

12) OECD 416-OPPTS 870.3800,
Reproduction and fertility effects
(Two generation reproduction
toxicity), 418-021 part 2 of 2

RESEARCH PATHOLOGY SERVICES, INC.

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ORAL (GAVAGE) TWO-GENERATION
(ONE LITTER PER GENERATION) REPRODUCTION
STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13
HISTOPATHOLOGY REPORT

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HISTOPATHOLOGY REPORT

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METHOD:

Microscopic examination was made of the specified tissues from five groups of male and female CrI:CD®(SD)IGS BR VAF/Plus® rats of the P and F1 generations used in a two-generation reproduction study of potassium perfluorobutane sulfonate (PFBS). A brief outline of the study design is shown below.

Group	Number of Rats per Sex per Generation	Dosage (mg/kg/day)	Concentration (mg/mL)	Dosage Volume (mL/kg)
I	30	0	0	10/15 ¹
II	30	30	3	10
III	30	100	10	10
IV	30	300	30	10
V	30	1000	100/66.7 ¹	10/15 ¹

The test substance was considered 100% pure for the purpose of dosage calculations.

¹From 04/18/01 through 05/20/01, the concentration of PFBS for the Group V F1 rats was reduced to 66.7 mg/mL and the dosage volume for the Group I and V F1 rats was changed to 15 mL/kg.

The P generation male and female rats were given the test substance once daily, beginning at approximately six weeks of age (at least 70 days before cohabitation) and continuing until the day before sacrifice. The F1 generation adult rats were given the same dosage level of the test substance as their respective P generation sires and dams once daily, beginning at weaning (approximately 70 days before cohabitation) and continuing until the day before sacrifice). F1 and F2 pups may have been exposed to the test substance *in utero* during maternal gestation and via maternal milk during the lactation period.

The in-life portion of the study, necropsies, and recording of the gross necropsy observations were performed by the staff of Argus Research. The preserved tissues were then submitted to Research Pathology Services, Inc. for tissue processing, microscopic slide preparation and histopathologic evaluation.

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The protocol-specified tissues were routinely processed, embedded in paraffin, sectioned, and stained with hematoxylin and eosin for microscopic evaluation with the exception of the testes which were stained with the periodic acid-Schiff technique.

The tissues specified for microscopic evaluation from the ten male and ten female randomly selected P and F1 generation adult rats of Groups I and V included adrenal glands, kidneys, liver, pituitary and testis, epididymis, prostate, seminal vesicles and coagulating gland (male rats) or ovaries, oviducts, uterus, cervix and vagina (female rats). In addition, the reproductive tissues, when available, were examined from male and female rats of the P and F1 generations suspected of reduced fertility. Sections of the liver and kidneys, when available, and all tissues with gross lesions also were examined from the remaining adult male rats of the P and F1 generations.

Upon completion of the project, all raw data (remaining wet tissue, paraffin blocks, microscopic slides and histology records) will be returned to Argus Research for archiving.

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RESULTS:

The type, incidence, and degree of severity of all histomorphologic observations in the P and F1 generation adult rats specified for microscopic examination are summarized in Tables 1 and 3, respectively. Tables 2 and 4 summarize the histomorphologic observations in the rats suspected of reduced fertility in the P and F1 generations, respectively. Individual microscopic findings from the P and F1 generation adult rats are presented in tabular form in Appendices I and II, respectively. A key to the individual microscopic observations precedes Table I-1 and Table II-1. The gross necropsy observations, microscopic findings, and a correlation of the gross and microscopic changes, when applicable, are included in Appendices III and IV for the P and F1 generation parental adult rats, respectively.

P Generation Adult Rats (Tables 1 and 2, I-1 to I-10, Appendix III):

Treatment-related microscopic changes were observed in the liver of male rats of Groups IV and V and kidneys of male and female rats of Groups IV and V.

The treatment-related change in the liver consisted of increased size (hypertrophy) of hepatocytes of male rats of Groups IV and V. The liver cells were enlarged due to an increased amount of finely granular eosinophilic cytoplasm. This hypertrophy generally was present in all areas of the lobules, but did tend to be more prevalent and more prominent in the centrilobular region. The incidence and severity of rats with hepatocellular hypertrophy was dose-related (Table 1). A similar hepatic change was not observed in the male rats of Groups II and III or in any of the Group V female rats selected for examination.

In the kidneys, the primary treatment-related microscopic change consisted of an increased incidence and severity of hyperplasia of the tubular and ductular epithelium of the inner medulla/papilla in male and female rats of Groups IV and V (Table 1). The affected tubules were more densely cellular with variable-sized nuclei. Also, there was an increased incidence of minimal or mild focal papillary edema in the Group IV and V female rats and Group V male rats. Focal necrosis of the papilla occurred in one Group V male rat and three Group IV female rats and

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medullary tubular dilatation was seen in one Group IV and two Group V female rats. There were several other microscopic changes observed in the kidneys of male and female P generation rats, including the controls, but these were considered to have occurred spontaneously and were not considered to be associated with the treatment-related effects in the papilla. Hyperplasia of the papillary tubules also was seen in three Group III male rats and in none of the P generation control male rats. This incidence in the Group III male rats is not considered to be a treatment-related effect, as similar minimal or mild hyperplasia was observed in three P generation control female rats and three F1 generation control male rats.

No treatment-related microscopic changes were observed in the reproductive organs of any of the male and female P generation rats selected for histopathologic evaluation that had been given 1000 mg/kg/day of the test substance. There were a few microscopic changes observed in these tissues of the male and female rats, but they generally occurred at single, low or similar frequencies between the control and compound-treatment groups (Table 1). These changes were typical of those that occur spontaneously in adult male and female rats used in reproduction studies. Growing and antral follicles and corpora lutea were present in the ovaries of all control and high dosage group P generation female rats selected for microscopic evaluation (Table 1).

Male rats described as showing "reduced fertility" were those male rats which failed to sire healthy offspring or for which sperm or spermatid number, sperm motility or morphology were affected. The male rats characterized as "reduced fertility" of the P generation are identified in the individual tables of microscopic findings in Appendix I as "SSRF". The type, incidence and degree of severity of these findings are summarized in Table 2. Similarly, the few changes observed in these "reduced fertility" male rats occurred sporadically and are of the type that occur spontaneously in male rats of this age and strain and were not compound-related. Focal or diffuse prostatic atrophy was observed only in treated "SSRF" male rats (one Group III and two Group V male rats) and in the none of the "SSRF" control rats (Table 2). However, focal prostatic atrophy was observed in three control male rats specified for the complete examination (Table 1).

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F1 Generation Adult Rats (Tables 3 and 4, II-1 to II-10, Appendix IV):

Microscopic examination of the liver of male rats and kidneys of male and female rats revealed treatment-related effects similar to those in the P generation male and female rats.

In the liver, the treatment-related change consisted of minimal or mild increased size (hypertrophy) of hepatocytes in male rats of Groups IV and V of the F1 generation which was similar to that observed in the P generation male rats. The incidence and severity of this hepatic hypertrophy in the groups of F1 generation male rats also was dose-related (Table 3). This liver change was not observed in the F1 generation male rats of Groups II and III or in any of the F1 generation Group V female rats.

Compound-related microscopic changes were observed in the kidneys of female rats of Group IV and male and female rats of Group V. The treatment-related changes consisted primarily of an increased incidence and severity of hyperplasia of the tubular and ductular epithelium in the inner medullary region and papilla. These tubules had increased amounts of small cells with prominent dark nuclei. Other changes considered to be treatment-related were an increased incidence of focal papillary edema in the Group V male rats and in the Group IV and V female rats. Papillary hemorrhage occurred at low incidences in the same groups of male and female rats. Sporadic incidences of focal papillary necrosis also were observed in two male rats of Group IV and one female rat each of Groups IV and V which also were considered to be compound-related.

There were no treatment-related microscopic changes in the reproductive organs of the 10 male and 10 female F1 generation rats randomly selected for histopathologic examination that had been given 1000 mg/kg/day of the test substance.

No compound-related microscopic changes were observed in any of the male or female rats identified as having "reduced fertility" (Table 4). There were a few changes in the reproductive tissues of these rats but they occurred sporadically or at

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similar incidences among the groups, including the controls, and none were treatment-related. Their type, incidence or severity was not affected by administration of the test substance. These rats are identified in the individual tables of microscopic findings as "SSRF", "SDRF" or "SURF".

No treatment-related microscopic changes were seen in any of the tissues specified for examination from the male and female rats of Groups II and III of the P and F1 generations:

There were several other microscopic findings in the kidneys of male and female rats of the P and F1 generations. These changes were observed mostly in treated animals at a relatively low incidence and included pelvic hemorrhage, hyperplasia of the pelvic/papillary urothelium, pelvic mineralization and cortical tubular basophilia. Although these changes were seen at a low incidence mostly in rats of the compound-treatment groups, they were not considered to be directly compound-related as these changes do occur spontaneously in this strain of rat. The possibility, however, that their incidence or occurrence could have been exacerbated in association with the other treatment-related renal effects is a consideration. Similarly, focal papillary necrosis was observed in one F1 generation Group III male rat. This focus of necrosis was different from the treatment-related papillary necrosis in that it was a minimal focal area at the tip of the papilla in a rat with moderate pyelonephritis and this necrosis was considered to be part of the pyelonephritis and not the treatment-related change.

All other microscopic changes observed in the various organs and tissues were considered to have occurred spontaneously and to be unrelated to treatment. These changes were typical of those of which occur in male and female rats used in multigeneration reproduction studies. The type, incidence or severity of these changes were not influenced by PFBS administration. These changes are listed and summarized in the attached histomorphology tables.

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SUMMARY:

Microscopic examination was made of the specified tissues from selected parental male and female rats of the P and F1 generations of an oral (gavage) two-generation (one litter per generation) reproduction study of potassium perfluorobutane sulfonate (PFBS). Four groups of 30 male and 30 female rats in each generation received 30, 100, 300, or 1000 mg/kg/day of the test substance. In each generation, an additional group of 30 male and 30 female rats received the vehicle only and served as control groups.

No treatment-related microscopic changes were observed in the reproductive organs of any of the male or female rats of the P and F1 generations designated for microscopic examination. Also, there were no treatment-related changes in any of the organs specified for evaluation from the P and F1 generation male and female rats that had been given 30 or 100 mg/kg/day of PFBS.

There were a few male and/or female rats in each of the P and F1 generations that were classified as demonstrating "reduced fertility". Microscopic examination of the reproductive organs of the male and female rats available for examination that were designated as "reduced fertility" animals showed no consistent microscopic changes. The few changes that were seen in these "reduced fertility" rats were not considered to be treatment-related.

Treatment-related microscopic changes were observed in the liver of male rats and kidneys of male and female P and F1 generation rats that had been given 300 or 1000 mg/kg/day of PFBS.

The treatment-related microscopic change in the liver of the P and F1 generation male rats of the 300 and 1000 mg/kg/day PFBS-treatment groups consisted of minimal or mild enlargement (hypertrophy) of hepatocytes. This effect was most prominent in centrilobular areas. The incidence and severity of this hypertrophy in these dosage groups in the two generations were dose-related. A similar effect in the liver was not observed in male rats of the lower dosage groups or in female rats of the 1000 mg/kg/day dosage group of either generation.

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The treatment-related microscopic changes in the kidneys also occurred in male and female rats of the P and F1 generations. In the P generation, the treatment-related effects occurred in both sexes of the 300 and 1000 mg/kg/day dosage groups and in the F1 generation, the effects occurred in male rats of the 1000 mg/kg/day dosage group and in the female rats of the 300 and 1000 mg/kg/day dosage groups. The renal changes consisted primarily of hyperplasia of the tubular and ductular epithelium in the inner medulla and papillary region. The incidence and severity of this hyperplasia generally occurred at a dose-related incidence and severity. Other associated treatment-related changes that occurred at lower incidences and sporadic distributions in the P and/or F1 generation rats consisted of focal papillary edema, focal papillary necrosis, dilatation of medullary tubules and focal papillary hemorrhage.

All microscopic changes observed in the other tissues specified for examination of the P and F1 generation adult male and female rats of this study were considered to have occurred spontaneously and to be incidental and unrelated to compound administration.

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QUALITY ASSURANCE UNIT STATEMENT

All aspects of the tissue processing, microscopic slide preparation, histopathologic evaluation and report preparation for the study listed above have been performed according to the Standard Operating Procedures of Research Pathology Services, Inc. and were audited in accordance with the procedures established by the Quality Assurance Unit of Research Pathology Services, Inc. in compliance with the Good Laboratory Practice regulations specified in the protocol.

Quality Assurance inspections were performed as shown below. There were no deviations from the protocol, Standard Operating Procedures and/or appropriate Good Laboratory Practice regulations noted during the conduct of the study that had any impact on study integrity. The summary report of QA inspections was submitted to the Study Director on March 7, 2003.

Dates of Inspection	Study Phase	Date Reported to Management	Date Reported to Study Director
12/06/01, 03/01/02	Trimming	12/31/01, 03/31/02	05/08/02
12/07/01, 03/04/02	Embedding	12/31/01, 03/31/02	05/08/02
02/01/02, 03/13/02	Microtomy	02/28/02, 03/31/02	05/08/02
02/04/02, 03/14/02	Staining	02/28/02, 03/31/02	05/08/02
03/14/02	Organization & Review	05/08/02	05/08/02
04/18/02	Histopathology	04/30/02	05/08/02
04/18/02	Data Entry	04/30/02	05/08/02
04/25, 26, 29, 30/02	Data Verification	04/30/02	05/08/02
05/02/02	Data Processing	05/08/02	05/08/02
05/03/02	Report Preparation	05/08/02	05/08/02
05/07/02	Pre-Submission Audit	05/08/02	05/08/02
05/08/02, 06/14/02	Draft Report	05/08/02, 06/14/02	05/08/02, 06/14/02
03/07/03	Final Report	03/07/03	03/07/03

Karen W. Harkins BS 03.07.03

Karen W. Harkins, BS Date
Quality Assurance Unit

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GOOD LABORATORY PRACTICE COMPLIANCE STATEMENT

All aspects of the above-referenced study performed by Research Pathology Services, Inc. were conducted according to:

U.S. Environmental Protection Agency (1998). Health Effects Test Guidelines; Reproduction and Fertility Effects. Office of Prevention, Pesticides and Toxic Substances (OPPTS) 870.3800, August, 1998.

U.S. Environmental Protection Agency (1997). Toxic Substances Control Act (TSCA) Test Guidelines; Final Rule. Reproduction & Fertility Effects, 799.9380 (cross-referenced to OPPTS 870.3800). *Federal Register*, August 15, 1997.

U.S. Environmental Protection Agency. Federal Insecticide, Fungicide and Rodenticide Act/Toxic Substances Control Act (FIFRA/TSCA); Good Laboratory Practice Standards; Final Rule. 40 CFR Part 160/Part 792.

Organisation for Economic Cooperation and Development (1998). The Revised OECD Principles of Good Laboratory Practices [C(97)186/Final].

No deviations were noted that had any significant impact on the validity of the study.

W. Ray Brown mar 7, 2003
W. Ray Brown, DVM, PhD, DACVP Date
Veterinary Pathologist

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TABLE 1

Incidence and Degree of Severity of Histomorphologic Observations
P Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	30	30	30	30	30	30	30	30	30	30
<u>TESTIS:</u>										
NO. EXAMINED	13	1	2	2	16					
NO. NORMAL	12	1	1	1	15					
-atrophy, diffuse	[1]	[0]	[0]	[1]	[1]					
marked	1	0	0	1	1					
-atrophy, multifocal	[0]	[0]	[1]	[0]	[0]					
mild	0	0	1	0	0					
-edema, diffuse	[1]	[0]	[0]	[0]	[0]					
marked	1	0	0	0	0					
<u>EPIDIDYMIS:</u>										
NO. EXAMINED	13	1	1	2	15					
NO. NORMAL	9	0	1	1	11					
-atrophy	[1]	[0]	[0]	[1]	[1]					
mild	0	0	0	0	1					
marked	1	0	0	1	0					
-hypospermia	[1]	[0]	[0]	[1]	[1]					
mild	0	0	0	0	1					
marked	1	0	0	1	0					
-infiltration, mononuclear-cell, focal	[3]	[1]	[0]	[0]	[4]					
minimal	2	1	0	0	4					
mild	1	0	0	0	0					
<u>PROSTATE:</u>										
NO. EXAMINED	13	1	1	1	15					
NO. NORMAL	6	0	0	1	6					
-atrophy, diffuse	[0]	[0]	[0]	[0]	[1]					
moderate	0	0	0	0	1					
-atrophy, focal	[3]	[0]	[1]	[0]	[4]					
minimal	2	0	1	0	1					
mild	1	0	0	0	2					
moderate	0	0	0	0	1					
-inflammation, chronic	[3]	[1]	[1]	[0]	[4]					
minimal	1	0	1	0	2					
mild	2	1	0	0	2					
-prostatitis, suppurative	[2]	[0]	[0]	[0]	[3]					
minimal	2	0	0	0	3					
<u>SEMINAL VESICLES:</u>										
NO. EXAMINED	13	1	1	1	15					
NO. NORMAL	13	1	1	1	14					

[] = Total incidence of specified lesion, all grades.

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TABLE 1 (Continued)

Incidence and Degree of Severity of Histomorphologic Observations
 P Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	30	30	30	30	30	30	30	30	30	30
<u>SEMINAL VESICLES (Continued):</u>										
-atrophy	[0]	[0]	[0]	[0]	[1]					
mild	0	0	0	0	1					
<u>COAGULATING GLAND:</u>										
NO. EXAMINED	13	1	1	1	15					
NO. NORMAL	13	1	1	1	15					
<u>OVARIES:</u>										
NO. EXAMINED						10	0	0	0	10
NO. NORMAL						10	0	0	0	9
-cyst(s), intraovarian						0	0	0	0	1
<u>OVIDUCT(S):</u>										
NO. EXAMINED						10	0	0	0	10
NO. NORMAL						10	0	0	0	10
<u>UTERUS:</u>										
NO. EXAMINED						10	0	0	0	10
NO. NORMAL						2	0	0	0	0
-distention, lumen						[1]	[0]	[0]	[0]	[3]
mild						0	0	0	0	1
moderate						1	0	0	0	1
marked						0	0	0	0	1
-macrophages, pigmented						[8]	[0]	[0]	[0]	[9]
minimal						0	0	0	0	3
mild						3	0	0	0	2
moderate						5	0	0	0	4
<u>CERVIX:</u>										
NO. EXAMINED						10	0	0	0	10
NO. NORMAL						10	0	0	0	10
<u>VAGINA:</u>										
NO. EXAMINED						10	0	0	0	10
NO. NORMAL						10	0	0	0	10
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea						10	0	0	0	10
-presence of growing/antral follicles						10	0	0	0	10
<u>ADRENAL GLANDS:</u>										
NO. EXAMINED	10	0	0	0	10	10	0	0	0	10
NO. NORMAL	6	0	0	0	7	10	0	0	0	9

[] = Total incidence of specified lesion, all grades.

