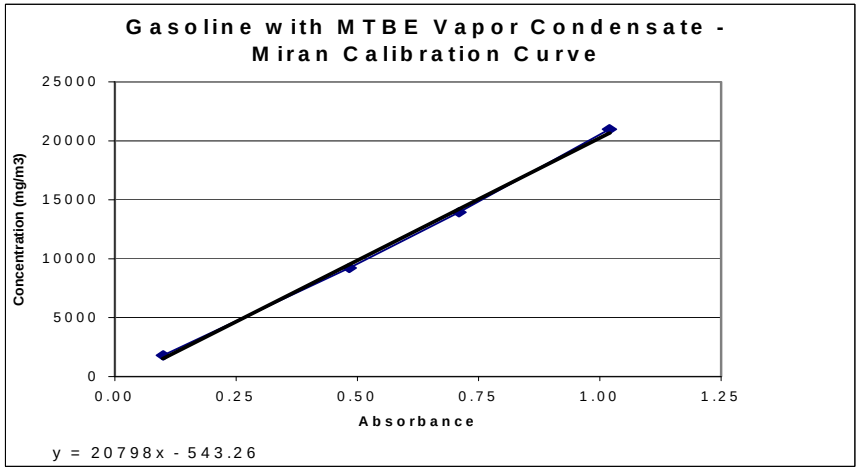
TABLE I-2 - GAS CHROMATOGRAPH OPERATING CONDITIONS

GAS CHROMATOGRAPH:	Hewlett Packard 6890GC
DETECTOR:	Flame Ionization
COLUMN:	Supelco Part # I-1824, Carbopack C 80/100 0.19% Picric Acid
GAS FLOWS (ml/min):	H_2 - 45.0 Air - 450.0 Makeup Gas (Helium) - 30.0
INLET TEMPERATURE:	110^{o}C
INLET FLOW mlc/min)	Helium – 30.9
OVEN TEMPERATURE:	115^{o}C
DETECTOR TEMPERATURE:	250^{o}C
SAMPLE LOOP SIZE:	1 ml
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

TARGET DOSE: 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 (%)
25-Aug-01	1	0	0	66	79
26-Aug-01	2	0	0	67	80
27-Aug-01	3	0	0	68	73
28-Aug-01	4	0	0	68	73
29-Aug-01	5	0	0	68	75
30-Aug-01	6	0	0	66	80
31-Aug-01	7	0	0	68	73
01-Sep-01	8	0	0	68	72
02-Sep-01	9	0	0	68	72
03-Sep-01	10	0	0	70	65
04-Sep-01	11	0	0	68	73
05-Sep-01	12	0	0	70	74
06-Sep-01	13	0	0	70	65
07-Sep-01	14	0	0	70	73
08-Sep-01	15	0	0	70	69

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

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

TARGET DOSE: 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 (%)
09-Sep-01	16	0	0	69	81
10-Sep-01	17	0	0	69	67
11-Sep-01	18	0	0	68	72
12-Sep-01	19	0	0	68	67
13-Sep-01	20	0	0	68	72
14-Sep-01	21	0	0	68	65
15-Sep-01	22	0	0	67	54
16-Sep-01	23	0	0	67	58
17-Sep-01	24	0	0	66	70
Mean		**0**	**0**	**68**	**71**
Std. Dev.		**0**	**0**	**1.3**	**6.5**

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

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

TARGET DOSE: 2000 mg/m^3

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 (%)
25-Aug-01	1	1738	1937	2017	1903	1902	2170	2107	2006	69	75
26-Aug-01	2	1772	2262	2112	2113	2122	2050	2056	2119	69	74
27-Aug-01	3	1771	2098	2256	2244	1926	2010	2087	2104	70	68
28-Aug-01	4	1772	2036	1948	1916	1921	2070	2234	2021	72	67
29-Aug-01	5	1722	2161	2143	2022	2163	2225	2175	2148	71	68
30-Aug-01	6	1689	1959	1873	1827	2104	2162	2174	2017	71	66
31-Aug-01	7	1861	1893	2137	2231	2200	1908	1961	2055	71	67
01-Sep-01	8	1793	2124	2086	1875	2218	2187	2111	2100	71	67
02-Sep-01	9	1789	2061	1762	2186	2120	2239	2106	2079	72	66
03-Sep-01	10	1672	2353	2026	1874	2156	2043	1901	2059	72	66
04-Sep-01	11	1864	2366	1984	2403	2545	1912	2208	2236	73	61
05-Sep-01	12	1940	2447	2162	1951	2344	3897	1929	2455	71	70
06-Sep-01	13	1663	2109	2216	1951	1913	2035	1514	1956	71	67
07-Sep-01	14	1657	2232	2046	1892	2085	1726	2062	2007	73	64
08-Sep-01	15	1851	2103	2065	2058	2167	2183	2123	2117	73	66

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

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

TARGET DOSE: 2000 mg/m^3

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 (%)
09-Sep-01	16	1822	2205	1927	2292	2251	2107	2128	2152	72	72
10-Sep-01	17	1817	2328	2202	2113	2057	1962	2204	2144	74	65
11-Sep-01	18	1817	1885	2131	2121	2094	1994	2164	2065	72	65
12-Sep-01	19	1763	2135	2222	1990	2171	2151	2083	2125	73	60
13-Sep-01	20	1699	2179	2093	2061	2128	2004	2099	2094	71	65
14-Sep-01	21	1664	2248	1996	2192	2243	2259	1934	2145	71	60
15-Sep-01	22	1767	a	1991	1980	2150	2084	2148	2071	70	48
16-Sep-01	23	1718	19907[b]	1997	1871	2205	2126	2072	2054	70	54
17-Sep-01	24	1658	2018	2070	2099	2194	2087	2173	2107	71	63
MEAN		1762							2101	71	65
Std. Dev.		76.4							96.6	1.3	5.8

a - GC sequence of analysis did not initiate; analysis not performed.
b - Apparent bad analytical value; value not used for mean calculations.

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

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

TARGET DOSE: 10,000 mg/m^3

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 (%)
25-Aug-01	1	10321	10643	10652	10770	10960	11073	10791	10815	73	74
26-Aug-01	2	9501	11119	10656	10327	10396	10116	10600	10536	72	71
27-Aug-01	3	9822	11698	11979	11291	11017	10643	10453	11180	74	66
28-Aug-01	4	9336	11328	9952	10089	9630	10477	10339	10302	75	62
29-Aug-01	5	9317	10568	10689	10604	10788	10594	10568	10635	75	62
30-Aug-01	6	9483	11082	10726	10161	10776	11174	10876	10799	75	60
31-Aug-01	7	9622	10820	10222	10377	12992	10359	10620	10898	75	60
01-Sep-01	8	9710	11538	11079	11226	10803	10644	10570	10977	73	65
02-Sep-01	9	9525	11109	10639	10830	10550	11005	11183	10886	75	62
03-Sep-01	10	9271	11181	11652	11305	10600	11509	10718	11161	75	60
04-Sep-01	11	9481	11500	11033	10986	11119	10903	10910	11075	76	59
05-Sep-01	12	9321	11246	10560	10471	10880	10584	10880	10770	77	59
06-Sep-01	13	9364	10507	10675	11223	11114	10814	10529	10810	77	55
07-Sep-01	14	8631	11029	11916	12103	12267	11390	18035	12790	77	61
08-Sep-01	15	9856	10511	10565	10707	10893	10856	10879	10735	77	61

a - GC sequence of analysis did not initiate; analysis not performed.
b - Apparent bad analytical value; value not used for mean calculations.

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

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

TARGET DOSE: 10,000 mg/m^3

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 (%)
09-Sep-01	16	9817	10597	10368	10635	10290	10149	10141	10363	74	75
10-Sep-01	17	9563	10462	10098	10472	10255	10086	9922	10216	77	61
11-Sep-01	18	9690	10535	10132	10503	10667	10520	10304	10444	76	57
12-Sep-01	19	9368	10451	10314	10254	10122	10060	10020	10203	75	53
13-Sep-01	20	9400	10629	10225	10136	10183	10120	9783	10179	76	59
14-Sep-01	21	9469	10727	11076	10278	10189	10408	10319	10500	75	54
15-Sep-01	22	9431	a	10285	9897	10064	9767	10508	10104	75	42
16-Sep-01	23	9715	10697	10600	10281	11431	10368	10202	10596	73	53
17-Sep-01	24	9285	10856	10372	9325	10759	10711	10485	10418	75	51
MEAN		9512							10725	75	60
Std. Dev.		305.4							541.2	1.4	7.2

a - GC sequence of analysis did not initiate; analysis not performed.