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Incidence and Degree of Severity of Histomorphologic Observations
P Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	30	30	30	30	30	30	30	30	30	30
<u>ADRENAL GLANDS (Continued):</u>										
-degeneration, cystic, cortex minimal	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[1] 1
-infiltration, mononuclear-cell, multifocal mild	[1] 1	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0
-vacuolation, cortex minimal	[3] 3	[0] 0	[0] 0	[0] 0	[3] 3	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0
<u>KIDNEYS:</u>										
NO. EXAMINED	30	30	30	30	30	27	29	29	26	24
NO. NORMAL	15	20	19	14	6	16	20	15	9	2
-hyperplasia, tubular/ductular epithelium, papilla minimal	[0] 0	[0] 0	[3] 3	[9] 7	[19] 9	[3] 1	[2] 2	[5] 4	[16] 7	[21] 9
mild	0	0	0	2	9	2	0	1	8	12
moderate	0	0	0	0	1	0	0	0	1	0
-edema, papillary, focal minimal	[1] 1	[1] 1	[2] 2	[2] 2	[6] 5	[1] 1	[1] 1	[3] 3	[8] 7	[7] 7
mild	0	0	0	0	1	0	0	0	1	0
-necrosis, papilla, focal minimal	[0] 0	[0] 0	[0] 0	[0] 0	[1] 0	[0] 0	[0] 0	[0] 0	[3] 1	[0] 0
moderate	0	0	0	0	1	0	0	0	2	0
-dilatation, medullary tubules minimal	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[1] 0	[2] 1
moderate	0	0	0	0	0	0	0	0	1	1
-basophilia, cortical tubules, focal minimal	[5] 4	[4] 4	[3] 3	[1] 1	[5] 4	[1] 1	[0] 0	[0] 0	[1] 0	[2] 1
mild	1	0	0	0	1	0	0	0	0	1
moderate	0	0	0	0	0	0	0	0	1	0
-cyst(s), medulla	1	0	1	0	1	0	1	0	0	1
-cyst(s), papilla	1	0	0	0	0	0	1	0	0	0
-cyst(s), perirenal	0	0	0	0	1	0	0	0	0	0
-dilatation, cortical tubules, focal minimal	[0] 0	[0] 0	[0] 0	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0	[1] 0	[1] 0
mild	0	0	0	0	0	0	0	0	0	1
moderate	0	0	0	0	0	0	0	0	1	0

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

TABLE 1 (Continued)

Incidence and Degree of Severity of Histomorphologic Observations
P Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	30	30	30	30	30	30	30	30	30	30
<u>KIDNEYS (Continued):</u>										
-dilatation, pelvis	[1]	[3]	[2]	[4]	[1]	[1]	[0]	[1]	[0]	[1]
minimal	0	2	2	1	0	1	0	0	0	0
mild	1	1	0	2	0	0	0	1	0	1
moderate	0	0	0	1	1	0	0	0	0	0
-hemorrhage, pelvis	[0]	[0]	[0]	[2]	[1]	[0]	[0]	[0]	[0]	[0]
minimal	0	0	0	1	0	0	0	0	0	0
mild	0	0	0	1	1	0	0	0	0	0
-hyperplasia, pelvic/papillary urothelium	[0]	[0]	[1]	[2]	[4]	[0]	[0]	[0]	[0]	[0]
minimal	0	0	1	2	0	0	0	0	0	0
mild	0	0	0	0	4	0	0	0	0	0
-infiltration, mononuclear-cell, focal	[10]	[5]	[3]	[1]	[2]	[0]	[0]	[1]	[1]	[0]
minimal	10	5	3	1	2	0	0	1	1	0
-mineralization, multifocal	[0]	[0]	[0]	[0]	[0]	[6]	[7]	[8]	[5]	[6]
minimal	0	0	0	0	0	6	7	8	5	6
-mineralization, pelvis	[0]	[0]	[1]	[3]	[1]	[0]	[0]	[1]	[0]	[0]
minimal	0	0	1	0	0	0	0	1	0	0
mild	0	0	0	1	1	0	0	0	0	0
moderate	0	0	0	2	0	0	0	0	0	0
-nephritis, chronic, focal	[0]	[0]	[0]	[0]	[0]	[0]	[1]	[0]	[0]	[1]
minimal	0	0	0	0	0	0	1	0	0	1
-pyelitis, chronic	[0]	[0]	[1]	[0]	[1]	[0]	[0]	[0]	[0]	[0]
mild	0	0	1	0	0	0	0	0	0	0
moderate	0	0	0	0	1	0	0	0	0	0
-pyelonephritis	[0]	[0]	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]
mild	0	0	0	0	0	1	0	0	0	0
<u>LIVER:</u>										
NO. EXAMINED	30	30	30	30	30	10	0	0	0	10
NO. NORMAL	22	25	26	20	3	9	0	0	0	10
-cellular alteration, basophilic, focal	[0]	[0]	[0]	[2]	[0]	[0]	[0]	[0]	[0]	[0]
minimal	0	0	0	2	0	0	0	0	0	0
-cellular alteration, clear-cell, focal	[0]	[1]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]
minimal	0	1	0	0	0	0	0	0	0	0
-hematopoiesis, extramedullary	[1]	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]	[0]
minimal	1	0	0	0	1	0	0	0	0	0

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

TABLE 1 (Continued)

Incidence and Degree of Severity of Histomorphologic Observations
P Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	30	30	30	30	30	30	30	30	30	30
<u>LIVER (Continued):</u>										
-hyperplasia, bile duct, focal	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]	[0]	[0]
minimal	0	0	0	1	0	0	0	0	0	0
-hypertrophy, hepatocellular	[0]	[0]	[0]	[3]	[26]	[0]	[0]	[0]	[0]	[0]
minimal	0	0	0	3	25	0	0	0	0	0
mild	0	0	0	0	1	0	0	0	0	0
-inflammation, chronic, focal/multifocal	[5]	[3]	[2]	[4]	[5]	[1]	[0]	[0]	[0]	[0]
minimal	5	3	2	4	5	1	0	0	0	0
-vacuolation, hepatocellular, centrilobular	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]	[0]	[0]
mild	0	0	0	1	0	0	0	0	0	0
-vacuolation, hepatocellular, multifocal	[2]	[1]	[2]	[1]	[1]	[0]	[0]	[0]	[0]	[0]
minimal	1	0	2	1	0	0	0	0	0	0
mild	1	1	0	0	1	0	0	0	0	0
<u>PITUITARY:</u>										
NO. EXAMINED	11	0	0	0	10	10	0	0	0	10
NO. NORMAL	8	0	0	0	10	8	0	0	0	10
-cyst(s)	2	0	0	0	0	2	0	0	0	0
-hyperplasia, pars distalis, focal	[1]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]
minimal	1	0	0	0	0	0	0	0	0	0
<u>EAR(S):</u>										
NO. EXAMINED	0	1	0	1	0	0	0	0	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-chondropathy, auricular	[0]	[1]	[0]	[1]	[0]	[0]	[0]	[0]	[0]	[0]
mild	0	0	0	1	0	0	0	0	0	0
marked	0	1	0	0	0	0	0	0	0	0
<u>EXTREMITIES:</u>										
NO. EXAMINED	0	0	0	0	0	0	0	0	1	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-ankylosis	0	0	0	0	0	0	0	0	1	0
-osteochondritis	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[1]	[0]
moderate	0	0	0	0	0	0	0	0	1	0
<u>SPLEEN:</u>										
NO. EXAMINED	0	0	0	0	0	1	0	0	2	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-abscess	0	0	0	0	0	0	0	0	1	0

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

TABLE 1 (Continued)

Incidence and Degree of Severity of Histomorphologic Observations
 P Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	30	30	30	30	30	30	30	30	30	30
<u>SPLEEN (Continued):</u>										
-atrophy moderate	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[1] 1	[0] 0
-congestion, red pulp moderate	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0	[0] 0
-cyst(s), capsular	0	0	0	0	0	1	0	0	0	0
-pigment mild	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[1] 1	[0] 0
THYMUS:										
NO. EXAMINED	2	1	1	4	2	0	0	0	0	0
NO. NORMAL	0	0	0	0	1	0	0	0	0	0
-congestion minimal mild	[2] 2 0	[1] 0 1	[1] 1 0	[3] 3 0	[0] 0 0	[0] 0 0	[0] 0 0	[0] 0 0	[0] 0 0	[0] 0 0
-hemorrhage, focal minimal	[0] 0	[0] 0	[0] 0	[1] 1	[1] 1	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0
TAIL:										
NO. EXAMINED	0	0	0	0	0	0	0	1	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-inflammation, chronic, focal moderate	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[1] 1	[0] 0	[0] 0
-necrosis moderate	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[1] 1	[0] 0	[0] 0

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

TABLE 2

Incidence and Degree of Severity of Histomorphologic Observations - Reduced Fertility Animals
P Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	3	1	1	1	5	3	1	1	1	5
<u>TESTIS:</u>										
NO. EXAMINED	3	1	1	1	5					
NO. NORMAL	2	1	1	1	4					
-atrophy, diffuse	[1]	[0]	[0]	[0]	[1]					
marked	1	0	0	0	1					
-edema, diffuse	[1]	[0]	[0]	[0]	[0]					
marked	1	0	0	0	0					
<u>EPIDIDYMIS:</u>										
NO. EXAMINED	3	1	1	1	5					
NO. NORMAL	1	0	1	1	3					
-atrophy	[1]	[0]	[0]	[0]	[1]					
mild	0	0	0	0	1					
marked	1	0	0	0	0					
-hypospermia	[1]	[0]	[0]	[0]	[1]					
mild	0	0	0	0	1					
marked	1	0	0	0	0					
-infiltration, mononuclear-cell, focal	[1]	[1]	[0]	[0]	[2]					
minimal	0	1	0	0	2					
mild	1	0	0	0	0					
<u>PROSTATE:</u>										
NO. EXAMINED	3	1	1	1	5					
NO. NORMAL	2	0	0	1	2					
-atrophy, diffuse	[0]	[0]	[0]	[0]	[1]					
moderate	0	0	0	0	1					
-atrophy, focal	[0]	[0]	[1]	[0]	[2]					
minimal	0	0	1	0	0					
mild	0	0	0	0	1					
moderate	0	0	0	0	1					
-inflammation, chronic	[1]	[1]	[1]	[0]	[1]					
minimal	0	0	1	0	0					
mild	1	1	0	0	1					
<u>SEMINAL VESICLES:</u>										
NO. EXAMINED	3	1	1	1	5					
NO. NORMAL	3	1	1	1	4					
-atrophy	[0]	[0]	[0]	[0]	[1]					
mild	0	0	0	0	1					

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

TABLE 2 (Continued)

Incidence and Degree of Severity of Histomorphologic Observations - Reduced Fertility Animals
P Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	3	1	1	1	5	3	1	1	1	5
<u>COAGULATING GLAND:</u>										
NO. EXAMINED	3	1	1	1	5					
NO. NORMAL	3	1	1	1	5					
<u>KIDNEYS:</u>										
NO. EXAMINED	3	1	1	1	5	0	0	0	0	0
NO. NORMAL	1	1	1	1	1	0	0	0	0	0
-hyperplasia, tubular/ductular epithelium, papilla	[0]	[0]	[0]	[0]	[4]	[0]	[0]	[0]	[0]	[0]
minimal	0	0	0	0	2	0	0	0	0	0
mild	0	0	0	0	2	0	0	0	0	0
-infiltration, mononuclear-cell, focal	[2]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]
minimal	2	0	0	0	0	0	0	0	0	0
<u>LIVER:</u>										
NO. EXAMINED	3	1	1	1	5	0	0	0	0	0
NO. NORMAL	3	1	1	1	1	0	0	0	0	0
-hematopoiesis, extramedullary	[0]	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]	[0]
minimal	0	0	0	0	1	0	0	0	0	0
-hypertrophy, hepatocellular	[0]	[0]	[0]	[0]	[4]	[0]	[0]	[0]	[0]	[0]
minimal	0	0	0	0	4	0	0	0	0	0
<u>SPLEEN:</u>										
NO. EXAMINED	0	0	0	0	0	1	0	0	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-congestion, red pulp	[0]	[0]	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]
moderate	0	0	0	0	0	1	0	0	0	0
-cyst(s), capsular	0	0	0	0	0	1	0	0	0	0
<u>THYMUS:</u>										
NO. EXAMINED	0	0	0	1	0	0	0	0	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-congestion	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]	[0]	[0]
minimal	0	0	0	1	0	0	0	0	0	0

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

TABLE 3

Incidence and Degree of Severity of Histomorphologic Observations
 F1 Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	30	30	30	30	30	30	30	30	30	30
TESTIS:										
NO. EXAMINED	19	7	5	7	16					
NO. NORMAL	19	5	4	7	15					
-atrophy, diffuse marked	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0					
-atrophy, focal minimal	[0] 0	[0] 0	[1] 1	[0] 0	[0] 0					
-degeneration, multifocal mild	[0] 0	[1] 1	[0] 0	[0] 0	[1] 1					
-retained Step 19 spermatids, Stage IX/X tubules	0	1	0	0	1					
EPIDIDYMIS:										
NO. EXAMINED	19	7	5	7	16					
NO. NORMAL	16	1	4	4	11					
-atrophy moderate	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0					
-exfoliated spermatogenic cells minimal moderate	[0] 0 0	[1] 1 0	[0] 0 0	[0] 0 0	[1] 0 1					
-hypospermia mild marked	[0] 0 0	[1] 0 1	[0] 0 0	[0] 0 0	[1] 1 0					
-infiltration, mononuclear-cell, focal minimal	[2] 2	[4] 4	[1] 1	[3] 3	[4] 4					
-microgranuloma(s)	1	0	0	0	0					
PROSTATE:										
NO. EXAMINED	19	7	5	7	16					
NO. NORMAL	5	3	2	1	11					
-atrophy, focal minimal mild moderate	[8] 3 4 1	[2] 1 1 0	[1] 0 0 1	[6] 3 2 1	[4] 2 2 0					
-inflammation, chronic minimal mild moderate	[9] 7 2 0	[2] 1 0 1	[2] 1 0 1	[1] 0 1 0	[2] 2 0 0					

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

TABLE 3 (Continued)

Incidence and Degree of Severity of Histomorphologic Observations
 F1 Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	30	30	30	30	30	30	30	30	30	30
<u>PROSTATE (Continued):</u>										
-prostatitis, suppurative	[1]	[0]	[0]	[1]	[0]					
minimal	1	0	0	1	0					
<u>SEMINAL VESICLES:</u>										
NO. EXAMINED	19	7	5	7	16					
NO. NORMAL	19	7	5	7	16					
<u>COAGULATING GLAND:</u>										
NO. EXAMINED	19	7	5	7	16					
NO. NORMAL	19	7	5	7	16					
<u>OVARIES:</u>										
NO. EXAMINED						11	1	0	1	10
NO. NORMAL						10	0	0	1	10
-cyst(s), intraovarian						1	1	0	0	0
-cystic bursa(e)						1	0	0	0	0
<u>OVIDUCT(S):</u>										
NO. EXAMINED						11	1	0	1	9
NO. NORMAL						11	1	0	1	9
<u>UTERUS:</u>										
NO. EXAMINED						11	1	0	1	10
NO. NORMAL						1	0	0	0	2
-distention, lumen	[1]	[1]	[0]	[1]	[0]					
minimal	0	1	0	1	0					
marked	1	0	0	0	0					
-macrophages, pigmented	[9]	[0]	[0]	[0]	[8]					
minimal	2	0	0	0	0					
mild	3	0	0	0	1					
moderate	4	0	0	0	7					
<u>CERVIX:</u>										
NO. EXAMINED						11	1	0	1	8
NO. NORMAL						10	1	0	1	8
-distention	[1]	[0]	[0]	[0]	[0]					
moderate	1	0	0	0	0					
<u>VAGINA:</u>										
NO. EXAMINED						10	0	0	1	10
NO. NORMAL						10	0	0	1	10
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea						11	1	0	1	10
-presence of growing/antral follicles						11	1	0	1	10

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

TABLE 3 (Continued)

Incidence and Degree of Severity of Histomorphologic Observations
 F1 Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	30	30	30	30	30	30	30	30	30	30
<u>ADRENAL GLANDS:</u>										
NO. EXAMINED	10	0	0	0	11	10	0	0	1	10
NO. NORMAL	5	0	0	0	7	9	0	0	0	10
-adenoma, cortical	0	0	0	0	1	0	0	0	0	0
-degeneration, cystic, cortex	[0]	[0]	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]
mild	0	0	0	0	0	1	0	0	0	0
-hypertrophy, cortex, diffuse	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[1]	[0]
moderate	0	0	0	0	0	0	0	0	1	0
-vacuolation, cortex	[5]	[0]	[0]	[0]	[3]	[0]	[0]	[0]	[1]	[0]
minimal	2	0	0	0	1	0	0	0	1	0
mild	2	0	0	0	0	0	0	0	0	0
moderate	1	0	0	0	2	0	0	0	0	0
<u>KIDNEYS:</u>										
NO. EXAMINED	29	28	29	28	28	23	26	28	25	26
NO. NORMAL	21	17	14	11	4	16	19	21	8	9
-hyperplasia, tubular/ductular	[3]	[0]	[1]	[5]	[21]	[2]	[1]	[2]	[13]	[15]
epithelium, papilla	3	0	0	4	8	2	1	2	7	7
minimal	0	0	1	1	13	0	0	0	5	7
mild	0	0	0	0	0	0	0	0	1	1
moderate	0	0	0	0	0	0	0	0	1	1
-edema, papillary, focal	[1]	[0]	[1]	[0]	[9]	[0]	[0]	[0]	[7]	[4]
minimal	1	0	1	0	9	0	0	0	6	3
mild	0	0	0	0	0	0	0	0	1	1
-necrosis, papilla, focal	[0]	[0]	[1]	[2]	[0]	[0]	[0]	[0]	[1]	[1]
minimal	0	0	1	2	0	0	0	0	0	0
mild	0	0	0	0	0	0	0	0	1	1
-hemorrhage, papilla	[0]	[0]	[0]	[0]	[3]	[0]	[0]	[0]	[1]	[2]
minimal	0	0	0	0	1	0	0	0	1	1
mild	0	0	0	0	2	0	0	0	0	1
-basophilia, cortical tubules, focal	[1]	[2]	[3]	[2]	[5]	[0]	[0]	[2]	[1]	[3]
minimal	1	2	3	2	3	0	0	2	0	1
mild	0	0	0	0	2	0	0	0	1	2
-cyst(s), cortex	0	2	0	0	0	0	0	0	0	1
-cyst(s), medulla	1	1	0	1	1	0	1	0	0	1
-cyst(s), papilla	0	0	1	1	0	0	0	0	0	0
-dilatation, cortical tubules, focal	[0]	[0]	[0]	[0]	[1]	[1]	[0]	[0]	[1]	[0]
mild	0	0	0	0	1	0	0	0	1	0
moderate	0	0	0	0	0	1	0	0	0	0

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

TABLE 3 (Continued)

Incidence and Degree of Severity of Histomorphologic Observations
 F1 Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	30	30	30	30	30	30	30	30	30	30
<u>KIDNEYS (Continued):</u>										
-dilatation, pelvis	[1]	[4]	[7]	[7]	[1]	[1]	[1]	[2]	[0]	[0]
minimal	0	1	3	4	0	1	0	1	0	0
mild	1	2	4	3	1	0	1	1	0	0
marked	0	1	0	0	0	0	0	0	0	0
-hemorrhage, pelvis	[0]	[0]	[0]	[2]	[3]	[0]	[0]	[0]	[0]	[0]
mild	0	0	0	1	2	0	0	0	0	0
moderate	0	0	0	1	1	0	0	0	0	0
-hyperplasia, pelvic/papillary urothelium	[0]	[1]	[1]	[4]	[2]	[0]	[0]	[0]	[0]	[1]
minimal	0	0	1	3	2	0	0	0	0	1
mild	0	1	0	1	0	0	0	0	0	0
-infiltration, fat-cell	[0]	[0]	[1]	[0]	[0]	[0]	[0]	[0]	[0]	[0]
minimal	0	0	1	0	0	0	0	0	0	0
-infiltration, mononuclear-cell, focal	[3]	[3]	[4]	[3]	[1]	[0]	[1]	[1]	[0]	[1]
minimal	3	3	3	3	1	0	1	1	0	1
mild	0	0	1	0	0	0	0	0	0	0
-mineralization, multifocal	[0]	[2]	[0]	[1]	[0]	[3]	[3]	[2]	[1]	[2]
minimal	0	2	0	1	0	3	3	2	1	2
-mineralization, pelvis	[0]	[1]	[2]	[4]	[2]	[0]	[1]	[0]	[0]	[0]
minimal	0	1	0	1	0	0	1	0	0	0
mild	0	0	2	2	1	0	0	0	0	0
moderate	0	0	0	1	1	0	0	0	0	0
-nephritis, chronic, focal	[0]	[0]	[0]	[2]	[0]	[0]	[0]	[0]	[0]	[0]
minimal	0	0	0	2	0	0	0	0	0	0
-pyelitis, chronic	[0]	[0]	[0]	[0]	[0]	[1]	[0]	[0]	[1]	[0]
minimal	0	0	0	0	0	0	0	0	1	0
moderate	0	0	0	0	0	1	0	0	0	0
-pyelonephritis	[0]	[0]	[1]	[0]	[1]	[0]	[0]	[0]	[0]	[0]
minimal	0	0	0	0	1	0	0	0	0	0
moderate	0	0	1	0	0	0	0	0	0	0
<u>LIVER:</u>										
NO. EXAMINED	29	28	29	28	28	10	0	0	1	10
NO. NORMAL	20	20	24	17	12	9	0	0	0	9
-cellular alteration, eosinophilic, focal	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]	[0]	[0]
mild	0	0	0	1	0	0	0	0	0	0

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

TABLE 3 (Continued)

Incidence and Degree of Severity of Histomorphologic Observations
 F1 Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	30	30	30	30	30	30	30	30	30	30
<u>LIVER (Continued):</u>										
-congestion, acute	[0]	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]	[0]
moderate	0	0	0	0	1	0	0	0	0	0
-cytoplasmic vacuolation, diffuse	[0]	[0]	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]
moderate	0	0	0	0	0	1	0	0	0	0
-hematopoiesis, extramedullary,	[1]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]
multifocal	1	0	0	0	0	0	0	0	0	0
minimal										
-hemorrhage, acute, focal	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[1]	[0]
moderate	0	0	0	0	0	0	0	0	1	0
-hyperplasia, bile duct, focal	[0]	[1]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]
minimal	0	1	0	0	0	0	0	0	0	0
-hypertrophy, hepatocellular	[0]	[0]	[0]	[3]	[14]	[0]	[0]	[0]	[0]	[0]
minimal	0	0	0	3	13	0	0	0	0	0
mild	0	0	0	0	1	0	0	0	0	0
-inflammation, chronic, focal/multifocal	[7]	[7]	[5]	[6]	[3]	[0]	[0]	[0]	[0]	[1]
minimal	7	7	5	6	3	0	0	0	0	1
-lipidosis, tension, focal	0	1	0	0	0	0	0	0	0	0
-necrosis, focal/multifocal	[1]	[0]	[0]	[2]	[2]	[0]	[0]	[0]	[0]	[0]
minimal	0	0	0	2	1	0	0	0	0	0
mild	0	0	0	0	1	0	0	0	0	0
moderate	1	0	0	0	0	0	0	0	0	0
<u>PITUITARY:</u>										
NO. EXAMINED	10	0	0	0	11	10	0	0	0	10
NO. NORMAL	8	0	0	0	11	10	0	0	0	10
-cyst(s)	1	0	0	0	0	0	0	0	0	0
-hyperplasia, pars distalis, focal	[1]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]
mild	1	0	0	0	0	0	0	0	0	0
<u>EAR(S):</u>										
NO. EXAMINED	0	0	0	3	0	1	2	0	4	2
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-chondropathy, auricular	[0]	[0]	[0]	[1]	[0]	[1]	[2]	[0]	[4]	[2]
mild	0	0	0	1	0	0	0	0	0	1
moderate	0	0	0	0	0	0	0	0	1	1
marked	0	0	0	0	0	1	2	0	3	0

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

TABLE 3 (Continued)

Incidence and Degree of Severity of Histomorphologic Observations
F1 Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	30	30	30	30	30	30	30	30	30	30
<u>EAR(S) (Continued):</u>										
-dermatitis, chronic, focal minimal	[0] 0	[0] 0	[0] 0	[2] 2	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0
<u>EXTREMITIES:</u>										
NO. EXAMINED	0	0	1	0	0	0	0	0	1	1
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-dermatitis, chronic, focal mild	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[1] 0	[1] 1
moderate	0	0	0	0	0	0	0	0	1	0
-inflammation, suppurative, joint capsule	[0] 0	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0
moderate	0	0	1	0	0	0	0	0	0	0
-osteoarthritis, chronic moderate	[0] 0	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0
-tendonitis, chronic mild	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[1] 1	[0] 0
<u>EYES:</u>										
NO. EXAMINED	0	0	0	0	0	1	0	1	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-atrophy, retinal mild	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[1] 1	[0] 0	[0] 0
-cataract, bilateral	0	0	0	0	0	1	0	0	0	0
-keratitis, chronic, focal minimal	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[1] 1	[0] 0	[0] 0
<u>MAMMARY GLAND:</u>										
NO. EXAMINED						1	0	0	0	0
NO. NORMAL						0	0	0	0	0
-adenocarcinoma						1	0	0	0	0
<u>PALATE:</u>										
NO. EXAMINED	1	0	0	0	0	0	0	0	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-fracture	1	0	0	0	0	0	0	0	0	0
-hemorrhage moderate	[1] 1	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

TABLE 3 (Continued)

Incidence and Degree of Severity of Histomorphologic Observations
 F1 Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	30	30	30	30	30	30	30	30	30	30
<u>THYMUS:</u>										
NO. EXAMINED	0	0	0	0	0	0	1	0	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-atrophy	[0]	[0]	[0]	[0]	[0]	[0]	[1]	[0]	[0]	[0]
mild	0	0	0	0	0	0	1	0	0	0
<u>TAIL:</u>										
NO. EXAMINED	0	0	0	0	2	0	0	0	1	0
NO. NORMAL	0	0	0	0	1	0	0	0	0	0
-abscess	0	0	0	0	0	0	0	0	1	0
-dermatitis, chronic	[0]	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]	[0]
mild	0	0	0	0	1	0	0	0	0	0
-hyperplasia/hyperkeratosis	[0]	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[1]	[0]
moderate	0	0	0	0	1	0	0	0	1	0
-inflammation, chronic	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[1]	[0]
moderate	0	0	0	0	0	0	0	0	1	0
-necrosis	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[1]	[0]
mild	0	0	0	0	0	0	0	0	1	0
<u>SKIN (GROSS LESION):</u>										
NO. EXAMINED	0	0	0	2	0	0	0	0	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-abscess	0	0	0	1	0	0	0	0	0	0
-dermatitis, chronic, focal	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]	[0]	[0]
moderate	0	0	0	1	0	0	0	0	0	0
<u>ESOPHAGUS:</u>										
NO. EXAMINED	0	1	0	2	1	0	0	0	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-bacterial colonies	0	1	0	0	0	0	0	0	0	0
-distention	[0]	[1]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]
moderate	0	1	0	0	0	0	0	0	0	0
-hemorrhage	[0]	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]	[0]
moderate	0	0	0	0	1	0	0	0	0	0
-necrosis	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]	[0]	[0]
marked	0	0	0	1	0	0	0	0	0	0
-perforation	0	0	0	2	1	0	0	0	0	0

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

TABLE 3 (Continued)

Incidence and Degree of Severity of Histomorphologic Observations
 F1 Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	30	30	30	30	30	30	30	30	30	30
<u>HEART:</u>										
NO. EXAMINED	0	1	0	1	0	0	0	0	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-abscess	0	1	0	0	0	0	0	0	0	0
-pericarditis, fibrinopurulent marked	[0] 0	[1] 1	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0
<u>LUNG:</u>										
NO. EXAMINED	0	1	0	0	0	0	0	0	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-pleuritis, fibrinopurulent marked	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0
<u>INTESTINES:</u>										
NO. EXAMINED	0	1	0	0	0	0	0	0	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-distention moderate	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0
<u>STOMACH:</u>										
NO. EXAMINED	0	1	0	0	0	0	0	0	0	0
NO. NORMAL	0	1	0	0	0	0	0	0	0	0
<u>THORACIC CAVITY:</u>										
NO. EXAMINED	0	0	0	1	0	0	0	0	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-abscess	0	0	0	1	0	0	0	0	0	0
<u>TRACHEA:</u>										
NO. EXAMINED	0	0	0	1	0	0	0	0	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-Advanced autolysis precludes evaluation	0	0	0	1	0	0	0	0	0	0

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

TABLE 4

Incidence and Degree of Severity of Histomorphologic Observations - Reduced Fertility Animals
 F1 Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	10	7	5	7	6	6	4	2	5	2
TESTIS:										
NO. EXAMINED	10	7	5	7	6					
NO. NORMAL	10	5	4	7	5					
-atrophy, diffuse marked	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0					
-atrophy, focal minimal	[0] 0	[0] 0	[1] 1	[0] 0	[0] 0					
-degeneration, multifocal mild	[0] 0	[1] 1	[0] 0	[0] 0	[1] 1					
-retained Step 19 spermatids, Stage IX/X tubules	0	1	0	0	1					
EPIDIDYMIS:										
NO. EXAMINED	10	7	5	7	6					
NO. NORMAL	7	1	4	4	3					
-atrophy moderate	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0					
-exfoliated spermatogenic cells minimal	[0] 0	[1] 1	[0] 0	[0] 0	[1] 0					
-exfoliated spermatogenic cells moderate	0	0	0	0	1					
-hypospermia mild	[0] 0	[1] 0	[0] 0	[0] 0	[1] 1					
-hypospermia marked	0	1	0	0	0					
-infiltration, mononuclear-cell, focal minimal	[2] 2	[4] 4	[1] 1	[3] 3	[2] 2					
-microgranuloma(s)	1	0	0	0	0					
PROSTATE:										
NO. EXAMINED	10	7	5	7	6					
NO. NORMAL	3	3	2	1	4					
-atrophy, focal minimal	[5] 1	[2] 1	[1] 0	[6] 3	[2] 1					
-atrophy, focal mild	3	1	0	2	1					
-atrophy, focal moderate	1	0	1	1	0					
-inflammation, chronic minimal	[4] 2	[2] 1	[2] 1	[1] 0	[1] 1					
-inflammation, chronic mild	2	0	0	1	0					
-inflammation, chronic moderate	0	1	1	0	0					

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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TABLE 4 (Continued)

Incidence and Degree of Severity of Histomorphologic Observations - Reduced Fertility Animals
F1 Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	10	7	5	7	6	6	4	2	5	2
<u>PROSTATE (Continued):</u>										
-prostatitis, suppurative	[1]	[0]	[0]	[1]	[0]					
minimal	1	0	0	1	0					
<u>SEMINAL VESICLES:</u>										
NO. EXAMINED	10	7	5	7	6					
NO. NORMAL	10	7	5	7	6					
<u>COAGULATING GLAND:</u>										
NO. EXAMINED	10	7	5	7	6					
NO. NORMAL	10	7	5	7	6					
<u>OVARIES:</u>										
NO. EXAMINED						1	1	0	1	0
NO. NORMAL						0	0	0	1	0
-cyst(s), intraovarian						1	1	0	0	0
-cystic bursa(e)						1	0	0	0	0
<u>OVIDUCT(S):</u>										
NO. EXAMINED						1	1	0	1	0
NO. NORMAL						1	1	0	1	0
<u>UTERUS:</u>										
NO. EXAMINED						1	1	0	1	0
NO. NORMAL						0	0	0	0	0
-distention, lumen						[1]	[1]	[0]	[1]	[0]
minimal						0	1	0	1	0
marked						1	0	0	0	0
<u>CERVIX:</u>										
NO. EXAMINED						1	1	0	1	0
NO. NORMAL						0	1	0	1	0
-distention						[1]	[0]	[0]	[0]	[0]
moderate						1	0	0	0	0
<u>VAGINA:</u>										
NO. EXAMINED						0	0	0	1	0
NO. NORMAL						0	0	0	1	0
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea						1	1	0	1	0
-presence of growing/antral follicles						1	1	0	1	0

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE 4 (Continued)

Incidence and Degree of Severity of Histomorphologic Observations - Reduced Fertility Animals
 F1 Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	10	7	5	7	6	6	4	2	5	2
<u>ADRENAL GLANDS:</u>										
NO. EXAMINED	1	0	0	0	0	0	0	0	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-vacuolation, cortex	[1]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]
mild	1	0	0	0	0	0	0	0	0	0
<u>KIDNEYS:</u>										
NO. EXAMINED	9	7	5	7	6	0	0	0	0	0
NO. NORMAL	6	3	4	3	0	0	0	0	0	0
-basophilia, cortical tubules, focal	[0]	[0]	[0]	[0]	[2]	[0]	[0]	[0]	[0]	[0]
minimal	0	0	0	0	1	0	0	0	0	0
mild	0	0	0	0	1	0	0	0	0	0
-cyst(s), cortex	0	1	0	0	0	0	0	0	0	0
-cyst(s), medulla	1	0	0	0	0	0	0	0	0	0
-cyst(s), papilla	0	0	1	1	0	0	0	0	0	0
-dilatation, pelvis	[0]	[1]	[0]	[2]	[0]	[0]	[0]	[0]	[0]	[0]
minimal	0	1	0	1	0	0	0	0	0	0
mild	0	0	0	1	0	0	0	0	0	0
-edema, papillary, focal	[1]	[0]	[0]	[0]	[2]	[0]	[0]	[0]	[0]	[0]
minimal	1	0	0	0	2	0	0	0	0	0
-hemorrhage, papilla	[0]	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]	[0]
mild	0	0	0	0	1	0	0	0	0	0
-hemorrhage, pelvis	[0]	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]	[0]
mild	0	0	0	0	1	0	0	0	0	0
-hyperplasia, tubular/ductular										
epithelium, papilla	[2]	[0]	[0]	[2]	[6]	[0]	[0]	[0]	[0]	[0]
minimal	2	0	0	2	2	0	0	0	0	0
mild	0	0	0	0	4	0	0	0	0	0
-infiltration, mononuclear-cell, focal	[0]	[2]	[1]	[1]	[1]	[0]	[0]	[0]	[0]	[0]
minimal	0	2	1	1	1	0	0	0	0	0
-mineralization, multifocal	[0]	[1]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]
minimal	0	1	0	0	0	0	0	0	0	0
-nephritis, chronic, focal	[0]	[0]	[0]	[1]	[0]	[0]	[0]	[0]	[0]	[0]
minimal	0	0	0	1	0	0	0	0	0	0
<u>LIVER:</u>										
NO. EXAMINED	9	7	5	7	6	0	0	0	0	0
NO. NORMAL	4	5	4	5	3	0	0	0	0	0

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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TABLE 4 (Continued)

Incidence and Degree of Severity of Histomorphologic Observations - Reduced Fertility Animals
 F1 Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	10	7	5	7	6	6	4	2	5	2
<u>LIVER (Continued):</u>										
-cellular alteration, eosinophilic, focal mild	[0] 0	[0] 0	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0
-hematopoiesis, extramedullary, multifocal minimal	[1] 1	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0
-hyperplasia, bile duct, focal minimal	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0
-hypertrophy, hepatocellular minimal	[0] 0	[0] 0	[0] 0	[1] 1	[3] 3	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0
-inflammation, chronic, focal/multifocal minimal	[4] 4	[1] 1	[1] 1	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0
-lipidosis, tension, focal	0	1	0	0	0	0	0	0	0	0
<u>PITUITARY:</u>										
NO. EXAMINED	1	0	0	0	1	0	0	0	0	0
NO. NORMAL	1	0	0	0	1	0	0	0	0	0
<u>EAR(S):</u>										
NO. EXAMINED	0	0	0	1	0	0	0	0	1	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-chondropathy, auricular mild moderate	[0] 0 0	[0] 0 0	[0] 0 0	[1] 1 0	[0] 0 0	[0] 0 0	[0] 0 0	[0] 0 0	[1] 0 1	[0] 0 0
<u>EXTREMITIES:</u>										
NO. EXAMINED	0	0	1	0	0	0	0	0	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-inflammation, suppurative, joint capsule moderate	[0] 0 0	[0] 0 0	[1] 1 0	[0] 0 0	[0] 0 0	[0] 0 0	[0] 0 0	[0] 0 0	[0] 0 0	[0] 0 0
-osteoarthritis, chronic moderate	[0] 0	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0
<u>TAIL:</u>										
NO. EXAMINED	0	0	0	0	2	0	0	0	1	0
NO. NORMAL	0	0	0	0	1	0	0	0	0	0
-abscess	0	0	0	0	0	0	0	0	1	0

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE 4 (Continued)

Incidence and Degree of Severity of Histomorphologic Observations - Reduced Fertility Animals
 F1 Generation

Dose Group:	I	II	III	IV	V	I	II	III	IV	V
Sex:	M	M	M	M	M	F	F	F	F	F
Number of Animals/Group:	10	7	5	7	6	6	4	2	5	2
<u>TAIL (Continued):</u>										
-dermatitis, chronic mild	[0] 0	[0] 0	[0] 0	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0
-hyperplasia/hyperkeratosis moderate	[0] 0	[0] 0	[0] 0	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0	[1] 1	[0] 0
-inflammation, chronic moderate	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[1] 1	[0] 0
-necrosis mild	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[1] 1	[0] 0
<u>SKIN (GROSS LESION):</u>										
NO. EXAMINED	0	0	0	1	0	0	0	0	0	0
NO. NORMAL	0	0	0	0	0	0	0	0	0	0
-dermatitis, chronic, focal moderate	[0] 0	[0] 0	[0] 0	[1] 1	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0	[0] 0

[] = Total incidence of specified lesion, all grades.

ORAL (GAVAGE) TWO-GENERATION
(ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS
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HISTOPATHOLOGY REPORT

APPENDIX I

HISTOMORPHOLOGIC OBSERVATIONS

P GENERATION

ORAL (GAVAGE) TWO-GENERATION
(ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS
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HISTOPATHOLOGY REPORT

KEY TO HISTOMORPHOLOGIC OBSERVATIONS

-	=	No change (not remarkable, within normal histologic limits or indicated change not present).
*	=	Tissue not available (specified tissue missing, insufficient tissue in plane of section, artifact precludes evaluation, or specified tissue not present in section).
< >	=	Microscopic finding(s) in tissue(s) with gross observation(s).
<->	=	Within normal limits [no microscopic change(s) to correlate with the gross observation(s)].
()	=	Only one of a pair of organs available for processing/evaluation.
A	=	Advanced autolysis precludes evaluation.
P	=	Indicated change or lesion present.
1	=	Minimal degree or amount of indicated change or lesion.
2	=	Mild degree or amount of indicated change or lesion.
3	=	Moderate degree or amount of indicated change or lesion.
4	=	Marked degree or amount of indicated change or lesion.
SS	=	Sacrifice-Scheduled
SD	=	Spontaneous Death
SSR	=	Scheduled Sacrifice (randomly selected for histopathology)
SSRF	=	Scheduled (Reduced Fertility)
SSGL	=	Scheduled Sacrifice (examined due to presence of a gross lesion)
SDGL	=	Spontaneous Death (examined due to presence of a gross lesion)
SMGL	=	Sacrifice-Moribund (examined due to presence of a gross lesion)

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE I-1

Histomorphologic Observations
 P Generation

Dose Group:	I	I	I	I	I	I	I	I	I	I
Animal Number:	15401	15402	15403	15404	15405	15406	15407	15408	15409	15410
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SS	SS	SS	SS	SSR	SS	SSR	SSRF	SSR	SS
<u>TESTIS:</u>										
-atrophy, diffuse					-		-	<4>	-	
-edema, diffuse					-		-	<4>	-	
<u>EPIDIDYMIS:</u>										
-atrophy					-		-	<4>	-	
-hypospermia					-		-	<4>	-	
<u>PROSTATE:</u>										
-atrophy, focal					1		-	-	2	
-inflammation, chronic					2		-	-	-	
<u>SEMINAL VESICLES:</u>										
					-		-	-	-	
<u>COAGULATING GLAND:</u>										
					-		-	-	-	
<u>ADRENAL GLANDS:</u>										
					-		-	-	-	
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	1	-	-	-	-	-	-	-	-
-infiltration, mononuclear-cell, focal	-	-	-	1	-	-	-	1	1	-
<u>LIVER:</u>										
-hematopoiesis, extramedullary	-	-	-	-	-	-	-	-	-	1
-inflammation, chronic, focal/multifocal	-	-	-	-	1	-	-	-	-	-
-vacuolation, hepatocellular, multifocal	-	-	1	-	-	2	-	-	-	-
<u>PITUITARY:</u>										
-hyperplasia, pars distalis, focal					-		-		1	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE I-1 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	I	I	I	I	I	I	I	I	I	I
Animal Number:	15411	15412	15413	15414	15415	15416	15417	15418	15419	15420
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SSR	SS	SSR	SSGL	SS	SSRF	SS	SSR	SS	SS
<u>TESTIS:</u>	-		-			-		-		
<u>EPIDIDYMIS:</u>										
-infiltration, mononuclear-cell, focal	1		-			-		-		
<u>PROSTATE:</u>										
-prostatitis, suppurative	-		-			-		1		
<u>SEMINAL VESICLES:</u>	-		-			-		-		
<u>COAGULATING GLAND:</u>	-		-			-		-		
<u>ADRENAL GLANDS:</u>										
-vacuolation, cortex	-		1					-		
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	1	1	-	-	-	-	-	-	-	-
-dilatation, pelvis	-	-	-	-	-	-	-	-	-	2
-infiltration, mononuclear-cell, focal	1	1	-	1	-	-	-	1	-	-
<u>LIVER:</u>										
-inflammation, chronic, focal/multifocal	-	1	-	-	-	-	1	-	-	-
<u>PITUITARY:</u>										
-cyst(s)	-		-	<P>				-		
<u>THYMUS:</u>										
-congestion				<1>						