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

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

TARGET DOSE: 20,000 mg/m^3

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 (%)
25-Aug-01	1	18061	19868	19461	20271	20283	20309	19653	19974	69	79
26-Aug-01	2	17626	23097	22394	21600	21011	20222	20044	21394	68	75
27-Aug-01	3	17408	21699	21567	20643	20020	19646	19292	20478	70	68
28-Aug-01	4	16936	21872	20471	20539	20384	20143	20032	20574	70	72
29-Aug-01	5	16597	18943	20297	20017	20153	20025	19910	19891	71	64
30-Aug-01	6	17625	21839	21146	21403	21594	21467	20615	21344	71	66
31-Aug-01	7	17389	21666	20515	20484	21164	20477	20521	20805	70	66
01-Sep-01	8	17790	22140	21966	22805	21074	20806	20611	21567	70	66
02-Sep-01	9	17444	21520	20842	20318	19846	20500	20434	20577	71	69
03-Sep-01	10	18504	20113	19656	19471	20672	20338	20223	20079	71	67
04-Sep-01	11	17393	20508	19831	19900	20160	20807	20783	20331	72	67
05-Sep-01	12	17475	20571	19841	20558	20469	20354	20158	20325	72	72
06-Sep-01	13	17318	19505	19911	20328	19960	19812	20169	19947	73	62
07-Sep-01	14	18944	17807[a]	18615[a]	15879[a]	12193[a]	16752[a]	15354[a]	16100	72	69
08-Sep-01	15	17764	19868	20710	20643	20828	20839	20793	20613	72	71

a - Suspected problem with the dip tube in the test substance tank.

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

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

TARGET DOSE: 20,000 mg/m^3

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 (%)
09-Sep-01	16	18550	20202	20347	20062	19854	19722	19570	19959	71	79
10-Sep-01	17	17185	20353	19638	19485	20976	20839	20650	20323	71	68
11-Sep-01	18	17553	20794	20304	21554	21147	20809	20205	20802	72	67
12-Sep-01	19	17256	21388	20902	20664	21142	21028	18912	20673	71	66
13-Sep-01	20	17279	21690	21449	21014	20369	20107	20252	20813	70	70
14-Sep-01	21	17467	20583	19833	19420	20522	20324	20277	20160	70	66
15-Sep-01	22	17676	a	22062	20468	20380	20249	20455	20723	69	53
16-Sep-01	23	17736	20566	21526	21165	20923	21772	21242	21199	69	58
17-Sep-01	24	17392	21836	21632	21212	20810	20732	20778	21167	69	65
MEAN		17599							20409	71	68
Std. Dev.		509.7							1037.6	1.2	5.7

a - GC sequence of analysis did not initiate; analysis not performed.

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	2119	10397	19313
Left Top Front	2186	10716	20118
Left Middle Back	2099	11714	20556
Left Middle Front	2063	10957	21646
Left Bottom Back	2189	10652	19226
Left Bottom Front	2099	10603	19814
Right Top Back	2046	10620	19858
Right Top Front	2083	10573	21170
Right Middle Back	2200	10782	19590
Right Middle Front	2158	10872	21415
Right Bottom Back	2033	10627	20603
Right Bottom Front	2022	10794	20788
MEAN	2108	10776	20341
SD	62.8	330.6	813.7
%CV	3.0	3.1	4.0
Minimum	2022	10397	19226
Maximum	2200	11714	21646

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 approximately 10-30 minutes apart.

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)

TABLE I-5 LIGHTING, NOISE, AND OXYGEN LEVELS

Environmental Conditions				
	25-August-01	**4-September-01**	**14-September-01**	**17-September-01**
Light Intensity: (fc)				
Room PE103, in a cage 3 feet above the floor.	17.8	17.4	7.8	43.6
Center of room PE102 3 feet above the floor.	39.0	38.6	41.5	41.4
Center of room PE110 3 feet above the floor.	38.0	38.0	39.2	44.3
Noise level: (db)				
1m - 1: Door open	78.2	78.4	78.8	76.2
1m - 1: Through port	79.1	78.7	79.5	77.3
1m - 2: Door open	77.1	76.8	76.5	72.8
1m - 2: Through port	79.6	79.1	78.7	76.2
1m - 3: Door open	78.8	78.1	79.0	79.1
1m - 3: Through port	80.0	81.2	79.8	78.2
1m - 4: Door open	76.6	77.2	74.5	77.4
1m - 4: Through port	79.8	77.4	75.5	77.8
O_2 Level: (%) (Reading upon removal)	No Alarm	No Alarm	No Alarms	No Alarms
1m - 1	20.8	20.7	20.9	20.8
1m - 2	20.8	20.7	20.8	20.8
1m - 3	20.8	20.7	20.8	20.8
1m - 4	20.8	20.7	20.8	20.8

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 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	0	0
3	6.80	0	0
2	17.0	0	0
1	28.0	0	0
		TOTAL =0	
PARTICLE CONCENTRATION = 0 MG/M^3			

PARTICLE SIZE DETERMINED WITH A SIERRA SERIES 210 CASCADE IMPACTOR

CONDITIONS:
SAMPLE FLOWRATE (Liters/Minute): 3 SAMPLE DURATION (Minutes): 3

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 (SECOND DETERMINATION)

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	0	0
2	17.0	0	0
1	28.0	0	0
		TOTAL =0	

CONCENTRATION OF PARTICLES = 0 MG/M^3

PARTICLE SIZE DETERMINED WITH A SIERRA SERIES 210 CASCADE IMPACTOR

CONDITIONS:
SAMPLE FLOWRATE (Liters/Minute): 4 SAMPLE DURATION (Minutes): 15

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

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)
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**
25-Aug-01	***64***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***
26-Aug-01	***64***	***64***	***66***	***66***	68	68	68	68	68	68	68	68	68
27-Aug-01	***66***	68	68	68	68	68	68	68	68	68	68	68	68
28-Aug-01	***66***	68	68	68	68	68	68	68	68	68	68	68	68
29-Aug-01	***67***	68	68	68	68	68	68	68	68	68	68	68	68
30-Aug-01	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***
31-Aug-01	***66***	***66***	68	68	68	68	68	68	68	68	68	68	68
1-Sep-01	***66***	***66***	***66***	68	68	68	68	68	68	68	68	68	68
2-Sep-01	68	68	68	68	68	68	68	68	68	68	68	68	68
3-Sep-01	68	69	70	70	70	70	70	70	70	70	70	70	70
4-Sep-01	66	***66***	68	68	68	68	68	68	68	70	70	70	70
5-Sep-01	68	68	68	70	70	70	70	70	70	70	70	70	70
6-Sep-01	68	70	70	70	70	70	70	70	70	70	70	70	70
7-Sep-01	68	70	70	70	70	70	70	70	70	70	70	70	70
8-Sep-01	68	68	70	70	70	70	70	70	70	70	70	70	70
9-Sep-01	***67***	***67***	67	67	69	69	69	70	70	70	70	70	70
10-Sep-01	***66***	***66***	68	70	70	70	70	70	70	70	70	70	70
11-Sep-01	68	68	68	68	68	68	68	68	68	68	68	68	68
12-Sep-01	68	68	68	68	68	68	68	68	68	68	68	68	68
13-Sep-01	68	68	68	68	68	68	68	68	68	68	68	68	68
14-Sep-01	***66***	68	68	68	68	68	68	68	68	68	68	68	68
15-Sep-01	***64***	***66***	***66***	***66***	***66***	68	68	68	68	68	68	68	68
16-Sep-01	***65***	***66***	***66***	***66***	***66***	***66***	68	68	68	68	68	68	68
17-Sep-01	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)
TABLE I-7 – CHAMBER TEMPERATURES AND HUMIDITIES
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**
25-Aug-01	***66***	68	69	70	70	70	70	70	70	70	70	70	70
26-Aug-01	***65***	***65***	70	70	70	70	70	70	70	70	70	70	70
27-Aug-01	69	70	70	70	70	70	70	70	70	70	70	70	70
28-Aug-01	68	70	72	72	72	72	72	72	72	72	72	72	72
29-Aug-01	68	70	70	70	72	72	72	72	72	72	72	72	72
30-Aug-01	68	70	70	70	70	70	70	72	72	72	72	72	72
31-Aug-01	66	70	70	72	72	72	72	72	72	72	72	72	72
1-Sep-01	68	68	68	70	72	72	72	72	72	72	72	72	72
2-Sep-01	70	70	72	72	72	72	72	72	72	72	72	72	72
3-Sep-01	70	72	72	72	72	72	73	73	73	73	73	73	73
4-Sep-01	68	72	72	72	74	74	74	74	74	74	74	74	74
5-Sep-01	70	70	70	70	70	70	70	70	72	72	74	74	74
6-Sep-01	70	70	70	70	72	72	72	72	72	72	72	72	72
7-Sep-01	70	70	72	72	72	74	74	74	74	74	74	74	74
8-Sep-01	70	70	73	73	73	73	73	73	73	73	73	73	73
9-Sep-01	68	68	72	72	72	72	72	74	74	74	74	74	74
10-Sep-01	70	72	74	74	74	74	74	74	74	74	74	74	74
11-Sep-01	70	70	72	72	72	72	72	72	72	72	72	74	74
12-Sep-01	70	72	72	72	72	72	72	74	74	74	74	74	74
13-Sep-01	70	70	70	70	70	72	72	72	72	72	72	72	72
14-Sep-01	***66***	70	70	70	70	72	72	72	72	72	72	72	72
15-Sep-01	***66***	68	70	70	70	70	70	70	70	70	70	70	70
16-Sep-01	***67***	68	70	70	70	70	71	71	71	71	71	71	71
17-Sep-01	68	70	70	70	70	70	72	72	72	72	72	72	72