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE I-1 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	I	I	I	I	I	I	I	I	I	I
Animal Number:	15421	15422	15423	15424	15425	15426	15427	15428	15429	15430
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SSR	SSR	SS	SS	SSGL	SSR	SSRF	SS	SSR	SS
<u>TESTIS:</u>	-	-				-	-		-	
<u>EPIDIDYMIS:</u>										
-infiltration, mononuclear-cell, focal	-	-				-	2		1	
<u>PROSTATE:</u>										
-atrophy, focal	-	1				-	-		-	
-inflammation, chronic	-	-				-	2		1	
-prostatitis, suppurative	1	-				-	-		-	
<u>SEMINAL VESICLES:</u>	-	-				-	-		-	
<u>COAGULATING GLAND:</u>	-	-				-	-		-	
<u>ADRENAL GLANDS:</u>										
-infiltration, mononuclear-cell, multifocal	2	-				-			-	
-vacuolation, cortex	-	1				1			-	
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	-	-	-	2	-	-	1	-	-
-cyst(s), medulla	-	-	-	P	-	-	-	-	-	-
-cyst(s), papilla	-	P	-	-	-	-	-	-	-	-
-edema, papillary, focal	1	-	-	-	-	-	-	-	-	-
-infiltration, mononuclear-cell, focal	1	-	-	-	1	-	1	-	-	-
<u>LIVER:</u>										
-inflammation, chronic, focal/multifocal	-	-	1	-	-	-	-	1	-	-
<u>PITUITARY:</u>										
-cyst(s)	-	P				-			-	
<u>THYMUS:</u>										
-congestion										

<1>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE I-2

Histomorphologic Observations
 P Generation

Dose Group:	II	II	II	II	II	II	II	II	II	II
Animal Number:	15431	15432	15433	15434	15435	15436	15437	15438	15439	15440
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SS	SS	SS	SS	SS	SS	SS	SS	SSGL	SS

KIDNEYS:

-basophilia, cortical tubules, focal	-	-	-	-	1	-	-	-	-	1
-dilatation, pelvis	2	-	-	-	-	-	-	-	-	1
-infiltration, mononuclear-cell, focal	-	-	-	-	-	-	-	1	-	-

LIVER:

-inflammation, chronic, focal/multifocal	1	-	-	-	-	-	-	-	1	-
-vacuolation, hepatocellular, multifocal	-	2	-	-	-	-	-	-	-	-

EAR(S):

-chondropathy, auricular

<4>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE I-2 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	II	II	II	II	II	II	II	II	II	II
Animal Number:	15441	15442	15443	15444	15445	15446	15447	15448	15449	15450
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SS	SS	SS	SS	SS	SSGL	SS	SS	SS	SS

KIDNEYS:

-dilatation, pelvis	-	-	-	-	-	-	-	-	1	-
-edema, papillary, focal	-	-	-	-	-	-	1	-	-	-
-infiltration, mononuclear-cell, focal	-	-	-	-	-	-	-	-	1	-

LIVER:

-cellular alteration, clear-cell, focal	-	-	-	-	-	-	1	-	-	-
-inflammation, chronic, focal/multifocal	-	-	1	-	-	-	-	-	-	-

THYMUS:

-congestion										<2>
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ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE I-2 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	II	II	II	II	II	II	II	II	II	II
Animal Number:	15451	15452	15453	15454	15455	15456	15457	15458	15459	15460
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SS	SS	SSRF	SS	SS	SS	SS	SS	SS	SS
<u>TESTIS:</u>										
			-							
<u>EPIDIDYMIS:</u>										
-infiltration, mononuclear-cell, focal			1							
<u>PROSTATE:</u>										
-inflammation, chronic			2							
<u>SEMINAL VESICLES:</u>										
			-							
<u>COAGULATING GLAND:</u>										
			-							
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	-	-	-	-	-	-	1	-	1
-infiltration, mononuclear-cell, focal	-	1	-	-	-	1	-	-	-	1
<u>LIVER:</u>										
	-	-	-	-	-	-	-	-	-	-

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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TABLE I-3

Histomorphologic Observations
 P Generation

Dose Group:	III	III	III	III	III	III	III	III	III	III
Animal Number:	15461	15462	15463	15464	15465	15466	15467	15468	15469	15470
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SS	SS	SS	SS	SS	SS	SS	SS	SS	SSGL

TESTIS:

-atrophy, multifocal

<2>

KIDNEYS:

-basophilia, cortical tubules, focal
 -hyperplasia, tubular/ductular epithelium,
 papilla
 -infiltration, mononuclear-cell, focal

-	-	1	-	-	-	-	-	-	-	-
1	-	-	1	-	-	-	-	-	-	-
-	-	1	-	-	-	-	-	-	-	-

LIVER:

-inflammation, chronic, focal/multifocal
 -vacuolation, hepatocellular, multifocal

-	-	-	-	-	-	1	-	-	-	-
1	-	-	-	1	-	-	-	-	-	-

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE I-3 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	III	III	III	III	III	III	III	III	III	III
Animal Number:	15471	15472	15473	15474	15475	15476	15477	15478	15479	15480
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SS	SS	SS	SSRF	SS	SSGL	SS	SS	SS	SS
<u>TESTIS:</u>				-						
<u>EPIDIDYMIS:</u>				-						
<u>PROSTATE:</u>										
-atrophy, focal				1						
-inflammation, chronic				1						
<u>SEMINAL VESICLES:</u>				-						
<u>COAGULATING GLAND:</u>				-						
<u>KIDNEYS:</u>										
-dilatation, pelvis	-	-	1	-	-	-	-	-	-	-
-edema, papillary, focal	-	-	-	-	-	-	-	-	-	1
-hyperplasia, pelvic/papillary urothelium	-	-	-	-	1	-	-	-	-	-
-infiltration, mononuclear-cell, focal	-	-	-	-	-	-	-	-	-	1
-mineralization, pelvis	-	-	-	-	1	-	-	-	-	-
<u>LIVER:</u>	-	-	-	-	-	-	-	-	-	-
<u>THYMUS:</u>										
-congestion										<1>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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TABLE I-3 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	III	III	III	III	III	III	III	III	III	III
Animal Number:	15481	15482	15483	15484	15485	15486	15487	15488	15489	15490
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	-	1	-	-	1	-	-	-	-
-cyst(s), medulla	-	-	-	-	-	-	-	-	P	-
-dilatation, pelvis	-	-	-	-	-	-	1	-	-	-
-edema, papillary, focal	-	-	-	-	-	1	-	-	-	-
-hyperplasia, tubular/ductular epithelium, papilla	-	-	-	-	-	-	1	-	-	-
-infiltration, mononuclear-cell, focal	-	-	-	-	-	1	-	-	-	-
-pyelitis, chronic	-	2	-	-	-	-	-	-	-	-
<u>LIVER:</u>										
-inflammation, chronic, focal/multifocal	-	-	1	-	-	-	-	-	-	-

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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TABLE I-4

Histomorphologic Observations
 P Generation

Dose Group:	IV	IV	IV	IV	IV	IV	IV	IV	IV	IV
Animal Number:	15491	15492	15493	15494	15495	15496	15497	15498	15499	15500
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SS	SS	SS	SS	SS	SS	SS	SS	SSGL	SSGL
<u>TESTIS:</u>										
-atrophy, diffuse										<4>
<u>EPIDIDYMIS:</u>										
-atrophy										<4>
-hypospermia										<4>
<u>KIDNEYS:</u>										
-dilatation, pelvis	-	-	-	-	-	-	1	-	<3>	<2>
-hemorrhage, pelvis	-	-	1	-	-	-	-	-	-	<2>
-hyperplasia, pelvic/papillary urothelium	-	-	-	-	-	-	-	-	-	<1>
-hyperplasia, tubular/ductular epithelium, papilla	1	-	-	1	-	1	-	1	-	-
-mineralization, pelvis	-	-	2	-	-	-	-	-	-	<3>
<u>LIVER:</u>										
-hyperplasia, bile duct, focal	-	-	1	-	-	-	-	-	-	-
-hypertrophy, hepatocellular	-	-	1	-	-	1	-	-	-	-
-inflammation, chronic, focal/multifocal	-	-	-	-	-	-	1	-	-	1
-vacuolation, hepatocellular, centrilobular	-	-	-	-	-	-	-	2	-	-
-vacuolation, hepatocellular, multifocal	1	-	-	-	-	-	-	-	-	-

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE I-4 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	IV	IV	IV	IV	IV	IV	IV	IV	IV	IV
Animal Number:	15501	15502	15503	15504	15505	15506	15507	15508	15509	15510
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SS	SS	SS	SSGL	SS	SS	SSRF	SS	SS	SS
<u>TESTIS:</u>										
<u>EPIDIDYMIS:</u>										
<u>PROSTATE:</u>										
<u>SEMINAL VESICLES:</u>										
<u>COAGULATING GLAND:</u>										
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	-	-	-	-	-	-	1	-	-
-edema, papillary, focal	-	-	-	-	-	1	-	-	-	-
-hyperplasia, tubular/ductular epithelium, papilla	-	1	-	-	2	1	-	2	-	-
-infiltration, mononuclear-cell, focal	-	-	-	1	-	-	-	-	-	-
<u>LIVER:</u>										
-cellular alteration, basophilic, focal	-	1	-	-	-	1	-	-	-	-
-inflammation, chronic, focal/multifocal	-	1	-	-	-	-	-	-	-	-
<u>EAR(S):</u>										
-chondropathy, auricular										<2>
<u>THYMUS:</u>										
-congestion										<1>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFES) IN RATS
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TABLE I-4 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	IV	IV	IV	IV	IV	IV	IV	IV	IV	IV
Animal Number:	15511	15512	15513	15514	15515	15516	15517	15518	15519	15520
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SS	SS	SS	SS	SS	SS	SS	SSGL	SSGL	SSGL
<u>KIDNEYS:</u>										
-dilatation, pelvis	-	-	-	-	-	-	-	<2>	-	-
-edema, papillary, focal	-	-	-	-	-	-	-	-	1	-
-hyperplasia, pelvic/papillary urothelium	-	-	-	-	-	-	-	<1>	-	-
-hyperplasia, tubular/ductular epithelium, papilla	-	-	-	-	1	-	-	-	-	-
-mineralization, pelvis	-	-	-	-	-	-	-	<3>	-	-
<u>LIVER:</u>										
-hypertrophy, hepatocellular	-	-	-	-	-	-	-	1	-	-
-inflammation, chronic, focal/multifocal	-	-	-	-	-	-	-	-	1	-
<u>THYMUS:</u>										
-congestion								<1>	<1>	-
-hemorrhage, focal								-	-	<1>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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TABLE I-5

Histomorphologic Observations
 P Generation

Dose Group:	V	V	V	V	V	V	V	V	V	V
Animal Number:	15521	15522	15523	15524	15525	15526	15527	15528	15529	15530
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SSR	SS	SSR	SSR	SS	SSRF	SSR	SS	SSRF	SSGL
<u>TESTIS:</u>										
-atrophy, diffuse	-		-	-		-	-		<4>	
<u>EPIDIDYMIS:</u>										
-atrophy	-		-	-		-	-		<2>	
-hypospermia	-		-	-		-	-		<2>	
-infiltration, mononuclear-cell, focal	-		-	1		-	-		<1>	
<u>PROSTATE:</u>										
-atrophy, diffuse	-		-	-		-	-		3	
-atrophy, focal	-		-	2		-	-		-	
-prostatitis, suppurative	-		-	1		-	-		-	
<u>SEMINAL VESICLES:</u>										
-atrophy	-		-	-		-	-		2	
<u>COAGULATING GLAND:</u>										
-	-		-	-		-	-		-	
<u>ADRENAL GLANDS:</u>										
-vacuolation, cortex	1		-	-			1			
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	1	-	-	-	-	-	-	-	-	<1>
-cyst(s), medulla	-	-	-	-	-	-	-	P	-	-
-dilatation, cortical tubules, focal	-	-	-	-	-	-	-	1	-	-
-dilatation, pelvis	-	-	-	-	-	-	-	-	-	<3>
-edema, papillary, focal	-	1	-	-	-	-	-	-	-	-
-hyperplasia, pelvic/papillary urothelium	-	-	-	-	-	-	-	-	-	<2>
-hyperplasia, tubular/ductular epithelium, papilla	2	2	-	1	-	-	1	-	2	<1>
-mineralization, pelvis	-	-	-	-	-	-	-	-	-	<2>
<u>LIVER:</u>										
-hypertrophy, hepatocellular	1	1	1	1	1	-	1	1	1	1
-inflammation, chronic, focal/multifocal	-	-	-	-	-	-	1	-	-	-
<u>PITUITARY:</u>										
-	-		-	-			-			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE I-5 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	V	V	V	V	V	V	V	V	V	V
Animal Number:	15531	15532	15533	15534	15535	15536	15537	15538	15539	15540
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SSR	SS	SSRF	SS	SS	SSR	SS	SSGL	SSRF	SS
<u>TESTIS:</u>	-		-			-			-	
<u>EPIDIDYMIS:</u>										
-infiltration, mononuclear-cell, focal	-		-			-			1	
<u>PROSTATE:</u>										
-atrophy, focal	-		2			-			3	
-inflammation, chronic	1		-			-			2	
<u>SEMINAL VESICLES:</u>	-		-			-			-	
<u>COAGULATING GLAND:</u>	-		-			-			-	
<u>ADRENAL GLANDS:</u>	-					-				
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	-	-	-	1	-	-	2	-	-
-edema, papillary, focal	-	-	-	-	-	1	-	-	-	1
-hemorrhage, pelvis	-	-	-	-	-	-	-	2	-	-
-hyperplasia, pelvic/papillary urothelium	-	-	-	-	-	-	-	2	-	2
-hyperplasia, tubular/ductular epithelium, papilla	-	-	1	2	-	1	2	3	1	2
-necrosis, papilla, focal	-	-	-	-	-	-	-	3	-	-
<u>LIVER:</u>										
-hematopoiesis, extramedullary	-	-	1	-	-	-	-	-	-	-
-hypertrophy, hepatocellular	-	1	1	1	1	1	1	2	1	-
-inflammation, chronic, focal/multifocal	1	-	-	1	-	-	-	-	-	-
-vacuolation, hepatocellular, multifocal	-	2	-	-	-	-	-	-	-	-
<u>PITUITARY:</u>	-					-				
<u>THYMUS:</u>										

<->

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE I-5 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	V	V	V	V	V	V	V	V	V	V
Animal Number:	15541	15542	15543	15544	15545	15546	15547	15548	15549	15550
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SS	SSGL	SSRF	SSR	SSR	SSR	SDGL	SSR	SS	SS
<u>TESTIS:</u>		<->	-	-	-	-		-		
<u>EPIDIDYMIS:</u>										
-infiltration, mononuclear-cell, focal			-	-	-	1		-		
<u>PROSTATE:</u>										
-atrophy, focal			-	-	-	-		1		
-inflammation, chronic			-	2	1	-		-		
-prostatitis, suppurative			-	1	-	1		-		
<u>SEMINAL VESICLES:</u>			-	-	-	-		-		
<u>COAGULATING GLAND:</u>			-	-	-	-		-		
<u>ADRENAL GLANDS:</u>										
-vacuolation, cortex				-	-	-		1		
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	1	-	-	-	-	-	-	-	-
-cyst(s), perirenal	-	-	-	-	-	-	-	-	-	p
-edema, papillary, focal	2	-	-	1	-	-	1	-	-	-
-hyperplasia, pelvic/papillary urothelium	-	2	-	-	-	-	-	-	-	-
-hyperplasia, tubular/ductular epithelium, papilla	2	2	2	-	1	-	1	-	1	-
-infiltration, mononuclear-cell, focal	-	-	-	1	-	1	-	-	-	-
-pyelitis, chronic	-	3	-	-	-	-	-	-	-	-
<u>LIVER:</u>										
-hypertrophy, hepatocellular	1	1	1	1	1	1	1	1	1	-
-inflammation, chronic, focal/multifocal	-	-	-	-	1	-	-	1	-	-
<u>PITUITARY:</u>				-	-	-		-		
<u>THYMUS:</u>										
-hemorrhage, focal										<1>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE I-6

Histomorphologic Observations
 P Generation

Dose Group:	I	I	I	I	I	I	I	I	I	I
Animal Number:	15551	15552	15553	15554	15555	15556	15557	15558	15559	15560
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SSR	SS	SS	SS	SS	SS	SSRF	SSR	SS
<u>OVARIES:</u>		-						*	-	
<u>OVIDUCT(S):</u>		-						*	-	
<u>UTERUS:</u>										
-macrophages, pigmented		2						*	3	
<u>CERVIX:</u>		-						*	-	
<u>VAGINA:</u>		-						*	-	
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea		P						*	P	
-presence of growing/antral follicles		P						*	P	
<u>ADRENAL GLANDS:</u>		-							-	
<u>KIDNEYS:</u>										
-dilatation, pelvis	-	-	-	1	-	-	-	*	-	-
-edema, papillary, focal	1	-	-	-	-	-	-	*	-	-
-hyperplasia, tubular/ductular epithelium, papilla	-	-	-	-	-	1	2	*	-	-
-mineralization, multifocal	-	-	1	1	-	-	-	*	1	-
-pyelonephritis	-	-	-	-	-	-	2	*	-	-
<u>LIVER:</u>		-							-	
<u>PITUITARY:</u>										
-cyst(s)		P							-	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE I-6 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	I	I	I	I	I	I	I	I	I	I
Animal Number:	15561	15562	15563	15564	15565	15566	15567	15568	15569	15570
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SSR	SS	SSR	SSR	SSRF	SS	SS	SS	SD
<u>OVARIES:</u>		-		-	-	*				
<u>OVIDUCT(S):</u>		-		-	-	*				
<u>UTERUS:</u>										
-distention, lumen		-		-	3	*				
-macrophages, pigmented		3		3	3	*				
<u>CERVIX:</u>		-		-	-	*				
<u>VAGINA:</u>		-		-	-	*				
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea		P		P	P	*				
-presence of growing/antral follicles		P		P	P	*				
<u>ADRENAL GLANDS:</u>		-		-	-					
<u>KIDNEYS:</u>										
-hyperplasia, tubular/ductular epithelium, papilla	-	-	-	-	-	*	-	-	2	-
-mineralization, multifocal	1	-	-	-	-	*	-	1	-	-
<u>LIVER:</u>		-		-	-					
<u>PITUITARY:</u>		-		-	-					

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE I-6 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	I	I	I	I	I	I	I	I	I	I
Animal Number:	15571	15572	15573	15574	15575	15576	15577	15578	15579	15580
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SSR	SSR	SS	SSR	SSR	SSR	SSRF	SS	SS	SS
<u>OVARIES:</u>	-	-		-	-	-	*			
<u>OVIDUCT(S):</u>	-	-		-	-	-	*			
<u>UTERUS:</u>										
-macrophages, pigmented	2	2		3	-	-	*			
<u>CERVIX:</u>	-	-		-	-	-	*			
<u>VAGINA:</u>	-	-		-	-	-	*			
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea	P	P		P	P	P	*			
-presence of growing/antral follicles	P	P		P	P	P	*			
<u>ADRENAL GLANDS:</u>	-	-		-	-	-				
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	-	-	1	-	-	*	-	-	-
-mineralization, multifocal	-	-	-	-	-	1	*	-	-	-
<u>LIVER:</u>										
-inflammation, chronic, focal/multifocal	-	1		-	-	-				
<u>PITUITARY:</u>										
-cyst(s)	P	-		-	-	-				
<u>SPLEEN:</u>										
-congestion, red pulp							<3>			
-cyst(s), capsular							<P>			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE I-7

Histomorphologic Observations
 P Generation

Dose Group:	II	II	II	II	II	II	II	II	II	II
Animal Number:	15581	15582	15583	15584	15585	15586	15587	15588	15589	15590
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
<u>KIDNEYS:</u>										
-cyst(s), papilla	-	-	-	-	-	-	-	P	-	-
-edema, papillary, focal	-	-	-	-	-	-	-	-	(1)	-
-hyperplasia, tubular/ductular epithelium, papilla	-	-	-	-	-	-	-	-	(1)	-
-mineralization, multifocal	-	-	-	-	-	-	1	1	-	-

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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TABLE I-7 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	II	II	II	II	II	II	II	II	II	II
Animal Number:	15591	15592	15593	15594	15595	15596	15597	15598	15599	15600
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS

KIDNEYS:

-mineralization, multifocal

1	-	-	-	1	-	-	1	-	-
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ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE I-7 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	II	II	II	II	II	II	II	II	II	II
Animal Number:	15601	15602	15603	15604	15605	15606	15607	15608	15609	15610
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SS	SSRF	SS	SS	SS	SS	SS	SS	SS
<u>OVARIES:</u>			*							
<u>OVIDUCT(S):</u>			*							
<u>UTERUS:</u>			*							
<u>CERVIX:</u>			*							
<u>VAGINA:</u>			*							
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>			*							
<u>KIDNEYS:</u>										
-cyst(s), medulla	-	-	*	-	-	-	-	-	-	P
-hyperplasia, tubular/ductular epithelium, papilla	-	-	*	-	-	-	-	1	-	-
-mineralization, multifocal	-	-	*	-	-	-	-	-	1	1
-nephritis, chronic, focal	-	-	*	-	-	-	-	-	1	-

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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TABLE I-8

Histomorphologic Observations
 P Generation

Dose Group:	III	III	III	III	III	III	III	III	III	III
Animal Number:	15611	15612	15613	15614	15615	15616	15617	15618	15619	15620
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SS	SS	SS	SS	SSGL	SS	SS	SS	SS

KIDNEYS:

-dilatation, pelvis	-	-	-	-	-	-	-	-	-	2
-edema, papillary, focal	-	-	-	-	-	1	-	-	1	-
-hyperplasia, tubular/ductular epithelium, papilla	-	-	-	-	-	1	-	-	-	-
-mineralization, multifocal	-	-	1	-	-	1	-	-	-	-

EAR(S):

<*>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

TABLE I-8 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	III	III	III	III	III	III	III	III	III	III
Animal Number:	15621	15622	15623	15624	15625	15626	15627	15628	15629	15630
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS

KIDNEYS:

-hyperplasia, tubular/ductular epithelium,
 papilla
 -mineralization, multifocal
 -mineralization, pelvis

-	-	1	-	-	-	-	-	-	-	1
-	-	-	1	-	-	1	1	-	-	-
-	-	-	-	-	-	-	1	-	-	-

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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TABLE I-8 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	III	III	III	III	III	III	III	III	III	III
Animal Number:	15631	15632	15633	15634	15635	15636	15637	15638	15639	15640
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SS	SS	SS	SS	SS	SS	SS	SSGL	SSRF
<u>OVARIES:</u>										*
<u>OVIDUCT(S):</u>										*
<u>UTERUS:</u>										*
<u>CERVIX:</u>										*
<u>VAGINA:</u>										*
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										*
<u>KIDNEYS:</u>										
-edema, papillary, focal	1	-	-	-	-	-	-	-	-	*
-hyperplasia, tubular/ductular epithelium, papilla	2	-	-	-	-	-	-	1	-	*
-infiltration, mononuclear-cell, focal	1	-	-	-	-	-	-	-	-	*
-mineralization, multifocal	-	-	1	1	-	-	1	-	-	*
<u>TAIL:</u>										
-inflammation, chronic, focal									<3>	
-necrosis									<3>	

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TABLE I-9

Histomorphologic Observations
 P Generation

Dose Group:	IV	IV	IV	IV	IV	IV	IV	IV	IV	IV
Animal Number:	15641	15642	15643	15644	15645	15646	15647	15648	15649	15650
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SS	SS	SS	SS	SS	SS	SS	SS	SSGL

KIDNEYS:

-edema, papillary, focal	-	1	2	-	-	1	-	-	-	-
-hyperplasia, tubular/ductular epithelium, papilla	1	2	3	-	1	1	-	-	-	2
-mineralization, multifocal	-	-	-	1	-	1	-	-	-	-
-necrosis, papilla, focal	-	-	-	-	-	-	-	-	-	3

EXTREMITIES:

-ankylosis										<P>
-osteochondritis										<3>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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TABLE I-9 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	IV	IV	IV	IV	IV	IV	IV	IV	IV	IV
Animal Number:	15651	15652	15653	15654	15655	15656	15657	15658	15659	15660
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SS	SS	SS	SS	SS	SSRF	SS	SS	SS
<u>OVARIES:</u>										*
<u>OVIDUCT(S):</u>										*
<u>UTERUS:</u>										*
<u>CERVIX:</u>										*
<u>VAGINA:</u>										*
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										*
<u>KIDNEYS:</u>										
-edema, papillary, focal	*	-	*	*	-	1	*	1	-	-
-hyperplasia, tubular/ductular epithelium, papilla	*	2	*	*	-	1	*	2	1	-
-mineralization, multifocal	*	1	*	*	-	-	*	1	-	-

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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TABLE I-9 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	IV	IV	IV	IV	IV	IV	IV	IV	IV	IV
Animal Number:	15661	15662	15663	15664	15665	15666	15667	15668	15669	15670
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SMGL	SS	SS	SS	SS	SS	SSGL	SS	SS	SS
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	3	-	-	-	-	-	-	-	-	-
-dilatation, cortical tubules, focal	3	-	-	-	-	-	-	-	-	-
-dilatation, medullary tubules	3	-	-	-	-	-	-	-	-	-
-edema, papillary, focal	-	1	1	-	-	1	-	-	-	-
-hyperplasia, tubular/ductular epithelium, papilla	2	1	2	-	-	2	1	-	2	-
-infiltration, mononuclear-cell, focal	-	-	-	-	-	1	-	-	-	-
-mineralization, multifocal	-	-	-	-	-	-	1	-	-	-
-necrosis, papilla, focal	3	-	1	-	-	-	-	-	-	-
<u>SPLEEN:</u>										
-abscess	-							<P>		
-atrophy	<3>							-		
-pigment	<2>							-		

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TABLE I-10

Histomorphologic Observations
 P Generation

Dose Group:	V	V	V	V	V	V	V	V	V	V
Animal Number:	15671	15672	15673	15674	15675	15676	15677	15678	15679	15680
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SSR	SSR	SS	SS	SSRF	SS	SSR	SSRF	SSR
<u>OVARIES:</u>		-	-			*		-	*	-
<u>OVIDUCT(S):</u>		-	-			*		-	*	-
<u>UTERUS:</u>										
-distention, lumen		-	2			*		3	*	-
-macrophages, pigmented		3	2			*		3	*	3
<u>CERVIX:</u>		-	-			*		-	*	-
<u>VAGINA:</u>		-	-			*		-	*	-
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea		P	P			*		P	*	P
-presence of growing/antral follicles		P	P			*		P	*	P
<u>ADRENAL GLANDS:</u>										
-degeneration, cystic, cortex		1	-					-		-
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	-	-	-	-	*	-	2	*	-
-cyst(s), medulla	-	-	P	-	-	*	-	-	*	-
-dilatation, cortical tubules, focal	-	-	-	-	-	*	-	2	*	-
-dilatation, medullary tubules	-	-	-	-	-	*	-	3	*	-
-edema, papillary, focal	-	1	-	-	-	*	1	-	*	-
-hyperplasia, tubular/ductular epithelium, papilla	2	1	1	2	1	*	2	1	*	2
-mineralization, multifocal	-	-	1	-	1	*	-	-	*	1
<u>LIVER:</u>		-	-					-		-
<u>PITUITARY:</u>		-	-					-		-

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TABLE I-10 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	V	V	V	V	V	V	V	V	V	V
Animal Number:	15681	15682	15683	15684	15685	15686	15687	15688	15689	15690
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SSR	SS	SSRF	SS	SSR	SSR	SS	SSR	SSRF	SS
<u>OVARIES:</u>										
-cyst(s), intraovarian	P		*		-	-		-	*	
<u>OVIDUCT(S):</u>	-		*		-	-		-	*	
<u>UTERUS:</u>										
-distention, lumen	4		*		-	-		-	*	
-macrophages, pigmented	-		*		1	3		1	*	
<u>CERVIX:</u>	-		*		-	-		-	*	
<u>VAGINA:</u>	-		*		-	-		-	*	
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea	P		*		P	P		P	*	
-presence of growing/antral follicles	P		*		P	P		P	*	
<u>ADRENAL GLANDS:</u>	-				-	-		-		
<u>KIDNEYS:</u>										
-edema, papillary, focal	-	-	*	-	-	1	-	-	*	1
-hyperplasia, tubular/ductular epithelium, papilla	1	2	*	2	1	2	-	-	*	1
-mineralization, multifocal	-	-	*	-	-	1	-	-	*	1
<u>LIVER:</u>					-	-		-		
<u>PITUITARY:</u>	-				-	-		-		

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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TABLE I-10 (Continued)

Histomorphologic Observations
 P Generation

Dose Group:	V	V	V	V	V	V	V	V	V	V
Animal Number:	15691	15692	15693	15694	15695	15696	15697	15698	15699	15700
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SSR	SSRF	SSR	SS	SS	SS	SS	SS	SS
<u>OVARIES:</u>		-	*	-						
<u>OVIDUCT(S):</u>		-	*	-						
<u>UTERUS:</u>										
-macrophages, pigmented		1	*	2						
<u>CERVIX:</u>		-	*	-						
<u>VAGINA:</u>		-	*	-						
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea		P	*	P						
-presence of growing/antral follicles		P	*	P						
<u>ADRENAL GLANDS:</u>		-		-						
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	1	*	-	-	-	-	-	-	*
-dilatation, medullary tubules	1	-	*	-	-	-	-	-	-	*
-dilatation, pelvis	-	-	*	-	-	2	-	-	-	*
-edema, papillary, focal	1	-	*	-	-	-	1	1	-	*
-hyperplasia, tubular/ductular epithelium, papilla	2	2	*	2	1	-	2	1	2	*
-mineralization, multifocal	-	-	*	-	-	-	-	1	-	*
-nephritis, chronic, focal	-	1	*	-	-	-	-	-	-	*
<u>LIVER:</u>		-		-						
<u>PITUITARY:</u>		-		-						

ORAL (GAVAGE) TWO-GENERATION
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HISTOPATHOLOGY REPORT

APPENDIX II

HISTOMORPHOLOGIC OBSERVATIONS

F1 GENERATION

ORAL (GAVAGE) TWO-GENERATION
(ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
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HISTOPATHOLOGY REPORT

KEY TO HISTOMORPHOLOGIC OBSERVATIONS

-	=	No change (not remarkable, within normal histologic limits or indicated change not present).
*	=	Tissue not available (specified tissue missing, insufficient tissue in plane of section, artifact precludes evaluation, or specified tissue not present in section).
< >	=	Microscopic finding(s) in tissue(s) with gross observation(s).
<->	=	Within normal limits [no microscopic change(s) to correlate with the gross observation(s)].
()	=	Only one of a pair of organs available for processing/evaluation.
A	=	Advanced autolysis precludes evaluation.
P	=	Indicated change or lesion present.
1	=	Minimal degree or amount of indicated change or lesion.
2	=	Mild degree or amount of indicated change or lesion.
3	=	Moderate degree or amount of indicated change or lesion.
4	=	Marked degree or amount of indicated change or lesion.
XB	=	Primary benign neoplasm present
SM	=	Primary malignant neoplasm present
SS	=	Sacrifice-Scheduled
SD	=	Spontaneous Death
SM	=	Sacrifice-Moribund
SU	=	Sacrifice-Unscheduled
SSR	=	Scheduled Sacrifice (randomly selected for histopathology)
SDR	=	Spontaneous Death (randomly selected for histopathology)
SSGL	=	Scheduled Sacrifice (examined due to presence of a gross lesion)
SDGL	=	Spontaneous Death (examined due to presence of a gross lesion)
SMGL	=	Sacrifice-Moribund (examined due to presence of a gross lesion)
SSRF	=	Scheduled (Reduced Fertility)
SURF	=	Unscheduled (Reduced Fertility)
SDRF	=	Spontaneous Death (Reduced Fertility)

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TABLE II-1

Histomorphologic Observations
 F1 Generation

Dose Group:	I	I	I	I	I	I	I	I	I	I
Animal Number:	3001	3002	3003	3004	3005	3006	3007	3008	3009	3010
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SSRF	SSR	SSRF	SSGL	SSRF	SSRF	SSRF	SSR	SS	SS
<u>TESTIS:</u>	-	-	-		-	-	-	-		
<u>EPIDIDYMIS:</u>										
-infiltration, mononuclear-cell, focal	-	-	-		-	1	1	-		
-microgranuloma(s)	-	-	-		P	-	-	-		
<u>PROSTATE:</u>										
-atrophy, focal	3	1	2		-	-	2	1		
-inflammation, chronic	2	1	1		-	2	-	-		
<u>SEMINAL VESICLES:</u>	-	-	-		-	-	-	-		
<u>COAGULATING GLAND:</u>	-	-	-		-	-	-	-		
<u>ADRENAL GLANDS:</u>										
-vacuolation, cortex		-					2	-		
<u>KIDNEYS:</u>										
-dilatation, pelvis	-	-	-	-	-	-	-	-	-	2
-edema, papillary, focal	-	-	-	-	1	-	-	-	-	-
-hyperplasia, tubular/ductular epithelium, papilla	1	-	-	-	1	-	-	-	1	-
<u>LIVER:</u>										
-hematopoiesis, extramedullary, multifocal	-	-	-	-	-	1	-	-	-	-
-inflammation, chronic, focal/multifocal	-	-	-	1	1	-	-	-	-	-
-necrosis, focal/multifocal	-	-	-	-	-	-	-	<3>	-	-
<u>PITUITARY:</u>										
		-					-	-		
<u>PALATE:</u>										
-fracture										<P>
-hemorrhage										<3>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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TABLE II-1 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	I	I	I	I	I	I	I	I	I	I
Animal Number:	3011	3012	3013	3014	3015	3016	3017	3018	3019	3020
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SSR	SS	SSR	SSRF	SSRF	SSRF	SS	SSRF	SS	SSR
<u>TESTIS:</u>	-		-	-	-	-		-		-
<u>EPIDIDYMIS:</u>	-		-	-	-	-		-		-
<u>PROSTATE:</u>										
-atrophy, focal	2		-	1	-	2		-		-
-inflammation, chronic	-		1	1	-	-		-		-
-prostatitis, suppurative	-		-	-	-	-		1		-
<u>SEMINAL VESICLES:</u>	-		-	-	-	-		-		-
<u>COAGULATING GLAND:</u>	-		-	-	-	-		-		-
<u>ADRENAL GLANDS:</u>										
-vacuolation, cortex	-		1							1
<u>KIDNEYS:</u>										
-cyst(s), medulla	-	-	-	-	-	P	-	-	-	-
<u>LIVER:</u>										
-inflammation, chronic, focal/multifocal	-	-	-	1	-	1	1	1	-	-
<u>PITUITARY:</u>										
-cyst(s)	-		-							P
<u>EAR(S):</u>										<*>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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TABLE II-1 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	I	I	I	I	I	I	I	I	I	I
Animal Number:	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SDRF	SS	SSR	SSR	SS	SSR	SS	SSR	SS	SS
<u>TESTIS:</u>	-		-	-		-		-		
<u>EPIDIDYMIS:</u>	-		-	-		-		-		
<u>PROSTATE:</u>										
-inflammation, chronic	-		1	1		-		1		
<u>SEMINAL VESICLES:</u>	-		-	-		-		-		
<u>COAGULATING GLAND:</u>	-		-	-		-		-		
<u>ADRENAL GLANDS:</u>										
-vacuolation, cortex			3	-		-		2		
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	*	-	-	-	-	-	-	-	1	-
-infiltration, mononuclear-cell, focal	*	1	-	-	-	1	-	-	1	-
<u>LIVER:</u>										
-inflammation, chronic, focal/multifocal	*	-	-	-	-	1	-	-	-	-
<u>PITUITARY:</u>										
-hyperplasia, pars distalis, focal			2	-		-		-		

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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TABLE II-2

Histomorphologic Observations
 F1 Generation

Dose Group:	II	II	II	II	II	II	II	II	II	II
Animal Number:	3181	3182	3183	3184	3185	3186	3187	3188	3189	3190
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SSRF	SS	SS	SS	SS	SS	SSRF	SS	SS	SS
<u>OVARIES:</u>										
-cyst(s), intraovarian	*						P			
<u>OVIDUCT(S):</u>	*						-			
<u>UTERUS:</u>										
-distention, lumen	*						<1>			
<u>CERVIX:</u>	•						-			
<u>VAGINA:</u>	•						*			
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea	*						P			
-presence of growing/antral follicles	*						P			
<u>KIDNEYS:</u>	*	-	-	-	-	-	*	-	-	-

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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TABLE II-2 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	II	II	II	II	II	II	II	II	II	II
Animal Number:	3191	3192	3193	3194	3195	3197	3198	3199	3200	3201
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SSGL	SS	SS	SSRF	SS	SS	SS	SSGL	SS

OVARIES:

*

OVIDUCT(S):

*

UTERUS:

*

CERVIX:

*

VAGINA:

*

OVARIAN FOLLICLES/CORPORA LUTEA:

*

KIDNEYS:

-dilatation, pelvis

- <2> - - *

-hyperplasia, tubular/ductular epithelium,
papilla

- - - - *

-mineralization, multifocal

- - - 1 *

EAR(S):

-chondropathy, auricular

<4>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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TABLE II-2 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	II	II	II	II	I:	II	I:	I:	I:	I:
Animal Number:	3202	3203	3204	3205	3206	3207	3208	3209	3210	6551
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SS	SS	SS	SSGL	SSGL	SSRF	SS	SS	SS

OVARIES:

*

OVIDUCT(S):

*

UTERUS:

*

CERVIX:

*

VAGINA:

*

OVARIAN FOLLICLES/CORPORA LUTEA:

*

KIDNEYS:

-cyst(s), medulla - - - - -
 -infiltration, mononuclear-cell, focal - - 1 - - -
 -mineralization, multifocal - - - - -
 -mineralization, pelvis 1 - - - - -

* - - - P
 * - - -
 * - - 1
 • - - -

EAR(S):

-chondropathy, auricular

<4>

THYMUS:

-atrophy

<2>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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TABLE II-3

Histomorphologic Observations
 F1 Generation

Dose Group:	III	III	III	III	III	III	III	III	III	III
Animal Number:	3061	3062	3063	3064	3065	3066	3067	3068	3069	3070
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SSRF	SD	SS	SSRF	SS	SS	SS	SSRF	SS	SS
<u>TESTIS:</u>										
-atrophy, focal	-			-				1		
<u>EPIDIDYMIS:</u>										
-infiltration, mononuclear-cell, focal	1			-				-		
<u>PROSTATE:</u>										
-inflammation, chronic	1			3				-		
<u>SEMINAL VESICLES:</u>										
	-			-				-		
<u>COAGULATING GLAND:</u>										
	-			-				-		
<u>KIDNEYS:</u>										
-cyst(s), papilla	-	*	-	-	-	-	-	P	-	-
-edema, papillary, focal	-	*	-	-	-	1	-	-	-	-
-infiltration, fat-cell	-	*	-	-	-	-	-	-	1	-
-infiltration, mononuclear-cell, focal	-	*	-	-	-	-	-	1	-	-
-mineralization, pelvis	-	*	-	-	-	2	-	-	-	-
<u>LIVER:</u>										
-inflammation, chronic, focal/multifocal	-	*	-	-	-	-	-	1	-	-