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)
TABLE I-7 – CHAMBER TEMPERATURES AND HUMIDITIES
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**
25-Aug-01	***66***	70	72	72	72	74	74	74	74	74	74	74	74
26-Aug-01	***66***	***66***	68	73	73	74	74	74	74	74	74	74	74
27-Aug-01	72	74	74	74	74	74	74	74	74	74	74	74	74
28-Aug-01	70	72	72	76	76	76	76	76	76	76	76	76	76
29-Aug-01	70	74	74	74	76	76	76	76	76	76	76	76	76
30-Aug-01	70	74	74	76	76	76	76	76	76	76	76	76	76
31-Aug-01	68	72	74	74	76	76	76	76	76	76	76	76	76
1-Sep-01	***66***	***66***	***66***	71	76	76	76	76	76	76	76	76	76
2-Sep-01	70	72	74	76	76	76	76	76	76	76	76	76	76
3-Sep-01	70	74	74	74	74	76	76	76	76	76	76	76	76
4-Sep-01	68	72	76	76	76	76	76	76	76	78	78	78	78
5-Sep-01	72	74	76	76	78	78	78	78	78	78	78	78	78
6-Sep-01	70	75	76	76	78	78	78	78	78	78	78	78	78
7-Sep-01	72	75	76	76	76	78	78	78	78	78	78	78	78
8-Sep-01	72	76	76	78	78	78	78	78	78	78	78	78	78
9-Sep-01	68	68	70	70	72	72	72	75	78	78	78	78	78
10-Sep-01	70	74	76	76	78	78	78	78	78	78	78	78	78
11-Sep-01	74	76	76	76	76	76	76	76	76	78	78	78	78
12-Sep-01	70	74	76	76	76	76	76	76	76	76	76	76	76
13-Sep-01	72	74	76	76	76	76	76	76	76	76	76	76	76
14-Sep-01	70	70	74	76	76	76	76	76	76	76	76	76	76
15-Sep-01	68	74	74	74	76	76	76	76	76	76	76	76	76
16-Sep-01	70	73	72	72	72	72	74	74	74	74	74	74	74
17-Sep-01	72	74	76	76	76	76	76	76	76	76	76	74	76

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)
TABLE I-7 – CHAMBER TEMPERATURES AND HUMIDITIES
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**
25-Aug-01	***64***	***66***	68	69	69	70	70	70	70	70	70	70	70
26-Aug-01	***64***	***64***	***64***	68	68	68	68	70	70	70	70	70	70
27-Aug-01	69	70	70	70	70	70	70	70	70	70	70	70	70
28-Aug-01	68	70	70	70	70	70	70	70	70	70	70	70	70
29-Aug-01	***67***	70	70	72	72	72	72	72	72	72	72	72	72
30-Aug-01	68	68	70	70	70	70	72	72	72	72	72	72	72
31-Aug-01	***66***	68	70	70	70	70	70	70	70	72	72	72	72
1-Sep-01	***66***	***66***	***66***	70	72	72	72	72	72	72	72	72	72
2-Sep-01	***66***	68	70	70	72	72	72	72	72	72	72	72	72
3-Sep-01	68	70	70	70	70	72	72	72	72	72	72	72	72
4-Sep-01	66	70	72	72	72	72	72	72	72	74	74	74	74
5-Sep-01	68	70	70	72	72	72	72	72	74	74	74	74	74
6-Sep-01	68	70	72	72	74	74	74	74	74	74	74	74	74
7-Sep-01	69	71	71	72	72	72	72	72	72	72	72	74	74
8-Sep-01	68	71	72	72	72	72	72	72	72	72	72	72	72
9-Sep-01	***67***	68	70	70	70	70	70	72	72	72	72	72	72
10-Sep-01	***67***	68	70	72	72	72	72	72	72	72	72	72	72
11-Sep-01	70	70	70	72	72	72	72	72	72	72	72	72	72
12-Sep-01	***66***	68	70	70	70	72	72	72	72	72	72	72	72
13-Sep-01	68	70	70	70	70	70	70	70	70	72	72	72	72
14-Sep-01	68	68	70	70	70	70	70	70	70	70	70	70	70
15-Sep-01	66	68	68	68	68	70	70	70	70	70	70	70	70
16-Sep-01	66	68	68	68	68	68	70	70	70	70	70	70	70
17-Sep-01	66	68	68	70	70	70	70	70	70	70	70	70	70

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)
TABLE I-7 – CHAMBER TEMPERATURES AND HUMIDITIES
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**
25-Aug-01	***80***	***75***	***75***	***80***	***80***	***80***	***80***	***80***	***80***	***80***	***80***	***80***	***80***
26-Aug-01	***80***	***80***	***80***	***80***	***80***	***80***	***80***	***80***	***80***	***80***	***80***	***80***	***80***
27-Aug-01	***80***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***
28-Aug-01	***80***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***
29-Aug-01	***85***	***81***	***81***	***81***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***
30-Aug-01	***80***	***80***	***80***	***80***	***80***	***80***	***80***	***80***	***80***	***80***	***80***	***80***	***80***
31-Aug-01	***71***	***80***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***
1-Sep-01	***71***	***71***	***71***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***
2-Sep-01	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***
3-Sep-01	***67***	***68***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***
4-Sep-01	***80***	***80***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***
5-Sep-01	***81***	***81***	***81***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***
6-Sep-01	***72***	***68***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***
7-Sep-01	***81***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***
8-Sep-01	***76***	***76***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***
9-Sep-01	***95***	***95***	***95***	***95***	***81***	***81***	***81***	***72***	***72***	***72***	***72***	***72***	***72***
10-Sep-01	***80***	***80***	***72***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***
11-Sep-01	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***
12-Sep-01	***67***	***67***	***67***	***67***	***67***	***67***	***67***	***67***	***67***	***67***	***67***	***67***	***67***
13-Sep-01	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***
14-Sep-01	***71***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***
15-Sep-01	56	53	53	53	53	55	55	55	55	55	55	55	55
16-Sep-01	***61***	***62***	***62***	***62***	***62***	***62***	55	55	55	55	55	55	55
17-Sep-01	***62***	***62***	***71***	***71***	***71***	***71***	***71***	***71***	***71***	***71***	***71***	***71***	***71***

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)
TABLE I-7 – CHAMBER TEMPERATURES AND HUMIDITIES
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**
25-Aug-01	***75***	***72***	***72***	***72***	***72***	***77***	***77***	***77***	***77***	***77***	***77***	***77***	***77***
26-Aug-01	***85***	***85***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***
27-Aug-01	***72***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***
28-Aug-01	***81***	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
29-Aug-01	***81***	***72***	***72***	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
30-Aug-01	***72***	***64***	***64***	***64***	***64***	***64***	***72***	***65***	***65***	***65***	***65***	***65***	***65***
31-Aug-01	***80***	***64***	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
1-Sep-01	***72***	***72***	***72***	***68***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
2-Sep-01	***72***	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
3-Sep-01	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
4-Sep-01	***81***	***65***	***65***	***65***	***58***	***58***	***58***	***58***	***58***	***58***	***58***	***58***	***58***
5-Sep-01	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***65***	***65***	***66***	***66***	***66***
6-Sep-01	***68***	***72***	***72***	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
7-Sep-01	***72***	***72***	***65***	***65***	***65***	***62***	***62***	***62***	***62***	***62***	***62***	***62***	***62***
8-Sep-01	***72***	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
9-Sep-01	***90***	***90***	***73***	***73***	***73***	***73***	***73***	***66***	***66***	***66***	***66***	***66***	***66***
10-Sep-01	***72***	***69***	***58***	***58***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***
11-Sep-01	***72***	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	58	58
12-Sep-01	***64***	57	57	57	***65***	***65***	***65***	58	58	58	58	58	58
13-Sep-01	***64***	***64***	***64***	***64***	***64***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
14-Sep-01	***71***	***64***	***64***	***64***	***64***	57	57	57	57	57	57	57	57
15-Sep-01	53	47	48	48	48	48	48	48	48	48	48	48	48
16-Sep-01	58	55	56	56	56	56	53	53	53	53	53	53	53
17-Sep-01	***63***	56	56	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)
TABLE I-7 – CHAMBER TEMPERATURES AND HUMIDITIES
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**
25-Aug-01	***80***	***72***	***69***	***73***	***73***	***74***	***74***	***74***	***74***	***74***	***74***	***74***	***74***
26-Aug-01	***80***	***80***	***81***	***69***	***69***	***74***	***74***	***66***	***66***	***66***	***66***	***66***	***66***
27-Aug-01	***69***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***	***66***
28-Aug-01	***72***	***73***	***73***	59	59	59	59	59	59	59	59	59	59
29-Aug-01	***72***	***66***	***66***	***66***	59	59	59	59	59	59	59	59	59
30-Aug-01	***72***	58	58	59	59	59	59	59	59	59	59	59	59
31-Aug-01	***72***	***65***	58	58	59	59	59	59	59	59	59	59	59
1-Sep-01	***80***	***80***	***80***	***69***	59	59	59	59	59	59	59	59	59
2-Sep-01	***72***	***73***	***66***	59	59	59	59	59	59	59	59	59	59
3-Sep-01	***64***	***62***	***62***	***62***	***62***	59	59	59	59	59	59	59	59
4-Sep-01	***81***	***65***	59	59	59	59	59	59	59	53	53	53	53
5-Sep-01	***65***	***66***	59	59	53	53	53	60	60	60	60	60	60
6-Sep-01	***64***	***62***	59	59	53	53	53	53	53	53	53	53	53
7-Sep-01	***73***	***62***	59	59	59	60	60	60	60	60	60	60	60
8-Sep-01	***69***	59	59	60	60	60	60	60	60	60	60	60	60
9-Sep-01	***95***	***90***	***90***	***81***	***82***	***82***	***82***	***70***	60	60	60	60	60
10-Sep-01	***72***	***66***	59	59	60	60	60	60	60	60	60	60	60
11-Sep-01	58	59	59	59	59	59	59	59	59	53	53	53	53
12-Sep-01	***64***	58	52	52	52	52	52	52	52	52	52	52	52
13-Sep-01	***65***	58	52	59	59	59	59	59	59	59	59	59	59
14-Sep-01	***64***	***64***	58	52	52	52	52	52	52	52	52	52	52
15-Sep-01	47	44	44	44	38	42	42	42	42	42	38	38	38
16-Sep-01	52	47	57	57	57	57	51	51	51	51	51	51	51
17-Sep-01	50	48	52	52	52	52	52	52	52	52	52	48	45