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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TABLE II-3 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	III	III	III	III	III	III	III	III	III	III
Animal Number:	3071	3072	3073	3074	3075	3076	3077	3078	3079	3080
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	-	-	-	-	-	-	1	1	-
-dilatation, pelvis	2	-	2	1	2	-	1	-	-	-
-hyperplasia, pelvic/papillary urothelium	-	-	-	1	-	-	-	-	-	-
-hyperplasia, tubular/ductular epithelium, papilla	2	-	-	-	-	-	-	-	-	-
-infiltration, mononuclear-cell, focal	-	-	-	1	-	-	-	-	-	-
-mineralization, pelvis	2	-	-	-	-	-	-	-	-	-
<u>LIVER:</u>										
-inflammation, chronic, focal/multifocal	-	1	1	-	-	-	-	-	-	-

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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TABLE II-3 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	III	III	III	III	III	III	III	III	III	III
Animal Number:	3081	3082	3083	3084	3085	3086	3087	3088	3089	3090
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SS	SSRF	SS	SS	SSRF	SS	SS	SS	SS	SS
<u>TESTIS:</u>		-			-					
<u>EPIDIDYMIS:</u>		-			-					
<u>PROSTATE:</u>										
-atrophy, focal		3			-					
<u>SEMINAL VESICLES:</u>		-			-					
<u>COAGULATING GLAND:</u>		-			-					
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	-	-	-	-	-	1	-	-	-
-dilatation, pelvis	1	-	-	-	-	-	-	2	-	-
-infiltration, mononuclear-cell, focal	1	-	-	2	-	-	-	-	-	-
-necrosis, papilla, focal	-	-	-	-	-	-	-	-	-	1
-pyelonephritis, multifocal	-	-	-	-	-	-	-	-	-	3
<u>LIVER:</u>										
-inflammation, chronic, focal/multifocal	-	-	1	-	-	1	-	-	-	-
<u>EXTREMITIES:</u>										
-inflammation, suppurative, joint capsule						<3>				
-osteoarthritis, chronic						<3>				

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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TABLE II-4

Histomorphologic Observations
 F1 Generation

Dose Group:	IV	IV	IV	IV	IV	IV	IV	IV	IV	IV
Animal Number:	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SSRF	SS	SSRF	SSRF	SSRF	SDGL	SMGL	SDGL	SS	SS
<u>TESTIS:</u>	-		-	-	-					
<u>EPIDIDYMIS:</u>	-		-	-	-					
<u>PROSTATE:</u>										
-atrophy, focal	2		1	1	2					
-inflammation, chronic	2		-	-	-					
-prostatitis, suppurative	-		1	-	-					
<u>SEMINAL VESICLES:</u>	-		-	-	-					
<u>COAGULATING GLAND:</u>	-		-	-	-					
<u>KIDNEYS:</u>										
-dilatation, pelvis	<2>	-	-	-	-	*	*	-	-	-
-hemorrhage, pelvis	-	-	-	-	-	*	*	-	-	2
-hyperplasia, pelvic/papillary urothelium	-	-	-	-	-	*	*	-	-	2
-hyperplasia, tubular/ductular epithelium, papilla	-	-	-	1	-	*	*	-	-	2
-mineralization, multifocal	-	-	-	-	-	*	*	-	1	-
-mineralization, pelvis	-	-	-	-	-	•	*	-	-	2
-necrosis, papilla, focal	-	-	-	-	-	*	*	-	-	1
<u>LIVER:</u>										
-hypertrophy, hepatocellular	1	1	-	-	-	*	*	-	-	-
-inflammation, chronic, focal/multifocal	-	-	-	-	-	*	*	1	-	1
<u>EAR(S):</u>										
-chondropathy, auricular			<2>							
<u>SKIN (GROSS LESION):</u>										
-abscess					-		<P>			
-dermatitis, chronic, focal					<3>		-			
<u>ESOPHAGUS:</u>										
-necrosis						-	<4>			
-perforation						<P>	<P>			
<u>HEART:</u>										
-pericarditis, fibrinopurulent							<4>			
<u>THORACIC CAVITY:</u>										
-abscess							<P>			
<u>TRACHEA:</u>								<A>		

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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TABLE II-4

Histomorphologic Observations
 F1 Generation

Dose Group:	IV	IV	IV	IV	IV	IV	IV	IV	IV	IV
Animal Number:	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SSRF	SS	SSRF	SSRF	SSRF	SDGL	SMGL	SDGL	SS	SS
<u>TESTIS:</u>	-		-	-	-					
<u>EPIDIDYMIS:</u>	-		-	-	-					
<u>PROSTATE:</u>										
-atrophy, focal	2		1	1	2					
-inflammation, chronic	2		-	-	-					
-prostatitis, suppurative	-		1	-	-					
<u>SEMINAL VESICLES:</u>	-		-	-	-					
<u>COAGULATING GLAND:</u>	-		-	-	-					
<u>KIDNEYS:</u>										
-dilatation, pelvis	<2>	-	-	-	-	*	*	-	-	-
-hemorrhage, pelvis	-	-	-	-	-	*	*	-	-	2
-hyperplasia, pelvic/papillary urothelium	-	-	-	-	-	*	•	-	-	2
-hyperplasia, tubular/ductular epithelium, papilla	-	-	-	1	-	*	*	-	-	2
-mineralization, multifocal	-	-	-	-	-	*	*	-	1	-
-mineralization, pelvis	-	-	-	-	-	*	*	-	-	2
-necrosis, papilla, focal	-	-	-	-	-	*	*	-	-	1
<u>LIVER:</u>										
-hypertrophy, hepatocellular	1	1	-	-	-	*	*	-	-	-
-inflammation, chronic, focal/multifocal	-	-	-	-	-	*	*	1	-	1
<u>EAR(S):</u>										
-chondropathy, auricular										<2>
<u>SKIN (GROSS LESION):</u>										
-abscess						-		<P>		
-dermatitis, chronic, focal						<3>		-		
<u>ESOPHAGUS:</u>										
-necrosis						-		<4>		
-perforation						<P>		<P>		
<u>HEART:</u>										
-pericarditis, fibrinopurulent								<4>		
<u>THORACIC CAVITY:</u>										
-abscess								<P>		
<u>TRACHEA:</u>										<A>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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TABLE II-4 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	IV	IV	IV	IV	IV	IV	IV	IV	IV	IV
Animal Number:	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SSRF	SS	SSGL	SS	SSRF	SS	SS	SS	SS	SS
<u>TESTIS:</u>	.				.					
<u>EPIDIDYMIS:</u>										
-infiltration, mononuclear-cell, focal	1				1					
<u>PROSTATE:</u>										
-atrophy, focal	1				3					
<u>SEMINAL VESICLES:</u>	.				.					
<u>COAGULATING GLAND:</u>	.				.					
<u>KIDNEYS:</u>										
-cyst(s), medulla	.	.	.	.	.	P	.	.	.	.
-hemorrhage, pelvis	.	.	.	.	.	.	.	.	3	.
-hyperplasia, pelvic/papillary urothelium	.	.	.	.	.	.	.	.	1	.
-hyperplasia, tubular/ductular epithelium, papilla	.	.	.	.	.	.	.	.	1	.
-infiltration, mononuclear-cell, focal	.	.	1	.	1	.	.	1	.	.
-mineralization, pelvis	.	.	1	.	.	.	.	.	3	.
-necrosis, papilla, focal	.	.	.	.	.	.	.	.	1	.
<u>LIVER:</u>										
-inflammation, chronic, focal/multifocal	.	.	.	.	.	.	.	.	1	1
-necrosis, focal/multifocal	.	.	.	.	.	.	.	.	.	1
<u>EAR(S):</u>										
-dermatitis, chronic, focal										<1>

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TABLE II-4 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	IV	IV	IV	IV	IV	IV	IV	IV	IV	IV
Animal Number:	3111	3112	3113	3114	3115	3116	3117	3118	3119	3120
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SS	SSRF	SS	SSGL	SS	SS	SS	SS	SS	SS
<u>TESTIS:</u>										
<u>EPIDIDYMIS:</u>										
-infiltration, mononuclear-cell, focal		1								
<u>PROSTATE:</u>										
<u>SEMINAL VESICLES:</u>										
<u>COAGULATING GLAND:</u>										
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	-	-	-	-	-	-	1	-	1
-cyst(s), papilla	-	P	-	-	-	-	-	-	-	-
-dilatation, pelvis	1	1	-	2	-	-	1	1	2	-
-hyperplasia, pelvic/papillary urothelium	-	-	-	-	1	-	-	-	1	-
-hyperplasia, tubular/ductular epithelium, papilla	-	1	-	-	1	-	-	-	-	-
-mineralization, pelvis	-	-	-	-	2	-	-	-	-	-
-nephritis, chronic, focal	-	1	-	-	-	-	-	1	-	-
<u>LIVER:</u>										
-cellular alteration, eosinophilic, focal	-	2	-	-	-	-	-	-	-	-
-hypertrophy, hepatocellular	-	-	1	-	-	-	-	-	-	-
-inflammation, chronic, focal/multifocal	-	-	-	-	-	-	1	-	1	-
-necrosis, focal/multifocal	-	-	-	-	-	1	-	-	-	-
<u>EAR(S):</u>										
-dermatitis, chronic, focal					<1>					

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TABLE II-5 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	V	V	V	V	V	V	V	V	V	V
Animal Number:	3131	3132	3133	3134	3135	3136	3137	3138	3139	3140
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SSRF	SSRF	SS	SS	SS	SDGL	SDGL	SS	SS	SSGL
<u>TESTIS:</u>	-	-								
<u>EPIDIDYMIS:</u>										
-infiltration, mononuclear-cell, focal	-	1								
<u>PROSTATE:</u>										
-atrophy, focal	2	-								
<u>SEMINAL VESICLES:</u>	-	-								
<u>COAGULATING GLAND:</u>	-	-								
<u>ADRENAL GLANDS:</u>										
-adenoma, cortical										<XB>
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	-	-	-	-	*	*	-	-	1
-edema, papillary, focal	-	1	-	-	1	*	*	-	1	-
-hemorrhage, papilla	2	-	1	-	-	*	*	-	-	-
-hemorrhage, pelvis	2	-	-	-	-	*	*	-	-	2
-hyperplasia, pelvic/papillary urothelium	-	-	-	-	1	*	*	-	-	1
-hyperplasia, tubular/ductular epithelium, papilla	2	1	2	-	2	*	*	2	1	2
-infiltration, mononuclear-cell, focal	-	1	-	-	-	*	*	-	-	-
-mineralization, pelvis	-	-	-	-	-	*	*	-	-	2
-pyelonephritis	-	-	1	-	-	*	*	-	-	-
<u>LIVER:</u>										
-hypertrophy, hepatocellular	-	1	1	1	-	*	*	1	-	-
<u>TAIL:</u>	<-->									
<u>ESOPHAGUS:</u>										
-hemorrhage										<3>
-perforation										<P>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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TABLE II-5 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	V	V	V	V	V	V	V	V	V	V
Animal Number:	3141	3142	3143	3144	3145	3146	3147	3148	3149	3150
Sex:	M	M	M	M	M	M	M	M	M	M
Death Type:	SSR	SSR	SSRF	SS	SSRF	SDR	SS	SSR	SS	SSR
<u>TESTIS:</u>	-	-	-		-	-		-		-
<u>EPIDIDYMIS:</u>										
-infiltration, mononuclear-cell, focal	1	-	1		-	-		-		1
<u>PROSTATE:</u>										
-atrophy, focal	-	-	-		-	-		2		-
-inflammation, chronic	-	-	-		-	-		-		1
<u>SEMINAL VESICLES:</u>	-	-	-		-	-		-		-
<u>COAGULATING GLAND:</u>	-	-	-		-	-		-		-
<u>ADRENAL GLANDS:</u>										
-vacuolation, cortex	-	-				1		-		-
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	-	-	-	2	-	-	-	-	-
-cyst(s), medulla	-	-	-	-	-	-	-	-	p	-
-dilatation, pelvis	-	-	-	2	-	-	-	-	-	-
-edema, papillary, focal	1	-	-	-	-	-	1	-	-	1
-hemorrhage, pelvis	-	3	-	-	-	-	-	-	-	-
-hyperplasia, tubular/ductular epithelium, papilla	2	-	1	1	2	-	1	1	-	1
-mineralization, pelvis	-	3	-	-	-	-	-	-	-	-
<u>LIVER:</u>										
-congestion, acute	-	-	-	-	-	3	-	-	-	-
-hypertrophy, hepatocellular	-	2	-	1	1	1	-	1	-	-
-inflammation, chronic, focal/multifocal	1	-	-	-	1	-	-	1	-	-
<u>PITUITARY:</u>	-	-						-		-
<u>TAIL:</u>										
-dermatitis, chronic						<2>				
-hyperplasia/hyperkeratosis						<3>				

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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TABLE II-6

Histomorphologic Observations
 F1 Generation

Dose Group:	I	I	I	I	I	I	I	I	I	I
Animal Number:	3151	3152	3153	3154	3155	3156	3157	3158	3159	3160
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SSR	SSR	SSRF	SS	SSRF	SSGL	SS	SS	SS	SS
<u>OVARIES:</u>	-	-	*		*					
<u>OVIDUCT(S):</u>	-	-	*		*					
<u>UTERUS:</u>										
-macrophages, pigmented	2	1	*		*					
<u>CERVIX:</u>	-	-	*		*					
<u>VAGINA:</u>	-	-	•		•					
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea	P	P	*		*					
-presence of growing/antral follicles	P	P	*		*					
<u>ADRENAL GLANDS:</u>	-	-								
<u>KIDNEYS:</u>										
-dilatation, cortical tubules, focal	-	-	*	-	*	3	-	-	•	-
-mineralization, multifocal	-	-	*	1	*	-	-	-	*	-
-pyelitis, chronic	-	-	*	-	*	3	-	-	*	-
<u>LIVER:</u>										
-cytoplasmic vacuolation, diffuse	3	-								
<u>PITUITARY:</u>	-	-								
<u>EYES:</u>										
-cataract, bilateral										<P>
<u>MAMMARY GLAND:</u>										
-adenocarcinoma										<XM>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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TABLE II-6 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	I	I	I	I	I	I	I	I	I	I
Animal Number:	3161	3162	3163	3164	3165	3166	3167	3168	3169	3170
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SSR	SSRF	SSRF	SSRF	SSR	SS	SS	SSR	SSR	SSRF
<u>OVARIES:</u>										
-cyst(s), intraovarian	-	*	*	*	-			-	-	P
-cystic bursa(e)	-	*	*	*	-			-	-	P
<u>OVIDUCT(S):</u>	-	*	*	*	-			-	-	-
<u>UTERUS:</u>										
-distention, lumen	-	*	*	*	-			-	-	<4>
-macrophages, pigmented	3	*	*	*	-			1	3	-
<u>CERVIX:</u>										
-distention	-	*	*	*	-			-	-	3
<u>VAGINA:</u>	-	*	*	*	-			-	-	*
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea	P	*	*	*	P			P	P	P
-presence of growing/antral follicles	P	*	*	*	P			P	P	P
<u>ADRENAL GLANDS:</u>										
-degeneration, cystic, cortex	-				2			-	-	
<u>KIDNEYS:</u>										
-dilatation, pelvis	-	*	*	*	-	-	1	-	-	*
-mineralization, multifocal	-	*	*	*	-	1	-	-	-	*
<u>LIVER:</u>	-				-			-	-	
<u>PITUITARY:</u>	-				-			-	-	

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TABLE II-6 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	I	I	I	I	I	I	I	I	I	I
Animal Number:	3171	3172	3173	3174	3175	3176	3177	3178	3179	3180
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SSR	SSR	SS	SS	SS	SS	SSGL	SSR	SSR	SS
<u>OVARIES:</u>	-	-						-	-	
<u>OVIDUCT(S):</u>	-	-						-	-	
<u>UTERUS:</u>										
-macrophages, pigmented	3	2						2	3	
<u>CERVIX:</u>	-	-						-	-	
<u>VAGINA:</u>	-	-						-	-	
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea	P	P						P	P	
-presence of growing/antral follicles	P	P						P	P	
<u>ADRENAL GLANDS:</u>	-	-						-	-	
<u>KIDNEYS:</u>										
-hyperplasia, tubular/ductular epithelium, papilla	1	-	-	-	-	1	-	-	-	-
-mineralization, multifocal	-	-	-	-	-	-	-	-	-	1
<u>LIVER:</u>	-	-						-	-	
<u>PITUITARY:</u>	-	-						-	-	
<u>EAR(S):</u>										
-chondropathy, auricular										

<4>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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TABLE II-7

Histomorphologic Observations
 F1 Generation

Dose Group:	II	II	II	II	II	II	II	II	II	II
Animal Number:	3181	3182	3183	3184	3185	3186	3187	3188	3189	3190
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SSRF	SS	SS	SS	SS	SS	SSRF	SS	SS	SS
<u>OVARIES:</u>										
-cyst(s), intraovarian	*						P			
<u>OVIDUCT(S):</u>	*						-			
<u>UTERUS:</u>										
-distention, lumen	*						<1>			
<u>CERVIX:</u>	*						-			
<u>VAGINA:</u>	*						*			
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea	*						P			
-presence of growing/antral follicles	*						P			
<u>KIDNEYS:</u>	*	-	-	-	-	-	*	-	-	-

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE II-7 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	II	II	II	II	II	II	II	II	II	II
Animal Number:	3191	3192	3193	3194	3195	3197	3198	3199	3200	3201
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SSGL	SS	SS	SSRF	SS	SS	SS	SSGL	SS
<u>OVARIES:</u>					*					
<u>OVIDUCT(S):</u>					*					
<u>UTERUS:</u>					*					
<u>CERVIX:</u>					*					
<u>VAGINA:</u>					*					
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>					*					
<u>KIDNEYS:</u>										
-dilatation, pelvis	-	<2>	-	-	*	-	-	-	-	-
-hyperplasia, tubular/ductular epithelium, papilla	-	-	-	-	*	-	1	-	-	-
-mineralization, multifocal	-	-	-	1	*	1	-	-	-	-
<u>EAR(S):</u>										
-chondropathy, auricular									<4>	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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TABLE II-7 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	II	I	II	II	II	II	II	II	II	II
Animal Number:	3202	3203	3204	3205	3206	3207	3208	3209	3210	6551
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SS	SS	SS	SSGL	SSGL	SSRF	SS	SS	SS

OVARIES:

*

OVIDUCT(S):

*

UTERUS:

*

CERVIX:

*

VAGINA:

*

OVARIAN FOLLICLES/CORPORA LUTEA:

*

KIDNEYS:

-cyst(s), medulla
 -infiltration, mononuclear-cell, focal
 -mineralization, multifocal
 -mineralization, pelvis

-	-	-	-	-	-	-	*	-	-	P
-	-	1	-	-	-	-	*	-	-	-
-	-	-	-	-	-	-	*	-	-	1
1	-	-	-	-	-	-	*	-	-	-

EAR(S):

-chondropathy, auricular

<4>

THYMUS:

-atrophy

<2>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE II-8

Histomorphologic Observations
 F1 Generation

Dose Group:	III	III	III	III	III	III	III	III	III	III
Animal Number:	3211	3212	3213	3214	3215	3216	3217	3218	3219	3220
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SS	SS	SSGL	SS	SS	SS	SS	SS	SS

KIDNEYS:

-dilatation, pelvis

- - - - - 1 - - -

EYES:

-atrophy, retinal

<2>

-keratitis, chronic, focal

<1>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE II-8 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	III	III	III	III	III	III	III	III	III	III
Animal Number:	3221	3222	3223	3224	3225	3226	3227	3228	3229	3230
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SS	SS	SS	SSRF	SS	SS	SS	SS	SS

OVARIES:

*

OVIDUCT(S):

*

UTERUS:

*

CERVIX:

*

VAGINA:

*

OVARIAN FOLLICLES/CORPORA LUTEA:

*

KIDNEYS:-hyperplasia, tubular/ductular epithelium,
papilla

1

1

-

-

*

-

-

-

-

-

-

-mineralization, multifocal

1

-

-

*

-

-

-

-

-

1

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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TABLE II-8 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	III	III	III	III	III	III	III	III	III	III
Animal Number:	3231	3232	3233	3234	3235	3236	3237	3238	3239	3240
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SS	SS	SS	SS	SS	SS	SS	SSGL	SS
<u>OVARIES:</u>								*		
<u>OVIDUCT(S):</u>								*		
<u>UTERUS:</u>								*		
<u>CERVIX:</u>								*		
<u>VAGINA:</u>								*		
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>								•		
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	1	-	1	-	-	*	-	-	-
-dilatation, pelvis	-	-	-	-	-	-	*	-	<2>	-
-infiltration, mononuclear-cell, focal	-	1	-	-	-	-	*	-	-	-

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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TABLE II-9

Histomorphologic Observations
 F1 Generation

Dose Group:	IV	IV	IV	IV	IV	IV	IV	IV	IV	IV
Animal Number:	3241	3242	3243	3244	3245	3246	3247	3248	3249	3250
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SSRF	SSGL	SS	SS	SS	SS	SS	SS	SSGL
<u>OVARIES:</u>		*								
<u>OVIDUCT(S):</u>		*								
<u>UTERUS:</u>		*								
<u>CERVIX:</u>		*								
<u>VAGINA:</u>		*								
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>		*								
<u>KIDNEYS:</u>										
-edema, papillary, focal	1	*	-	-	2	-	1	-	-	-
-hemorrhage, papilla	-	*	1	-	-	-	-	-	-	-
-hyperplasia, tubular/ductular epithelium, papilla	1	*	2	2	2	-	-	-	-	-
<u>EAR(S):</u>										
-chondropathy, auricular										

<4>

<4>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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TABLE II-9 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	IV	IV	IV	IV	IV	IV	IV	IV	IV	IV
Animal Number:	3251	3252	3253	3254	3255	3256	3257	3258	3259	3260
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SSRF	SS	SSGL	SS	SS	SSGL	SS	SS	SS
<u>OVARIES:</u>		*								
<u>OVIDUCT(S):</u>		*								
<u>UTERUS:</u>		*								
<u>CERVIX:</u>		*								
<u>VAGINA:</u>		*								
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>		*								
<u>ADRENAL GLANDS:</u>										
-hypertrophy, cortex, diffuse					<3>					
-vacuolation, cortical, focal					<1>					
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	-	*	-	-	2	-	-	-	-	-
-dilatation, cortical tubules, focal	-	*	-	-	2	-	-	-	-	-
-hyperplasia, tubular/ductular epithelium, papilla	1	*	1	-	3	2	-	2	1	-
-necrosis, papilla, focal	-	*	-	-	2	-	-	-	-	-
-pyelitis, chronic	-	*	-	1	-	-	-	-	-	-
<u>LIVER:</u>										
-hemorrhage, acute, focal					<3>					
<u>EAR(S):</u>										
-chondropathy, auricular		<3>					<4>			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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TABLE II-9 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	IV	IV	IV	IV	IV	IV	IV	IV	IV	IV
Animal Number:	3261	3262	3263	3264	3265	3266	3267	3268	3269	3270
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SSGL	SS	SSRF	SS	SS	SS	SSRF	SS	SS	SSRF
<u>OVARIES:</u>			*				-			*
<u>OVIDUCT(S):</u>			*				-			*
<u>UTERUS:</u>										
-distention, lumen			*				<1>			*
<u>CERVIX:</u>			*				-			*
<u>VAGINA:</u>			*				-			*
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea			*				P			*
-presence of growing/antral follicles			*				P			*
<u>KIDNEYS:</u>										
-edema, papillary, focal	-	1	*	1	-	-	*	1	1	*
-hyperplasia, tubular/ductular epithelium, papilla	-	1	*	1	-	-	*	1	-	*
-mineralization, multifocal	-	-	*	-	-	1	*	-	-	*
<u>EXTREMITIES:</u>										
-dermatitis, chronic, focal	<3>									
-tendonitis, chronic	<2>									
<u>TAIL:</u>										
-abscess										<P>
-hyperplasia/hyperkeratosis										<3>
-inflammation, chronic										<3>
-necrosis										<2>

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE II-10

Histomorphologic Observations
 F1 Generation

Dose Group:	V	V	V	V	V	V	V	V	V	V
Animal Number:	3271	3272	3273	3274	3275	3276	3277	3278	3279	3281
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SSGL	SSR	SSR	SSRF	SS	SS	SS	SU	SS	SS
<u>OVARIES:</u>		-	-	*						
<u>OVIDUCT(S):</u>		-	-	*						
<u>UTERUS:</u>										
-macrophages, pigmented		-	3	*						
<u>CERVIX:</u>		-	-	*						
<u>VAGINA:</u>		-	-	*						
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea		P	P	*						
-presence of growing/antral follicles		P	P	*						
<u>ADRENAL GLANDS:</u>		-	-							
<u>KIDNEYS:</u>										
-cyst(s), cortex	-	-	-	*	-	-	-	-	-	P
-cyst(s), medulla	-	-	-	*	P	-	-	-	-	-
-edema, papillary, focal	-	-	-	*	-	1	-	2	-	-
-hemorrhage, papilla	-	-	-	*	1	-	-	-	-	-
-hyperplasia, pelvic/papillary urothelium	-	-	-	*	1	-	-	-	-	-
-hyperplasia, tubular/ductular epithelium, papilla	1	-	2	*	1	1	1	3	2	-
-mineralization, multifocal	-	-	-	*	-	-	-	-	-	1
-necrosis, papilla, focal	-	-	2	*	-	-	-	-	-	-
<u>LIVER:</u>		-	-							
<u>PITUITARY:</u>		-	-							
<u>EAR(S):</u>										
-chondropathy, auricular	<2>	<3>								

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE II-10 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	V	V	V	V	V	V	V	V	V	V
Animal Number:	3281	3282	3283	3284	3285	3286	3287	3288	3289	3290
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SS	SU	SS	SSR	SS	SSR	SSR	SSR	SSR	SS
<u>OVARIES:</u>				-		-	-	-	-	
<u>OVIDUCT(S):</u>				-		-	-	-	-	
<u>UTERUS:</u>										
-macrophages, pigmented				2		3	3	3	3	
<u>CERVIX:</u>				-		-	-	-	*	
<u>VAGINA:</u>				-		-	-	-	-	
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea				P		P	P	P	P	
-presence of growing/antral follicles				P		P	P	P	P	
<u>ADRENAL GLANDS:</u>				-		-	-	-	-	
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	1	*	-	-	-	-	-	-	-	-
-hyperplasia, tubular/ductular epithelium, papilla	1	*	-	-	-	-	-	-	-	2
-mineralization, multifocal	-	*	1	-	-	-	-	-	-	-
<u>LIVER:</u>				-		-	-	-	-	
<u>PITUITARY:</u>				-		-	-	-	-	
<u>EXTREMITIES:</u>										
-dermatitis, chronic, focal				<2>						
<u>ABDOMINAL CAVITY:</u>							<*>			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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TABLE II-10 (Continued)

Histomorphologic Observations
 F1 Generation

Dose Group:	V	V	V	V	V	V	V	V	V	V
Animal Number:	3291	3292	3293	3294	3295	3296	3297	3298	3299	3300
Sex:	F	F	F	F	F	F	F	F	F	F
Death Type:	SSR	SS	SS	SS	SSRF	SSR	SSR	SS	SS	SD
<u>OVARIES:</u>	-				*	-	-			
<u>OVIDUCT(S):</u>	-				*	-	*			
<u>UTERUS:</u>										
-macrophages, pigmented	-				*	3	3			
<u>CERVIX:</u>	-				*	-	*			
<u>VAGINA:</u>	-				*	-	-			
<u>OVARIAN FOLLICLES/CORPORA LUTEA:</u>										
-presence of corpora lutea	P				*	P	P			
-presence of growing/antral follicles	P				*	P	P			
<u>ADRENAL GLANDS:</u>	-					-	-			
<u>KIDNEYS:</u>										
-basophilia, cortical tubules, focal	2	-	-	-	*	-	-	-	2	*
-edema, papillary, focal	-	-	1	1	*	-	-	-	-	*
-hemorrhage, papilla	2	-	-	-	*	-	-	-	-	*
-hyperplasia, tubular/ductular epithelium, papilla	2	2	1	2	*	-	-	1	2	*
-infiltration, mononuclear-cell, focal	1	-	-	-	*	-	-	-	-	*
<u>LIVER:</u>										
-inflammation, chronic, focal/multifocal	1					-	-			
<u>PITUITARY:</u>	-					-	-			

ORAL (GAVAGE) TWO-GENERATION
(ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS
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HISTOPATHOLOGY REPORT

APPENDIX III

INDIVIDUAL ANIMAL GROSS AND HISTOMORPHOLOGY DATA

P Generation

KEY TO CORRELATION OF HISTOMORPHOLOGIC OBSERVATIONS

Not applicable = Microscopic evaluation/correlation not appropriate or not required
by protocol.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15401	DOSE GROUP: I
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 15401	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15402
SEX: M

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

GENERAL: No gross changes.

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: basophilia, cortical tubules, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15402

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15403
SEX: M

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: vacuolation, hepatocellular, multifocal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15403

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15404
SEX: M

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: infiltration, mononuclear-cell, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15404

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15405	DOSE GROUP: I		
SEX: M	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
<u>GENERAL:</u> No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
LIVER:	inflammation, chronic, focal/multifocal (minimal)		
PROSTATE:	inflammation, chronic (mild)		
	atrophy, focal (minimal)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
ADRENAL GLANDS	COAGULATING GLAND	EPIDIDYMIS	KIDNEYS
PITUITARY	SEMINAL VESICLES	TESTIS	

End of Record- 15405			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15406
SEX: M

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: vacuolation, hepatocellular, multifocal (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15406

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15407
SEX: M

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

GENERAL: No gross changes.

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
LIVER
TESTIS

COAGULATING GLAND
PITUITARY

EPIDIDYMIS
PROSTATE

KIDNEYS
SEMINAL VESICLES

End of Record- 15407

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15408
SEX: M

DOSE GROUP: I
DEATH TYPE: Scheduled (Reduced Fertility)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

EPIDIDYMIDES: Right- small.

atrophy, EPIDIDYMIS
hypospermia, EPIDIDYMIS
atrophy, diffuse, TESTIS
edema, diffuse, TESTIS

TESTES: Right- flaccid.

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMISS:

atrophy (marked)
hypospermia (marked)
infiltration, mononuclear-cell, focal (minimal)
atrophy, diffuse (marked)
edema, diffuse (marked)

KIDNEYS:

TESTIS:

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND

LIVER

PROSTATE

SEMINAL VESICLES

End of Record- 15408

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15409
SEX: M

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: infiltration, mononuclear-cell, focal (minimal)
PITUITARY: hyperplasia, pars distalis, focal (minimal)
PROSTATE: atrophy, focal (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	COAGULATING GLAND	EPIDIDYMIS	LIVER
SEMINAL VESICLES	TESTIS		

End of Record- 15409

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15410	DOSE GROUP: I
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
LIVER:	hematopoiesis, extramedullary (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 15410	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15411
SEX: M

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMIS:

infiltration, mononuclear-cell, focal (minimal)

KIDNEYS:

basophilia, cortical tubules, focal (minimal)

infiltration, mononuclear-cell, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
PROSTATE

COAGULATING GLAND
SEMINAL VESICLES

LIVER
TESTIS

PITUITARY

End of Record- 15411

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15412
SEX: M

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

basophilia, cortical tubules, focal (minimal)
infiltration, mononuclear-cell, focal (minimal)

LIVER:

inflammation, chronic, focal/multifocal (minimal)

End of Record- 15412

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15413	DOSE GROUP: I		
SEX: M	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
GENERAL: No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
ADRENAL GLANDS:	vacuolation, cortex (minimal)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
COAGULATING GLAND	EPIDIDYMIS	KIDNEYS	LIVER
PITUITARY	PROSTATE	SEMINAL VESICLES	TESTIS

End of Record- 15413			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15414
SEX: M

DOSE GROUP: I
DEATH TYPE: Scheduled (Gross Lesion)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

PITUITARY: Brown area <0.1cm diameter.
THYMUS: Pinpoint red areas, too numerous to
count.

cyst(s)
congestion

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: infiltration, mononuclear-cell, focal (minimal)
PITUITARY: cyst(s)
THYMUS: congestion (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15414

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15415
SEX: M

DOSE GROUP: :
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS · LIVER

End of Record- 15415

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15416 DOSE GROUP: I
 SEX: M DEATH TYPE: Scheduled (Reduced Fertility)
 =====

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	EPIDIDYMIS	KIDNEYS	LIVER
PROSTATE	SEMINAL VESICLES	TESTIS	

 End of Record- 15416

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix III
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ANIMAL NUMBER: 15417
SEX: M

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: inflammation, chronic, focal/multifocal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15417

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15418	DOSE GROUP: I		
SEX: M	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
<u>GENERAL:</u> No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
KIDNEYS:	infiltration, mononuclear-cell, focal (minimal)		
PROSTATE:	prostatitis, suppurative (minimal)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
ADRENAL GLANDS	COAGULATING GLAND	EPIDIDYMIS	LIVER
PITUITARY	SEMINAL VESICLES	TESTIS	

End of Record- 15418			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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ANIMAL NUMBER: 15419
SEX: M

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS . LIVER

End of Record- 15419

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
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P Generation

ANIMAL NUMBER: 15420
SEX: M

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: dilatation, pelvis (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15420

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 15421
SEX: M

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

ADRENAL GLANDS:	infiltration, mononuclear-cell, multifocal (mild)
KIDNEYS:	infiltration, mononuclear-cell, focal (minimal)
	edema, papillary, focal (minimal)
PROSTATE:	prostatitis, suppurative (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	EPIDIDYMIS	LIVER	PITUITARY
SEMINAL VESICLES	TESTIS		

End of Record- 15421

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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P Generation

ANIMAL NUMBER: 15422
SEX: M

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

ADRENAL GLANDS:	vacuolation, cortex (minimal)
KIDNEYS:	cyst(s), papilla
PITUITARY:	cyst(s)
PROSTATE:	atrophy, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	EPIDIDYMIS	LIVER	SEMINAL VESICLES
TESTIS			

End of Record- 15422

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15423
SEX: M

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: inflammation, chronic, focal/multifocal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15423

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15424	DOSE GROUP: I
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	cyst(s), medulla

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 15424	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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 P Generation

ANIMAL NUMBER: 15425	DOSE GROUP: I
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
THYMUS: Red, pinpoint areas numerous to count.	congestion
=====	
<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	infiltration, mononuclear-cell, focal (minimal)
	basophilia, cortical tubules, focal (mild)
THYMUS:	congestion (minimal)
=====	
<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	
=====	
End of Record- 15425	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 15426
SEX: M

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

ADRENAL GLANDS: vacuolation, cortex (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND
PITUITARY

EPIDIDYMIS
PROSTATE

KIDNEYS
SEMINAL VESICLES

LIVER
TESTIS

End of Record- 15426

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix III
Individual Animal Gross and Histomorphology Data
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ANIMAL NUMBER: 15427 DOSE GROUP: I
SEX: M DEATH TYPE: Scheduled (Reduced Fertility)
=====

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMIS: infiltration, mononuclear-cell, focal (mild)
KIDNEYS: infiltration, mononuclear-cell, focal (minimal)
PROSTATE: inflammation, chronic (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND LIVER SEMINAL VESICLES TESTIS

End of Record- 15427

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix III
Individual Animal Gross and Histomorphology Data
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ANIMAL NUMBER: 15428
SEX: M

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: basophilia, cortical tubules, focal (minimal)
LIVER: inflammation, chronic, focal/multifocal (minimal)

End of Record- 15428

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE.
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15429
SEX: M

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMISS:

infiltration, mononuclear-cell, focal (minimal)

PROSTATE:

inflammation, chronic (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
PITUITARY

COAGULATING GLAND
SEMINAL VESICLES

KIDNEYS
TESTIS

LIVER

End of Record- 15429

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix III
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 P Generation

ANIMAL NUMBER: 15430	DOSE GROUP: I
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 15430	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
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 P Generation

ANIMAL NUMBER: 15431	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	dilatation, pelvis (mild)
LIVER:	inflammation, chronic, focal/multifocal (minimal)

End of Record- 15431	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15432
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: vacuolation, hepatocellular, multifocal (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15432

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15433
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS · LIVER

End of Record- 15433

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15434	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 15434	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15435
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: basophilia, cortical tubules, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15435

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15436	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 15436	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15437 DOSE GROUP: II
SEX: M DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS LIVER

End of Record- 15437

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15438
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: infiltration, mononuclear-cell, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15438

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15439 DOSE GROUP: II
SEX: M DEATH TYPE: Scheduled (Gross Lesion)

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

EAR(S): Swollen and purple, bilateral. chondropathy, auricular

HISTOMORPHOLOGIC OBSERVATIONS:

EAR(S): chondropathy, auricular (marked)
LIVER: inflammation, chronic, focal/multifocal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15439

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15440
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

dilatation, pelvis (minimal)
basophilia, cortical tubules, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15440

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15441
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS . LIVER

End of Record- 15441

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15442
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS · LIVER

End of Record- 15442

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15443	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
LIVER:	inflammation, chronic, focal/multifocal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 15443	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15444	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 15444	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15445
 SEX: M

DOSE GROUP: II
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS LIVER

End of Record- 15445

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15446	DOSE GROUP: II
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
THYMUS: Pinpoint red areas, too numerous to count.	congestion

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
THYMUS:	congestion (mild)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 15446	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15447
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

edema, papillary, focal (minimal)

LIVER:

cellular alteration, clear-cell, focal (minimal)

End of Record- 15447

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15448	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 15448	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15449
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

dilatation, pelvis (minimal)
infiltration, mononuclear-cell, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15449

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15450
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS · LIVER

End of Record- 15450

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15451
 SEX: M

DOSE GROUP: II
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS LIVER

End of Record- 15451

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15452
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

GENERAL: No gross changes.

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: infiltration, mononuclear-cell, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15452

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15453	DOSE GROUP: II		
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
GENERAL: No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
EPIDIDYMIS:	infiltration, mononuclear-cell, focal (minimal)		
PROSTATE:	inflammation, chronic (mild)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
COAGULATING GLAND	KIDNEYS	LIVER	SEMINAL VESICLES
TESTIS			

End of Record- 15453			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15454
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

LIVER

End of Record- 15454

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15455
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS LIVER

End of Record- 15455

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15456
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: infiltration, mononuclear-cell, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15456

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15457
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS LIVER

End of Record- 15457

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15458
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: basophilia, cortical tubules, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15458

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15459
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

LIVER

End of Record- 15459

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15460
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

GENERAL: No gross changes.

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

basophilia, cortical tubules, focal (minimal)
infiltration, mononuclear-cell, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15460

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15461
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
LIVER: vacuolation, hepatocellular, multifocal (minimal)

End of Record- 15461

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15462
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS LIVER

End of Record- 15462

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15463
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

GENERAL: No gross changes.

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

basophilia, cortical tubules, focal (minimal)
infiltration, mononuclear-cell, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15463

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15464
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

GENERAL: No gross changes.

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15464

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15465
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: vacuolation, hepatocellular, multifocal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15465

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15466
 SEX: M

DOSE GROUP: III
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

GENERAL: No gross changes.

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS LIVER

End of Record- 15466

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15467
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: inflammation, chronic, focal/multifocal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15467

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15468
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

GENERAL: No gross changes.

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

LIVER

End of Record- 15468

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15469
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

LIVER

End of Record- 15469

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15470	DOSE GROUP: III
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>TESTES:</u> Bilateral, small.	atrophy, multifocal, TESTIS

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>TESTIS:</u>	atrophy, multifocal (mild)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 15470	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15471
 SEX: M

DOSE GROUP: III
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

LIVER

End of Record- 15471

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15472
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

LIVER

End of Record- 15472

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15473
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

dilatation, pelvis (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15473

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15474
SEX: M

DOSE GROUP: III
DEATH TYPE: Scheduled (Reduced Fertility)

GROSS OBSERVATION(S):

GENERAL: No gross changes.