APPENDIX I - INHALATION EXPOSURE DATA (CONT'D)
TABLE I-7 – CHAMBER TEMPERATURES AND HUMIDITIES
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**
25-Aug-01	***80***	***80***	***72***	***76***	***76***	***81***	***81***	***81***	***81***	***81***	***81***	***81***	***81***
26-Aug-01	***80***	***80***	***80***	***76***	***76***	***76***	***76***	***72***	***72***	***72***	***72***	***72***	***72***
27-Aug-01	***72***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***	***68***
28-Aug-01	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***
29-Aug-01	***76***	***72***	***72***	***61***	***61***	***61***	***61***	***61***	***61***	***61***	***61***	***61***	***61***
30-Aug-01	***72***	***72***	***64***	***64***	***64***	***64***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
31-Aug-01	***71***	***81***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***65***	***65***	***65***	***65***
1-Sep-01	***71***	***71***	***71***	***64***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
2-Sep-01	***80***	***90***	***72***	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
3-Sep-01	***67***	***72***	***72***	***72***	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
4-Sep-01	***80***	***81***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	58	58	***66***	***66***
5-Sep-01	***81***	***81***	***81***	***73***	***73***	***73***	***73***	***73***	***66***	***66***	***66***	***66***	***66***
6-Sep-01	***72***	***81***	***65***	***65***	58	58	58	58	58	58	58	58	58
7-Sep-01	***76***	***77***	***73***	***69***	***69***	***69***	***69***	***69***	***69***	***69***	***69***	***62***	***62***
8-Sep-01	***81***	***77***	***69***	***69***	***69***	***69***	***69***	***69***	***69***	***69***	***69***	***69***	***69***
9-Sep-01	***95***	***90***	***81***	***81***	***81***	***81***	***81***	***73***	***73***	***73***	***73***	***73***	***73***
10-Sep-01	***76***	***81***	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
11-Sep-01	***72***	***72***	***72***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
12-Sep-01	***71***	***81***	***64***	***64***	***64***	***65***	***65***	***65***	***65***	***65***	***65***	***65***	***65***
13-Sep-01	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***65***	***65***	***65***	***65***
14-Sep-01	***80***	***72***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***
15-Sep-01	53	55	55	55	55	52	52	52	52	52	52	52	52
16-Sep-01	***62***	59	***64***	***64***	***64***	***64***	53	53	53	53	53	53	53
17-Sep-01	***71***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***	***64***

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 carbon disulfide (CS_2) for at least 30 minutes. Aliquots were analyzed by GC-FID.

STANDARDIZATION

A standard mixture was prepared in (CS_2) containing each of the 18 target hydrocarbons plus MTBE 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. Since MTBE coelutes with the hydrocarbon 2,3 dimethylbutane, a distribution factor was applied to the coeluting pair to calculate the final hydrocarbon - oxygenate distribution. This distribution factor (96% MTBE: 4% 2,3 dimethylbutane) was determined as part of the EMBSI neat test substance characterization study 167490.

CHARACTERIZATION

Characterization of the neat MRD-00-713 (gasoline vapor condensate with MTBE) 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 (CONT'D)

INSTRUMENT CONDITIONS FOR MRD-00-713 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
Detector Type (range)	FID (2^4)
Detector Temperature; (gas flows)	225°C (H_2 45 mL/min; Air 450 mL/min)
Injector Temperature (Split ratio)	200°C (split injection ~5:1)
Injection Volume	1.0 µL
Analytical Column	Supleco Petrocol DH 150 fused silica capillary column (150m x 0.25µm; 1.0µm 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
Carrier Gas Program	65 psi (He)

RESULTS

Hydrocarbon characterization was performed on an area percent basis for each of the 18 target hydrocarbons and MTBE oxygenate. Results are listed in Table J-1.

Analysis of the 20,000 mg/m^3 (high) exposure level sample taken during study Week 2 (4 September 01) detected none of the target hydrocarbons and was likely due to a sampling problem. For the remainder of the samples, the hydrocarbon and MTBE distribution measured from the chamber characterization samples was in good agreement with the distribution measured from characterization of neat MRD-00-713 performed as part of EMBSI study 167490.

Daniel Letinski, Analytical Chemist — 21 Aug 09 Date

APPENDIX J- ANALYTICAL CHEMISTRY REPORT (CONT'D)

TABLE J-1 - CHAMBER CHARACTERIZATION - HYDROCARBON DISTRIBUTION

CHAMBER CHARACTERIZATION - SORBENT TUBES
HYDROCARBON DISTRIBUTION

Sample Date	28-Aug-01			4-Sep-01			11-Sep-01			17-Sep-01		
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	1.8	1.8	1.7	1.9	2.0		1.7	1.7	2.0	1.9	1.8	2.0
n-butane	9.9	9.7	9.7	10.0	10.6		9.3	9.5	10.4	10.1	9.7	10.3
isopentane	31.9	31.7	31.5	32.3	31.7		31.2	31.5	31.6	31.9	31.6	31.7
n-pentane	9.0	9.1	9.1	9.2	9.0		8.9	9.1	9.1	9.0	9.2	9.0
trans-2-pentene	1.9	1.9	1.9	1.9	1.9	No	1.9	1.9	1.9	1.9	1.9	1.9
2-methyl-2-butene	2.6	2.5	2.5	2.6	2.5		2.7	2.6	2.6	2.6	2.8	2.4
MtBE	20.9	21.7	22.1	20.1	21.3		22.0	21.9	21.3	20.8	21.8	21.6
2,3-dimethylbutane	0.9	0.9	0.9	0.8	0.9	Target	0.9	0.9	0.9	0.9	0.9	0.9
2-methylpentane	4.8	4.8	4.9	4.9	4.7		4.9	4.9	4.7	4.8	4.8	4.7
3-methylpentane	2.8	2.8	2.8	2.8	2.7		2.8	2.8	2.7	2.8	2.8	2.7
n-hexane	2.2	2.3	2.3	2.3	2.2	HCs	2.3	2.3	2.2	2.2	2.2	2.2
methylcyclopentane	1.2	1.2	1.2	1.2	1.3		1.2	1.2	1.2	1.2	1.2	1.2
2,4-dimethylpentane	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
benzene	2.1	1.7	1.7	2.1	1.6	Detected	2.1	1.7	1.6	2.1	1.6	1.7
2-methylhexane	1.0	1.1	1.1	1.1	1.0		1.1	1.1	1.0	1.1	1.0	1.0
2,3-dimethylpentane	1.1	1.1	1.1	1.1	1.1		1.1	1.1	1.1	1.1	1.1	1.1
3-methylhexane	1.3	1.3	1.2	1.2	1.2		1.3	1.3	1.3	1.2	1.2	1.2
isooctane	1.3	1.4	1.3	1.4	1.3		1.4	1.4	1.4	1.3	1.3	1.3
toluene	2.2	2.2	2.2	2.2	2.2		2.4	2.2	2.2	2.3	2.2	2.2
Sum	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 – STATISTICIANS REPORT

Analysis Of Fetal Data From A Whole-Body Inhalation Developmental Toxicity Study In Rats With Baseline Gasoline with MTBE Vapor Condensate (MRD-00-713)

This report details the statistical analysis of fetal body weight and anomaly data from ExxonMobil Study 171334. The study was conducted to evaluate the potential developmental toxicity of Baseline Gasoline with MTBE Vapor Condensate (GMVC). GMVC was administered via whole-body inhalation exposure to pregnant rats during the period of major organogenesis and fetal growth. GMVC was administered by whole-body inhalation exposure to 24 confirmed-mated Crl: CD(SD)IGS BR female rats at target doses 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. The model considered dose group, litter size, and fetal sex as explanatory variables. When 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 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 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 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. There were four 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
Malformations for All Fetuses
Malformations for Alive Fetuses
Variations for All Fetuses
Variations for Alive Fetuses

APPENDIX K – STATISTICIANS REPORT (CONT'D)

Table I lists the four categories and corresponding sub-categories. Within the skeletal category several subcategories were combined into a group of similar anomalies. For example in the Category Skeletal the separate sub-categories of "SKELETAL/VERTEBRAE (CE): Extra presacral vertebrae" and "SKELETAL/VERTEBRAE (L): Extra presacral vertebrae" were combined into a sub-category "SKELETAL/VERTEBRAE: Extra presacral vertebrae(combined)". 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.

Table I
Anomaly Categories and Corresponding Sub-categories

Category	Sub-Category	Sub-categories combined
Head	1- HEAD: Anophthalmia	
	2- HEAD: Cerebral ventricle abnormalities	
	3- HEAD: Malpositioned nasal septum	
	4- HEAD: Retina fold; Right	
External	1- EXTERNAL: Cleft palate (confirmed internally)	
	2- EXTERNAL: Fetus discolored red	
	3- EXTERNAL: Filamentous tail	
	4- EXTERNAL: Malrotated paw	
	5- EXTERNAL: Microstomia	
Abdomen/Thorax	1- ABDOMEN/THORAX: Hydronephrosis	
	2- ABDOMEN/THORAX: Hydroureter; Left	

APPENDIX K – STATISTICIANS REPORT (CONT'D)

Category	Sub-Category	Sub-categories combined
Skeletal	1- SKELETAL/RIBS (Anlage): Multiple hypoplastic	
	2- SKELETAL/RIBS (CE8): Well-formed; Right	
	3- SKELETAL/RIBS (L1): Rudimentary lumbar ribs	
	4- SKELETAL/RIBS (L1): Well-formed; Left	
	5- SKELETAL/RIBS (T13): Short Last; Bilateral	
	6- SKELETAL/RIBS: Rib anlage supernumary ossification site	
	7- SKELETAL/STERNEBRAE (Anlage): Multiple hypoplastic	
	8- SKELETAL/STERNEBRAE (Between V and VI): Site of ossification	
	9- SKELETAL/STERNEBRAE (III): Dumbbell centra	
	10- SKELETAL/STERNEBRAE (IV): Bifid centra	
	11- SKELETAL/STERNEBRAE: Hypolastic sternebrae	
	12- SKELETAL/STERNEBRAE: Sternebrae, asymetric form	
	13- SKELETAL/STERNEBRAE: Unossified sternebrae	
	14- SKELETAL/VERTEBRAE (CE): Multiple bones malformed	
	15- SKELETAL/VERTEBRAE (CE): Extra presacral vertebra	
	16- SKELETAL/VERTEBRAE (L): One less presacral	
	17- SKELETAL/VERTEBRAE (L): Extra presacral vertebrae	
	18- SKELETAL/VERTEBRAE (S4): Unossified centra	
	19- SKELETAL/VERTEBRAE (T5 Anlage): Misshapen centra	
	20- SKELETAL/VERTEBRAE (T5): Misshapen centra	
	21- SKELETAL/VERTEBRAE: Bifid centra vertebral anlage	
	22- SKELETAL/VERTEBRAE: Bifid vertebral centra	
	23- SKELETAL/VERTEBRAE: Dumbbell-shaped vertebral centra anlage	
	24- SKELETAL/VERTEBRAE: Dumbbell vertebral centra	
	25- SKELETAL/VERTEBRAE: Hypoplastic vertebral anlage centra	
	26- SKELETAL/VERTEBRAE: Hypoplastic vertebral centra	
	27- SKELETAL/VERTEBRAE: Multiple vertebral bones absent	
	28- SKELETAL/RIBS: Supernumary ribs(combined)	2,3,4
	29- SKELETAL/STERNEBRAE: Hypoplastic sternebrae(combined)	9,10,11,13
	30- SKELETAL/VERTEBRAE: Extra presacral vertebrae(combined)	15,17
	31- SKELETAL/VERTEBRAE: Hypoplastic vertebral anlage centra (combined)	21,23,25
	32- SKELETAL/VERTEBRAE: Hypoplastic vertebral centra (combined)	18,22,24,26

APPENDIX K – STATISTICIANS REPORT (CONT'D)

RESULTS:

BODY WEIGHT ANALYSIS

There was no statistically significant difference in the mean fetal litter weights among the dose groups. Table II shows the mean fetal weight and the least squares mean fetal weight. The dose and dose by sex interaction were not statistically significant indicating there was not a dose related effect.

Table II
Mean fetal weight, the least squares mean fetal weight

Dose Group (mg/m^3)	n litters	n fetuses	observed fetus mean (gm)	Least squares fetus mean (gm)*
0	24	358	5.38	5.38
2,000	24	362	5.46	5.45
10,000	24	369	5.29	5.30
20,000	24	366	5.40	5.42

*The least squares mean accounts for litter size.

ANOMALY ANALYSES

Of the 27 individual anomaly analyses the count of skeletal dumbbell vertebral centra indicated a statistically significant difference between the dose group (10,000 mg/m^3) and the control group, and the count of dumbbell-shaped vertebral centra anlage for females indicated a statistically significant difference between the dose group (2,000 mg/m^3) and the control group . None of the other measures indicated statistically significant differences among the dose groups. Incidence tables are provided in the appendix.

CONCLUSION:

Based on these findings, administration of the test substance at the exposures tested is associated with a increased incidence of skeletal dumbbell vertebral centra in the 10,000 mg/m^3 dose group relative to the control group and with an increased incidence for females of skeletal dumbbell-shaped vertebral centra anlage in the 2,000 mg/m^3 dose group relative to the control group.

8 MAY 2009
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APPENDIX K – STATISTICIANS REPORT (CONT'D)

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Chen, Gaylor, and Laborde, "Dose-response modeling of growth for developmental toxicity", Environmetrics, vol 7, pg 135-144, 1996.

Little, Milliken, Stroup, and Wolfinger, "SAS System for Mixed Models", SAS Institute, Cary, NC, 1997, section 5.6.2, pg 203.

Ryan, L., "The use of generalized estimating equations for risk assessment in developmental toxicity", Risk Analysis, 12(3), pg 439-447, 1992.

APPENDIX K – STATISTICIANS REPORT (CONT'D)

APPENDIX
Anomaly Counts

Study # 171334
Head Variations and Malformations - combined
All Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	181	0	0
2000 MG/M3	24	179	3	3
10000 MG/M3	24	186	1	1
20000 MG/M3	24	184	0	0

Head Variations and Malformations - combined
Alive Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	181	0	0
2000 MG/M3	24	179	3	3
10000 MG/M3	24	186	1	1
20000 MG/M3	24	184	0	0

Head Malformations - combined
All Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	181	0	0
2000 MG/M3	24	179	3	3
10000 MG/M3	24	186	1	1
20000 MG/M3	24	184	0	0

APPENDIX K – STATISTICIANS REPORT (CONT'D)

Head Malformations - combined
Alive Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	181	0	0
2000 MG/M3	24	179	3	3
10000 MG/M3	24	186	1	1
20000 MG/M3	24	184	0	0

head - individual
HEAD: Anophthalmia

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	181	0	0
2000 MG/M3	24	179	1	1
10000 MG/M3	24	186	0	0
20000 MG/M3	24	184	0	0

head - individual
HEAD: Cerebral ventricle abnormalities

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	181	0	0
2000 MG/M3	24	179	1	1
10000 MG/M3	24	186	1	1
20000 MG/M3	24	184	0	0

head - individual
HEAD: Malpositioned nasal septum

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	181	0	0
2000 MG/M3	24	179	1	1
10000 MG/M3	24	186	0	0
20000 MG/M3	24	184	0	0

APPENDIX K – STATISTICIANS REPORT (CONT'D)

head - individual
HEAD: Retina fold; Right

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	181	0	0
2000 MG/M3	24	179	1	1
10000 MG/M3	24	186	0	0
20000 MG/M3	24	184	0	0

External Variations and Malformations - combined
All Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	358	2	2
2000 MG/M3	24	362	1	1
10000 MG/M3	24	369	1	1
20000 MG/M3	24	366	1	1

External Variations and Malformations - combined
Alive Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	358	2	2
2000 MG/M3	24	362	1	1
10000 MG/M3	24	369	1	1
20000 MG/M3	24	366	1	1

External Malformations - combined
All Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	358	2	2
2000 MG/M3	24	362	1	1
10000 MG/M3	24	369	1	1
20000 MG/M3	24	366	1	1

APPENDIX K – STATISTICIANS REPORT (CONT'D)

External Malformations - combined
Alive Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	358	2	2
2000 MG/M3	24	362	1	1
10000 MG/M3	24	369	1	1
20000 MG/M3	24	366	1	1

external - individual
EXTERNAL: Cleft palate (confirmed internally)

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	358	0	0
2000 MG/M3	24	362	1	1
10000 MG/M3	24	369	0	0
20000 MG/M3	24	366	0	0

external - individual
EXTERNAL: Fetus discolored red

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	358	0	0
2000 MG/M3	24	362	2	2
10000 MG/M3	24	369	0	0
20000 MG/M3	24	366	0	0

NOTE: This is an observation and is not included in the combined categories.

external - individual
EXTERNAL: Filamentous tail

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	358	1	1
2000 MG/M3	24	362	0	0
10000 MG/M3	24	369	0	0
20000 MG/M3	24	366	0	0

APPENDIX K – STATISTICIANS REPORT (CONT'D)

external - individual
EXTERNAL: Malrotated paw

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	358	1	1
2000 MG/M3	24	362	0	0
10000 MG/M3	24	369	1	1
20000 MG/M3	24	366	1	1

external - individual
EXTERNAL: Microstomia

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	358	0	0
2000 MG/M3	24	362	1	1
10000 MG/M3	24	369	0	0
20000 MG/M3	24	366	0	0

Visceral Variations and Malformations - combined
All Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	181	4	4
2000 MG/M3	24	179	1	1
10000 MG/M3	24	186	1	1
20000 MG/M3	24	184	1	1

Visceral Variations and Malformations - combined
Alive Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	181	4	4
2000 MG/M3	24	179	1	1
10000 MG/M3	24	186	1	1
20000 MG/M3	24	184	1	1

APPENDIX K – STATISTICIANS REPORT (CONT'D)

Visceral Malformations - combined
All Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	181	4	4
2000 MG/M3	24	179	1	1
10000 MG/M3	24	186	1	1
20000 MG/M3	24	184	1	1

Visceral Malformations - combined
Alive Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	181	4	4
2000 MG/M3	24	179	1	1
10000 MG/M3	24	186	1	1
20000 MG/M3	24	184	1	1

visceral - individual
ABDOMEN/THORAX: Hydronephrosis

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	181	3	3
2000 MG/M3	24	179	1	1
10000 MG/M3	24	186	1	1
20000 MG/M3	24	184	1	1

visceral - individual
ABDOMEN/THORAX: Hydroureter; Left

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	181	1	1
2000 MG/M3	24	179	0	0
10000 MG/M3	24	186	0	0
20000 MG/M3	24	184	0	0

APPENDIX K – STATISTICIANS REPORT (CONT'D)

Skeletal Variations and Malformations - combined
All Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	14	28
2000 MG/M3	24	183	16	32
10000 MG/M3	24	183	15	30
20000 MG/M3	24	182	16	35

Skeletal Variations and Malformations - combined
Alive Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	14	28
2000 MG/M3	24	183	16	32
10000 MG/M3	24	183	15	30
20000 MG/M3	24	182	16	35

Skeletal Variations - combined
All Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	13	27
2000 MG/M3	24	183	16	32
10000 MG/M3	24	183	15	30
20000 MG/M3	24	182	16	35

Skeletal Variations - combined
Alive Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	13	27
2000 MG/M3	24	183	16	32
10000 MG/M3	24	183	15	30
20000 MG/M3	24	182	16	35

APPENDIX K – STATISTICIANS REPORT (CONT'D)

Skeletal Malformations - combined
All Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	2	2
2000 MG/M3	24	183	2	2
10000 MG/M3	24	183	0	0
20000 MG/M3	24	182	0	0

Skeletal Malformations - combined
Alive Fetuses

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	2	2
2000 MG/M3	24	183	2	2
10000 MG/M3	24	183	0	0
20000 MG/M3	24	182	0	0

skeletal - individual
SKELETAL/RIBS (Anlage): Multiple hypoplastic

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	3	5
2000 MG/M3	24	183	3	4
10000 MG/M3	24	183	4	7
20000 MG/M3	24	182	4	6

skeletal - individual
SKELETAL/RIBS (CE8): Well-formed; Right

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	0	0
2000 MG/M3	24	183	1	1
10000 MG/M3	24	183	0	0
20000 MG/M3	24	182	0	0

APPENDIX K – STATISTICIANS REPORT (CONT'D)

skeletal - individual
SKELETAL/RIBS (L1): Rudimentary lumbar ribs

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	3	3
2000 MG/M3	24	183	5	5
10000 MG/M3	24	183	4	6
20000 MG/M3	24	182	5	11

skeletal - individual
SKELETAL/RIBS (L1): Well-formed; Left

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	0	0
2000 MG/M3	24	183	1	1
10000 MG/M3	24	183	0	0
20000 MG/M3	24	182	1	1

skeletal - individual
SKELETAL/RIBS (T13): Short Last; Bilateral

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	0	0
2000 MG/M3	24	183	0	0
10000 MG/M3	24	183	0	0
20000 MG/M3	24	182	1	1

skeletal - individual
SKELETAL/RIBS: Rib anlage supernumary ossification site

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	1	2
2000 MG/M3	24	183	1	2
10000 MG/M3	24	183	1	1
20000 MG/M3	24	182	2	6

APPENDIX K – STATISTICIANS REPORT (CONT'D)

skeletal - individual
SKELETAL/STERNEBRAE (Anlage): Multiple hypoplastic

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	3	5
2000 MG/M3	24	183	1	2
10000 MG/M3	24	183	1	3
20000 MG/M3	24	182	2	2

skeletal - individual
SKELETAL/STERNEBRAE (Between V and VI): Site of ossification

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	0	0
2000 MG/M3	24	183	1	1
10000 MG/M3	24	183	0	0
20000 MG/M3	24	182	0	0

skeletal - individual
SKELETAL/STERNEBRAE (III): dumbbell centra

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	0	0
2000 MG/M3	24	183	0	0
10000 MG/M3	24	183	1	1
20000 MG/M3	24	182	0	0

skeletal - individual
SKELETAL/STERNEBRAE (IV): Bifid centra

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	0	0
2000 MG/M3	24	183	1	1
10000 MG/M3	24	183	1	1
20000 MG/M3	24	182	0	0

APPENDIX K – STATISTICIANS REPORT (CONT'D)

skeletal - individual
SKELETAL/STERNEBRAE: Hypolastic sternebrae

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	0	0
2000 MG/M3	24	183	1	1
10000 MG/M3	24	183	1	1
20000 MG/M3	24	182	0	0

skeletal - individual
SKELETAL/STERNEBRAE: Sternebrae, asymetric form

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	0	0
2000 MG/M3	24	183	1	1
10000 MG/M3	24	183	1	1
20000 MG/M3	24	182	1	1

skeletal - individual
SKELETAL/STERNEBRAE: Unossified sternebrae

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	2	3
2000 MG/M3	24	183	1	1
10000 MG/M3	24	183	0	0
20000 MG/M3	24	182	2	3

skeletal - individual
SKELETAL/VERTEBRAE (CE): Multiple bones malformed

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	0	0
2000 MG/M3	24	183	1	1
10000 MG/M3	24	183	0	0
20000 MG/M3	24	182	0	0

APPENDIX K – STATISTICIANS REPORT (CONT'D)

skeletal - individual
SKELETAL/VERTEBRAE (CE): Extra presacral vertebrae

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	0	0
2000 MG/M3	24	183	1	1
10000 MG/M3	24	183	0	0
20000 MG/M3	24	182	0	0

skeletal - individual
SKELETAL/VERTEBRAE (L): One less presacral vertebrae

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	0	0
2000 MG/M3	24	183	1	1
10000 MG/M3	24	183	0	0
20000 MG/M3	24	182	0	0

skeletal - individual
SKELETAL/VERTEBRAE (L): Extra presacral vertebrae

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	1	1
2000 MG/M3	24	183	0	0
10000 MG/M3	24	183	0	0
20000 MG/M3	24	182	0	0

skeletal - individual
SKELETAL/VERTEBRAE (S4): Unossified centra

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	1	1
2000 MG/M3	24	183	0	0
10000 MG/M3	24	183	0	0
20000 MG/M3	24	182	0	0

APPENDIX K – STATISTICIANS REPORT (CONT'D)

skeletal - individual
SKELETAL/VERTEBRAE (T5 Anlage): Misshapen centra

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	1	1
2000 MG/M3	24	183	0	0
10000 MG/M3	24	183	0	0
20000 MG/M3	24	182	0	0

skeletal - individual
SKELETAL/VERTEBRAE (T5): Misshapen centra

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	1	1
2000 MG/M3	24	183	0	0
10000 MG/M3	24	183	0	0
20000 MG/M3	24	182	0	0

skeletal - individual
SKELETAL/VERTEBRAE: Bifid centra vertebral anlage

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	0	0
2000 MG/M3	24	183	2	2
10000 MG/M3	24	183	1	1
20000 MG/M3	24	182	2	2

skeletal - individual
SKELETAL/VERTEBRAE: Bifid vertebral centra

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	7	12
2000 MG/M3	24	183	6	14
10000 MG/M3	24	183	8	9
20000 MG/M3	24	182	7	9

APPENDIX K – STATISTICIANS REPORT (CONT'D)

skeletal - individual
SKELETAL/VERTEBRAE: Dumbbell-shaped vertebral centra anlage

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	0	0
2000 MG/M3	24	183	3	9
10000 MG/M3	24	183	5	5
20000 MG/M3	24	182	2	2

skeletal - individual
SKELETAL/VERTEBRAE: dumbbell vertebral centra

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	0	0
2000 MG/M3	24	183	0	0
10000 MG/M3	24	183	3	3
20000 MG/M3	24	182	0	0

skeletal - individual
SKELETAL/VERTEBRAE: Hypoplastic vertebral anlage centra

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	3	3
2000 MG/M3	24	183	4	8
10000 MG/M3	24	183	4	8
20000 MG/M3	24	182	5	8

skeletal - individual
SKELETAL/VERTEBRAE: Hypoplastic vertebral centra

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	0	0
2000 MG/M3	24	183	1	1
10000 MG/M3	24	183	1	1
20000 MG/M3	24	182	0	0

APPENDIX K – STATISTICIANS REPORT (CONT'D)

skeletal - individual
SKELETAL/VERTEBRAE: Multiple vertebral bones absent

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	1	1
2000 MG/M3	24	183	0	0
10000 MG/M3	24	183	0	0
20000 MG/M3	24	182	0	0

skeletal - combined
SKELETAL/RIBS: Supernumary ribs

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	3	3
2000 MG/M3	24	183	6	6
10000 MG/M3	24	183	4	6
20000 MG/M3	24	182	5	11

skeletal - combined
SKELETAL/STERNEBRAE: Hypoplastic sternebrae

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	2	3
2000 MG/M3	24	183	2	2
10000 MG/M3	24	183	1	1
20000 MG/M3	24	182	2	3

skeletal - combined
SKELETAL/VERTEBRAE: Extra presacral vertebrae

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	1	1
2000 MG/M3	24	183	1	1
10000 MG/M3	24	183	0	0
20000 MG/M3	24	182	0	0

APPENDIX K – STATISTICIANS REPORT (CONT'D)

skeletal - combined
SKELETAL/VERTEBRAE: Hypoplastic vertebral anlage centra (combined)

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	3	3
2000 MG/M3	24	183	8	18
10000 MG/M3	24	183	9	14
20000 MG/M3	24	182	7	12

skeletal - combined
SKELETAL/VERTEBRAE: Hypoplastic vertebral centra (combined)

DOSE	dams examined	fetuses examined	dams affected	fetuses affected
0 MG/M3	24	177	8	13
2000 MG/M3	24	183	6	14
10000 MG/M3	24	183	10	12
20000 MG/M3	24	182	7	9

APPENDIX L - HISTORICAL CONTROL DATA FOR ANNANDALE, NJ FACILITY

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

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	7.84	8.436	0.58	16.48	17.16	0	0.97	0.4	79.840760
LOW		14.96	7.54	7.42	0.44	15.50	16.42	0	0.97	0.03	78.883958
STUDY											
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	AFFECTE
HIGH		11.402500	7.455	0	5.10	3.30	0.17	0.70	0.80
LOW		10.159600	7.103	0	2.50	2.80	0.08	0	0.50
STUDY #									
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 #	[redacted]		
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 #	10	9(B)	9(A)
NUMBER OF LITTER	24	25	25
NUMBER OF FETUSES	359	401	398
% STUNTED - F	0	1.25	0
% STUNTED - L	0	16.00	0
% EXT. VAR. - F	0	0	0
% EXT. VAR. - L	0	0	0
% EXT. MAL - F	0.28	0	0.50
% EXT. MAL. - L	4.17	0	8.00
Cleft Palate - F			
Cleft Palate - L			
Malrotated hindpaw - F	0.28		0.50
Malrotated hindpaw - L	4.17		8.00

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 #	10	9(B)	9(A)
NUMBER OF LITTERS	24	25	25
NUMBER OF FETUSES	178	197	201
% VIS. VAR. - F	0	0	1.00
% VIS. VAR. - L	0	0	4.00
% VIS. MAL. - F	1.69	1.02	0.50
% VIS. MAL. - L	12.50	4.00	4.00
Hydrocephaly - F			
Hydrocephaly - L			
Microphthalmia - F		0.51	
Microphthalmia - L		4.00	
Retinal fold - F	1.12		
Retinal fold - L	8.33		
Heart: Misshapen - F			
Heart: Misshapen - L			
Subclavian artery: Abnormal origin - F			
Subclavian artery: Abnormal origin - L			
Subclavian artery: Retroesophageal - F			
Subclavian artery: Retroesophageal - L			
Adrenal(s): Discolored - F			
Adrenal(s): Discolored - L			
Renal pelvis(es): Dilated - F			
Renal pelvis(es): Dilated - L			
Hydronephrosis - F			
Hydronephrosis - L			
Ureter(s): Convoluted - F			1.00
Ureter(s): Convoluted - L			4.00

NOTE: F - Fetus
L - Litter
Blank entries for an observation indicate that the observation was not present in that study

STUDY #	10	9(B)	9(A)
NUMBER OF LITTERS	24	25	25
NUMBER OF FETUSES	178	197	201
Hydroureter - F	0.56	0.51	0.50
Hydroureter - L	4.17	4.00	4.00
Umbilical artery: Left of urinary bladder - F			
Umbilical artery: Left of urinary bladder - L			

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)
(SKELETAL DATA)

STUDY #	10	9(B)	9(A)
NUMBER OF LITTER	24	$	$
NUMBER OF FETUSES	181	$	$
% SKEL. VAR. - F	8.84	$	$
% SKEL. VAR. - L	50.00	$	$
% SKEL. MAL. - F	0	$	$
% SKEL. MAL. - L	0	$	$
Skull bone(s): Hypoplastic - F			
Skull bone(s): Hypoplastic - L			
Skull bone(s): Unossified - F			
Skull bone(s): Unossified - L			
Forepaw: Advanced - F			
Forepaw: Advanced - L			
Forepaw: Unossified - F			
Forepaw: Unossified - L			
Sternebrae: Asymmetric form - F			
Sternebrae: Asymmetric form - L			
Sternebrae: Bifid - F			
Sternebrae: Bifid - L			
Sternebrae: Hypoplastic - F			
Sternebrae: Hypoplastic - L			
Sternebrae: Unossified - F	1.10		
Sternebrae: Unossified - L	8.33		
Vertebral centra: Bifid- F	1.10		
Vertebral centra: Bifid- L	8.33		

NOTE: F - Fetus
L - Litter
$ - Not examined
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)
(SKELETAL DATA)

STUDY #	10	9(B)	9(A)
NUMBER OF LITTER	24	$	$
NUMBER OF FETUSES	181	$	$
Vertebral centra: Dumbbell/8-shaped - F	1.10		
Vertebral centra: Dumbbell/8-shaped - L	8.33		
Vertebral centra anlage: Bifid - F			
Vertebral centra anlage: Bifid - L			
Rib(s): Hypoplastic - F			
Rib(s): Hypoplastic - L			
Rib(s): Misshapen - F			
Rib(s): Misshapen - L			
Rib(s): Rudimentary lumbar - F	5.52		
Rib(s): Rudimentary lumbar - L	25.00		
Rib(s): Well formed lumbar - F			
Rib(s): Well formed lumbar - L			
Rib(s): Short last thoracic - F			
Rib(s): Short last thoracic - L			
Rib(s): Thick/wavy - F			
Rib(s): Thick/wavy - L			
Pelvic girdle: Hypoplastic - F			
Pelvic girdle: Hypoplastic - L			
Hindpaw: Advanced - F			
Hindpaw: Advanced - L			
Hindpaw: Unossified - F			
Hindpaw: Unossified - L			

NOTE: F - Fetus
L - Litter
$ - Not examined
Blank entries for an observation indicate that the observation was not present in that study

APPENDIX M – FEED AND WATER ANALYSES
FEED ANALYSES

LabDiet PMI NUTRITION

Return to Certified Analysis Retrieval

Product Code: 5002M
Product Desc: CERTIFIED RODENT DIET MEAL
Lab Number: L0114619-2
Lot Code: APR 01 01 1B
Entered: 3/26/2001

Assay	Analysis	Units
PROTEIN	21.1	%
FAT (ACID HYDRO.)	6.11	%
FIBER (CRUDE)	4.19	%
ARSENIC	0.211	PPM
CADMIUM	0.069	PPM
CALCIUM	0.988	%
LEAD	0.159	PPM
MERCURY	LESS THAN 0.025	PPM
PHOSPHORUS	0.635	%
SELENIUM	0.299	PPM

ORGANOPHOSPHATES	PPM	ORGANOPHOSPHATES	PPM
Diazinon	LESS THAN 0.02	Disulfoton	LESS THAN 0.02
Ethion	LESS THAN 0.02	Malathion	0.11
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)
WATER ANALYSES

ExxonMobil Biomedical Sciences, Inc.

Memorandum

To: PE Wing Vivarium Animal Water Supply Analysis Files

Re: Sample Date May 22, 2001

From: R. C. Forgash

Date: July 9, 2001

The results of the PE wing vivarium animal water supply analysis from the sample collected on 22-May-01 revealed no contaminant levels above the maximum contaminant levels (MCL). The only noteworthy results were those listed below.

	Result	MCL
Methylene chloride	1.2 µg/l	3.0 µg/l
1, 1, 1-Trichloroethane	1.0 µg/l	30 µg/l
Calcium	49.6 mg/l	*
Copper	0.097 mg/l	1.3 mg/l
Magnesium	26.7 mg/l	*
Zinc	0.040 mg/l	5.0 mg/l

* No MCL

All reported values for this water analysis are judged acceptable.

Methylene chloride is a solvent commonly used in an analytical chemistry laboratory. The lab that performed our analysis was contacted to inquire if the methylene chloride seen in our results could be a contaminant from their lab. Their response was that it is possible since they use methylene chloride in many of their analyses. I asked if it was possible to re-analyze the EMBSI water sample and was informed that this was not possible.

On June 15, 2001 the Mammalian Vivarium animal water source was changed over to the site reverse osmosis water supply, however in order to clarify the methylene chloride issue the former animal water source will be re-sampled and analyzed for methylene chloride.

Resampled + analyzed for methylene chloride
Results = None detected

APPENDIX M – FEED AND WATER ANALYSES (CONT'D)
WATER ANALYSES (CONT'D)

Accutest Laboratories

Report of Analysis

Client Sample ID:	PE 106		
Lab Sample ID:	E91651-1	**Date Sampled:**	05/22/01
Matrix:	DW - Drinking Water	**Date Received:**	05/22/01
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	T20546.D	1	05/26/01	YYL	n/a	n/a	VT649
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		0.86	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND		0.60	ug/l	
67-66-3	Chloroform	ND		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	0.66	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	1.2	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	1.0	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	

S

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)
WATER ANALYSES (CONT'D)

Accutest Laboratories

Report of Analysis

Client Sample ID:	PE 106		
Lab Sample ID:	E91651-1	**Date Sampled:**	05/22/01
Matrix:	DW - Drinking Water	**Date Received:**	05/22/01
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)	105%		73-127%
2037-26-5	Toluene-D8 (SUR)	102%		88-111%
460-00-4	4-Bromofluorobenzene (SUR)	94%		75-114%

6

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)
WATER ANALYSES (CONT'D)

Accutest Laboratories

Report of Analysis

Client Sample ID: PE 106
Lab Sample ID: E91651-1
Matrix: DW - Drinking Water
Method: EPA 625 EPA 625
Project: Lab Animal Room Water

Date Sampled: 05/22/01
Date Received: 05/22/01
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M15002.D	1	06/02/01	CBD	05/27/01	OP9476	EM440
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		20	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

APPENDIX M – FEED AND WATER ANALYSES (CONT'D)
WATER ANALYSES (CONT'D)

Accutest Laboratories

Report of Analysis

Client Sample ID: PE 106
Lab Sample ID: E91651-1
Matrix: DW - Drinking Water
Method: EPA 625 EPA 625
Project: Lab Animal Room Water

Date Sampled: 05/22/01
Date Received: 05/22/01
Percent Solids: n/a

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	20	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	45%		15-93%
4165-62-2	Phenol-d5	11%		10-76%
118-79-6	2,4,6-Tribromophenol	80%		38-144%
4165-60-0	Nitrobenzene-d5	100%		43-126%
321-60-8	2-Fluorobiphenyl	94%		38-130%
1718-51-0	Terphenyl-d14	110%		24-155%

S

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)
WATER ANALYSES (CONT'D)

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID:	PE 106		
Lab Sample ID:	E91651-1	**Date Sampled:**	05/22/01
Matrix:	DW - Drinking Water	**Date Received:**	05/22/01
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	XX20502.D	1	05/30/01	KLS	05/27/01	OP9477	GXX402
Run #2	CD49493.D	1	06/05/01	LLP	05/27/01	OP9477	GCD1882

Pesticide/PCB PPL List

CAS No.	Compound	Result	MCL	RL	Units	Q
309-00-2	Aldrin	ND		0.0075	ug/l	
319-84-6	alpha-BHC	ND		0.0055	ug/l	
319-85-7	beta-BHC	ND		0.0049	ug/l	
319-86-8	delta-BHC	ND		0.0075	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.20	0.0055	ug/l	
12789-03-6	Chlordane	ND	0.50	0.19	ug/l	
60-57-1	Dieldrin	ND		0.0065	ug/l	
72-54-8	4,4'-DDD	ND		0.014	ug/l	
72-55-9	4,4'-DDE	ND		0.012	ug/l	
50-29-3	4,4'-DDT	ND		0.010	ug/l	
72-20-8	Endrin	ND	3.0	0.0095	ug/l	
1031-07-8	Endosulfan sulfate	ND		0.0075	ug/l	
7421-93-4	Endrin aldehyde	ND		0.0080	ug/l	
959-98-8	Endosulfan-I	ND		0.0050	ug/l	
33213-65-9	Endosulfan-II	ND		0.0075	ug/l	
76-44-8	Heptachlor	ND	0.40	0.0075	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.20	0.0060	ug/l	
72-43-5	Methoxychlor	ND	40	0.049	ug/l	
8001-35-2	Toxaphene	ND	3.0	0.34	ug/l	
12674-11-2	Aroclor 1016	ND [a]	0.50	0.24	ug/l	
11104-28-2	Aroclor 1221	ND [a]	0.50	0.090	ug/l	
11141-16-5	Aroclor 1232	ND [a]	0.50	0.12	ug/l	
53469-21-9	Aroclor 1242	ND [a]	0.50	0.30	ug/l	
12672-29-6	Aroclor 1248	ND [a]	0.50	0.22	ug/l	
11097-69-1	Aroclor 1254	ND [a]	0.50	0.11	ug/l	
11096-82-5	Aroclor 1260	ND [a]	0.50	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	82%	81%	66-121%
877-09-8	Tetrachloro-m-xylene	80%	89%	66-121%
2051-24-3	Decachlorobiphenyl	79%	98%	61-131%
2051-24-3	Decachlorobiphenyl	76%	103%	61-131%

(a) Result is from Run# 2

9

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)
WATER ANALYSES (CONT'D)

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID:	PE 106		
Lab Sample ID:	E91651-1	**Date Sampled:**	05/22/01
Matrix:	DW - Drinking Water	**Date Received:**	05/22/01
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	EF32253.D	1	05/25/01	YYX	05/24/01	OP9472	GEF1846
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	85%		57-158%
19719-28-9	2,4-DCAA	88%		57-158%

10

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)
WATER ANALYSES (CONT'D)

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID: PE 106
Lab Sample ID: E91651-1
Matrix: DW - Drinking Water
Project: Lab Animal Room Water

Date Sampled: 05/22/01
Date Received: 05/22/01
Percent Solids: n/a

Metals Analysis

Analyte	Result	MCL	RL	Units	DF	Prep	Analyzed	By	Method
Antimony	<0.0050	0.0060	0.0050	mg/l	1	06/07/01	06/07/01	JDM	EPA 200.8
Arsenic	<0.0050	0.050	0.0050	mg/l	1	05/31/01	05/31/01	LH	EPA 200.7
Beryllium	<0.0030	0.0040	0.0030	mg/l	1	05/31/01	05/31/01	LH	EPA 200.7
Cadmium	<0.0040	0.0050	0.0040	mg/l	1	05/31/01	05/31/01	LH	EPA 200.7
Calcium	49.6		5.0	mg/l	1	05/31/01	05/31/01	LH	EPA 200.7
Chromium	<0.010	0.10	0.010	mg/l	1	05/31/01	05/31/01	LH	EPA 200.7
Copper	0.097	1.3	0.025	mg/l	1	05/31/01	05/31/01	LH	EPA 200.7
Lead	<0.0030	0.015	0.0030	mg/l	1	05/24/01	05/24/01	JDM	EPA 200.9
Magnesium	26.7		5.0	mg/l	1	05/31/01	05/31/01	LH	EPA 200.7
Manganese	<0.015	0.050	0.015	mg/l	1	05/31/01	05/31/01	LH	EPA 200.7
Mercury	<0.00020	0.0020	0.00020	mg/l	1	06/01/01	06/04/01	RF	EPA 245.1
Nickel	<0.040		0.040	mg/l	1	05/31/01	05/31/01	LH	EPA 200.7
Selenium	<0.0050	0.050	0.0050	mg/l	1	05/25/01	05/25/01	JDM	EPA 200.9
Silver	<0.010	0.10	0.010	mg/l	1	05/31/01	05/31/01	LH	EPA 200.7
Thallium	<0.0020	0.0020	0.0020	mg/l	1	06/13/01	06/15/01	JDM	EPA 200.9
Zinc	0.040	5.0	0.020	mg/l	1	05/31/01	05/31/01	LH	EPA 200.7

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RL = Reporting Limit
MCL = Maximum Contamination Level (NJAC 7:10-1 11/96)

APPENDIX M – FEED AND WATER ANALYSES (CONT'D)
WATER ANALYSES (CONT'D)

Accutest Laboratories

Report of Analysis

Client Sample ID:	PE 106		
Lab Sample ID:	E91651-1	**Date Sampled:**	05/22/01
Matrix:	DW - Drinking Water	**Date Received:**	05/22/01
		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	05/23/01 MJC	ACCUTEST
Coliform, Fecal	0		col/100ml	1	05/22/01 MJC	SM18 9222D
Coliform, Total	NEGATIVE	0		1	05/22/01 MJC	SM18 9223B
Cyanide	<0.010	0.20	mg/l	1	05/24/01 AMS	EPA 335.4
Hardness, Total	235		mg/l	1	05/31/01 KY	EPA 130.2
Nitrogen, Ammonia	0.17		mg/l	1	05/26/01 JK	EPA350.1, SM4500NH3H
Phenols	<0.050		mg/l	1	05/25/01 JK	EPA 420.2
Plate Count, Total	0		CFU/ml	1	05/23/01 MJC	SM18 9215B
Solids, Total Suspended	<4.0		mg/l	1	05/23/01	EPA 160.2

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MCL = Maximum Contamination Level (NJAC 7:10-1 11/96)