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

PROSTATE: inflammation, chronic (minimal)
atrophy, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	EPIDIDYMIS	KIDNEYS	LIVER
SEMINAL VESICLES	TESTIS		

End of Record- 15474

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15475
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, pelvic/papillary urothelium (minimal)
mineralization, pelvis (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15475

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15476	DOSE GROUP: III
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>THYMUS:</u> Red pinpoint areas numerous to count.	congestion

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>THYMUS:</u>	congestion (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 15476	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15477	DOSE GROUP: III
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 15477	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15478
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

LIVER

End of Record- 15478

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15479
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS . LIVER

End of Record- 15479

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15480	DOSE GROUP: III
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	infiltration, mononuclear-cell, focal (minimal) edema, papillary, focal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 15480	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15481
 SEX: M

DOSE GROUP: III
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS . LIVER

End of Record- 15481

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15482
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: pyelitis, chronic (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15482

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15483	DOSE GROUP: III
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	basophilia, cortical tubules, focal (minimal)
LIVER:	inflammation, chronic, focal/multifocal (minimal)

End of Record- 15483	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15484
 SEX: M

DOSE GROUP: III
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS . LIVER

End of Record- 15484

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15485	DOSE GROUP: III
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 15485	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15486
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

edema, papillary, focal (minimal)
basophilia, cortical tubules, focal (minimal)
infiltration, mononuclear-cell, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15486

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15487
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: dilatation, pelvis (minimal)
hyperplasia, tubular/ductular epithelium, papilla (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15487

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15488
 SEX: M

DOSE GROUP: III
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS . LIVER

End of Record- 15488

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15489
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: cyst(s), medulla

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15489

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15490
 SEX: M

DOSE GROUP: III
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS · LIVER

End of Record- 15490

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15491
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
LIVER: vacuolation, hepatocellular, multifocal (minimal)

End of Record- 15491

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15492
 SEX: M

DOSE GROUP: IV
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS LIVER

End of Record- 15492

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15493	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, pelvis (mild)
	hemorrhage, pelvis (minimal)
LIVER:	hypertrophy, hepatocellular (minimal)
	hyperplasia, bile duct, focal (minimal)

End of Record- 15493	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15494
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15494

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15495
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS LIVER

End of Record- 15495

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15496
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

hyperplasia, tubular/ductular epithelium, papilla (minimal)

LIVER:

hypertrophy, hepatocellular (minimal)

End of Record- 15496

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15497	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	dilatation, pelvis (minimal)
LIVER:	inflammation, chronic, focal/multifocal (minimal)

End of Record- 15497	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15498
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
LIVER: vacuolation, hepatocellular, centrilobular (mild)

End of Record- 15498

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15499	DOSE GROUP: IV
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>KIDNEYS:</u> Bilateral- moderate, dilatation.	dilatation, pelvis

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>KIDNEYS:</u>	dilatation, pelvis (moderate)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 15499	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15500
SEX: M

DOSE GROUP: IV
DEATH TYPE: Scheduled (Gross Lesion)

=====

GROSS OBSERVATION(S):

EPIDIDYMIDES: Left- small.

KIDNEYS: Right- pelvis dilated, dark red
substance found in pelvis.

TESTES: Left- flaccid, small.

HISTOMORPHOLOGIC OBSERVATION(S):

hypospermia, EPIDIDYMIS
atrophy, EPIDIDYMIS
dilatation, pelvis
mineralization, pelvis
hyperplasia, pelvic/papillary urothelium
hemorrhage, pelvis
atrophy, diffuse, TESTIS

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMIS:

hypospermia (marked)
atrophy (marked)

KIDNEYS:

dilatation, pelvis (mild)
mineralization, pelvis (moderate)
hyperplasia, pelvic/papillary urothelium (minimal)
hemorrhage, pelvis (mild)

LIVER:

inflammation, chronic, focal/multifocal (minimal)

TESTIS:

atrophy, diffuse (marked)

End of Record- 15500

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15501
 SEX: M

DOSE GROUP: IV
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS · LIVER

End of Record- 15501

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15502
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
LIVER: cellular alteration, basophilic, focal (minimal)
inflammation, chronic, focal/multifocal (minimal)

End of Record- 15502

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15503
 SEX: M

DOSE GROUP: IV
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS · LIVER

End of Record- 15503

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15504	DOSE GROUP: IV
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>EAR(S):</u> Both- swollen and purple.	chondropathy, auricular

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>EAR(S):</u>	chondropathy, auricular (mild)
<u>KIDNEYS:</u>	infiltration, mononuclear-cell, focal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 15504	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15505
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 15505

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15506	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)
	edema, papillary, focal (minimal)
LIVER:	cellular alteration, basophilic, focal (minimal)

End of Record- 15506	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15507	DOSE GROUP: IV
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>THYMUS:</u> Red pinpoint areas numerous to count.	congestion

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>THYMUS:</u>	congestion (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
COAGULATING GLAND	EPIDIDYMIS
PROSTATE	SEMINAL VESICLES
	KIDNEYS
	TESTIS
	LIVER

End of Record- 15507	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15508	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	basophilia, cortical tubules, focal (minimal) hyperplasia, tubular/ductular epithelium, papilla (mild)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 15508	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15509
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS . LIVER

End of Record- 15509

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15510
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS . LIVER

End of Record- 15510

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15511
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS · LIVER

End of Record- 15511

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15512	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled

=====

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS . LIVER

End of Record- 15512

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15513
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS . LIVER

End of Record- 15513

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15514
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS · LIVER

End of Record- 15514

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix III
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P Generation

ANIMAL NUMBER: 15515	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 15515	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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 P Generation

ANIMAL NUMBER: 15516	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 15516	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix III
Individual Animal Gross and Histomorphology Data
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ANIMAL NUMBER: 15517
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS . LIVER

End of Record- 15517

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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P Generation

ANIMAL NUMBER: 15518	DOSE GROUP: IV
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>KIDNEYS:</u> Right- pelvis dilated, slight; pelvis filled with dark red substance.	dilatation, pelvis mineralization, pelvis hyperplasia, pelvic/papillary urothelium congestion
<u>THYMUS:</u> Pinpoint red areas, too numerous to count.	

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>KIDNEYS:</u>	dilatation, pelvis (mild) mineralization, pelvis (moderate) hyperplasia, pelvic/papillary urothelium (minimal)
<u>LIVER:</u>	hypertrophy, hepatocellular (minimal)
<u>THYMUS:</u>	congestion (minimal)

End of Record- 15518	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 15519	DOSE GROUP: IV
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)

=====

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
THYMUS: Red, pinpoint areas, too numerous to count.	congestion

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	edema, papillary, focal (minimal)
LIVER:	inflammation, chronic, focal/multifocal (minimal)
THYMUS:	congestion (minimal)

End of Record- 15519

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 15520	DOSE GROUP: IV
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
THYMUS: Red, pinpoint areas, numerous to count.	hemorrhage, focal

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
THYMUS:	hemorrhage, focal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 15520	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 15521
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

ADRENAL GLANDS:	vacuolation, cortex (minimal)
KIDNEYS:	basophilia, cortical tubules, focal (minimal)
	hyperplasia, tubular/ductular epithelium, papilla (mild)
LIVER:	hypertrophy, hepatocellular (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	EPIDIDYMIS	PITUITARY	PROSTATE
SEMINAL VESICLES	TESTIS		

End of Record- 15521

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix III
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P Generation

ANIMAL NUMBER: 15522	DOSE GROUP: V
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (mild)
	edema, papillary, focal (minimal)
LIVER:	hypertrophy, hepatocellular (minimal)

End of Record- 15522	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 15523	DOSE GROUP: V		
SEX: M	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
GENERAL: No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
LIVER:	hypertrophy, hepatocellular (minimal)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
ADRENAL GLANDS	COAGULATING GLAND	EPIDIDYMIS	KIDNEYS
PITUITARY	PROSTATE	SEMINAL VESICLES	TESTIS

End of Record- 15523			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
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ANIMAL NUMBER: 15524
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

GENERAL: No gross changes.

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMIS:	infiltration, mononuclear-cell, focal (minimal)
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)
LIVER:	hypertrophy, hepatocellular (minimal)
PROSTATE:	prostatitis, suppurative (minimal)
	atrophy, focal (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	COAGULATING GLAND	PITUITARY	SEMINAL VESICLES
TESTIS			

End of Record- 15524

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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P Generation

ANIMAL NUMBER: 15525
SEX: M

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: hypertrophy, hepatocellular (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15525

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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P Generation

ANIMAL NUMBER: 15526	DOSE GROUP: V
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
COAGULATING GLAND	EPIDIDYMIS
PROSTATE	SEMINAL VESICLES
	KIDNEYS
	TESTIS
	LIVER

End of Record- 15526	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 15527
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

ADRENAL GLANDS:	vacuolation, cortex (minimal)
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)
LIVER:	inflammation, chronic, focal/multifocal (minimal)
	hypertrophy, hepatocellular (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND
SEMINAL VESICLES

EPIDIDYMISS
TESTIS

PITUITARY

PROSTATE

End of Record- 15527

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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P Generation

ANIMAL NUMBER: 15528	DOSE GROUP: V
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	cyst(s), medulla
	dilatation, cortical tubules, focal (minimal)
LIVER:	hypertrophy, hepatocellular (minimal)

End of Record- 15528	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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P Generation

ANIMAL NUMBER: 15529	DOSE GROUP: V
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>EPIDIDYMIDES:</u> Small, bilateral.	infiltration, mononuclear-cell, focal, EPIDIDYMIS atrophy, EPIDIDYMIS hypospermia, EPIDIDYMIS atrophy, diffuse, TESTIS
<u>TESTES:</u> Small, flaccid, bilateral.	
=====	
<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
EPIDIDYMIS:	atrophy (mild) hypospermia (mild) infiltration, mononuclear-cell, focal (minimal)
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (mild)
LIVER:	hypertrophy, hepatocellular (minimal)
PROSTATE:	atrophy, diffuse (moderate)
SEMINAL VESICLES:	atrophy (mild)
TESTIS:	atrophy, diffuse (marked)
=====	
<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
COAGULATING GLAND	
=====	
End of Record- 15529	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 15530
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Gross Lesion)

=====

GROSS OBSERVATION(S):

KIDNEYS: Right- pelvis, moderately dilated; dark
red substance found in kidney pelvis.

HISTOMORPHOLOGIC OBSERVATION(S):

dilatation, pelvis
mineralization, pelvis
hyperplasia, pelvic/papillary urothelium
hyperplasia, tubular/ductular epithelium,
papilla
basophilia, cortical tubules, focal

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

dilatation, pelvis (moderate)
mineralization, pelvis (mild)
hyperplasia, pelvic/papillary urothelium (mild)
basophilia, cortical tubules, focal (minimal)
hyperplasia, tubular/ductular epithelium, papilla (minimal)
hypertrophy, hepatocellular (minimal)

LIVER:

End of Record- 15530

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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P Generation

ANIMAL NUMBER: 15531
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: inflammation, chronic, focal/multifocal (minimal)
PROSTATE: inflammation, chronic (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
PITUITARY

COAGULATING GLAND
SEMINAL VESICLES

EPIDIDYMIS
TESTIS

KIDNEYS

End of Record- 15531

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15532	DOSE GROUP: V
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
LIVER:	vacuolation, hepatocellular, multifocal (mild) hypertrophy, hepatocellular (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 15532	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15533 DOSE GROUP: V
SEX: M DEATH TYPE: Scheduled (Reduced Fertility)
=====

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):
GENERAL: No gross changes. Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)
LIVER:	hematopoiesis, extramedullary (minimal)
	hypertrophy, hepatocellular (minimal)
PROSTATE:	atrophy, focal (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	EPIDIDYMIS	SEMINAL VESICLES	TESTIS
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End of Record- 15533

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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 P Generation

ANIMAL NUMBER: 15534	DOSE GROUP: V
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (mild)
LIVER:	inflammation, chronic, focal/multifocal (minimal)
	hypertrophy, hepatocellular (minimal)

End of Record- 15534	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 15535	DOSE GROUP: V
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	basophilia, cortical tubules, focal (minimal)
LIVER:	hypertrophy, hepatocellular (minimal)

End of Record- 15535	

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P Generation

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
edema, papillary, focal (minimal)
LIVER: hypertrophy, hepatocellular (minimal)

ADRENAL GLANDS	COAGULATING GLAND	EPIDIDYMIS	PITUITARY
PROSTATE	SEMINAL VESICLES	TESTIS	

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P Generation

ANIMAL NUMBER: 15537	DOSE GROUP: V
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (mild)
LIVER:	hypertrophy, hepatocellular (minimal)

End of Record- 15537	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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P Generation

ANIMAL NUMBER: 15538 DOSE GROUP: V
SEX: M DEATH TYPE: Scheduled (Gross Lesion)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

THYMUS: Red, pinpoint areas numerous to count.

No microscopic change to correlate

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, pelvic/papillary urothelium (mild)
necrosis, papilla, focal (moderate)
hemorrhage, pelvis (mild)
basophilia, cortical tubules, focal (mild)
hyperplasia, tubular/ductular epithelium, papilla (moderate)
LIVER: hypertrophy, hepatocellular (mild)
THYMUS: No microscopic change to correlate

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

THYMUS

End of Record- 15538

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 15539 DOSE GROUP: V
SEX: M DEATH TYPE: Scheduled (Reduced Fertility)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMIS:	infiltration, mononuclear-cell, focal (minimal)
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)
LIVER:	hypertrophy, hepatocellular (minimal)
PROSTATE:	inflammation, chronic (mild)
	atrophy, focal (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND SEMINAL VESICLES TESTIS

End of Record- 15539

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 15540	DOSE GROUP: V
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, pelvic/papillary urothelium (mild) hyperplasia, tubular/ductular epithelium, papilla (mild) edema, papillary, focal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 15540	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 15541	DOSE GROUP: V
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (mild)
	edema, papillary, focal (mild)
LIVER:	hypertrophy, hepatocellular (minimal)

End of Record- 15541	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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P Generation

ANIMAL NUMBER: 15542	DOSE GROUP: V
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>TESTES:</u> Right- large.	No microscopic change to correlate, TESTIS

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	pyelitis, chronic (moderate) hyperplasia, pelvic/papillary urothelium (mild) basophilia, cortical tubules, focal (minimal) hyperplasia, tubular/ductular epithelium, papilla (mild)
LIVER:	hypertrophy, hepatocellular (minimal)
TESTIS:	No microscopic change to correlate

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
TESTIS	

End of Record- 15542	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15543	DOSE GROUP: V
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable
=====	
<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (mild)
LIVER:	hypertrophy, hepatocellular (minimal)
=====	
<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
COAGULATING GLAND	EPIDIDYMIS
TESTIS	PROSTATE
	SEMINAL VESICLES
=====	
End of Record- 15543	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15544	DOSE GROUP: V		
SEX: M	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
<u>GENERAL:</u> No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
KIDNEYS:	infiltration, mononuclear-cell, focal (minimal)		
	edema, papillary, focal (minimal)		
LIVER:	hypertrophy, hepatocellular (minimal)		
PROSTATE:	inflammation, chronic (mild)		
	prostatitis, suppurative (minimal)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
ADRENAL GLANDS	COAGULATING GLAND	EPIDIDYMIS	PITUITARY
SEMINAL VESICLES	TESTIS		

End of Record- 15544			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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P Generation

ANIMAL NUMBER: 15545
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
LIVER: inflammation, chronic, focal/multifocal (minimal)
PROSTATE: hypertrophy, hepatocellular (minimal)
inflammation, chronic (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
SEMINAL VESICLES

COAGULATING GLAND
TESTIS

EPIDIDYMIS

PITUITARY

End of Record- 15545

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 15546 DOSE GROUP: V
SEX: M DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

THYMUS: Red pinpoint areas numerous to count.

hemorrhage, focal

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMIS:	infiltration, mononuclear-cell, focal (minimal)
KIDNEYS:	infiltration, mononuclear-cell, focal (minimal)
LIVER:	hypertrophy, hepatocellular (minimal)
PROSTATE:	prostatitis, suppurative (minimal)
THYMUS:	hemorrhage, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	COAGULATING GLAND	PITUITARY	SEMINAL VESICLES
TESTIS			

End of Record- 15546

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 15547	DOSE GROUP: V
SEX: M	DEATH TYPE: Spontaneous (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)
	edema, papillary, focal (minimal)
LIVER:	hypertrophy, hepatocellular (minimal)

End of Record- 15547	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 15548
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

ADRENAL GLANDS:	vacuolation, cortex (minimal)
LIVER:	inflammation, chronic, focal/multifocal (minimal)
	hypertrophy, hepatocellular (minimal)
PROSTATE:	atrophy, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	EPIDIDYMIS	KIDNEYS	PITUITARY
SEMINAL VESICLES	TESTIS		

End of Record- 15548

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 15549
SEX: M

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
LIVER: hypertrophy, hepatocellular (minimal)

End of Record- 15549

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 15550	DOSE GROUP: V
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S).</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	cyst(s), perirenal

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 15550	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 15551	DOSE GROUP: 1
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	edema, papillary, focal (minimal)

End of Record- 15551	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 15552
SEX: F

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

GENERAL: No gross changes.

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

OVARIAN FOLLICLES/CORPORA LUTEA: presence of corpora lutea
presence of growing/antral follicles
PITUITARY: cyst(s)
UTERUS: macrophages, pigmented (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	CERVIX	KIDNEYS	LIVER
OVARIES	OVIDUCT(S)	VAGINA	

End of Record- 15552

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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P Generation

ANIMAL NUMBER: 15553
SEX: F

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: mineralization, multifocal (minimal)

End of Record- 15553

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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P Generation

ANIMAL NUMBER: 15554	DOSE GROUP: I
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	dilatation, pelvis (minimal) mineralization, multifocal (minimal)

End of Record- 15554	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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P Generation

ANIMAL NUMBER: 15555	DOSE GROUP: I
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 15555	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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 P Generation

ANIMAL NUMBER: 15556	DOSE GROUP: I
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 15556	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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 P Generation

ANIMAL NUMBER: 15557	DOSE GROUP: I
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	pyelonephritis (mild) hyperplasia, tubular/ductular epithelium, papilla (mild)

End of Record- 15557	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15558	DOSE GROUP: I
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
KIDNEYS
OVARIAN FOLLICLES/CORPORA LUTEA
OVARIES
OVIDUCT(S)
UTERUS
VAGINA

End of Record- 15558

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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P Generation

ANIMAL NUMBER: 15559
SEX: F

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: mineralization, multifocal (minimal)
OVARIAN FOLLICLES/CORPORA LUTEA: presence of corpora lutea
presence of growing/antral follicles
UTERUS: macrophages, pigmented (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
OVIDUCT(S)

CERVIX
PITUITARY

LIVER
VAGINA

OVARIES

End of Record- 15559

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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P Generation

ANIMAL NUMBER: 15560	DOSE GROUP: I
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 15560	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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 P Generation

ANIMAL NUMBER: 15561	DOSE GROUP: I
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, multifocal (minimal)

End of Record- 15561	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15562	DOSE GROUP: I		
SEX: F	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
<u>GENERAL:</u> No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
OVARIAN FOLLICLES/CORPORA LUTEA:	presence of corpora lutea		
	presence of growing/antral follicles		
UTERUS:	macrophages, pigmented (moderate)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
ADRENAL GLANDS	CERVIX	KIDNEYS	LIVER
OVARIES	OVIDUCT(S)	PITUITARY	VAGINA

End of Record- 15562			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15563	DOSE GROUP: I
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 15563	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15564	DOSE GROUP: I
SEX: F	DEATH TYPE: Scheduled (Random)

=====

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

OVARIAN FOLLICLES/CORPORA LUTEA:	presence of corpora lutea
UTERUS:	presence of growing/antral follicles
	macrophages, pigmented (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	CERVIX	KIDNEYS	LIVER
OVARIES	OVIDUCT(S)	PITUITARY	VAGINA

End of Record- 15564

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15565	DOSE GROUP: I
SEX: F	DEATH TYPE: Scheduled (Random)

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

OVARIAN FOLLICLES/CORPORA LUTEA:	presence of corpora lutea
	presence of growing/antral follicles
UTERUS:	macrophages, pigmented (moderate)
	distention, lumen (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	CERVIX	KIDNEYS	LIVER
OVARIES	OVIDUCT(S)	PITUITARY	VAGINA

End of Record- 15565

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15566	DOSE GROUP: I
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
KIDNEYS
OVARIAN FOLLICLES/CORPORA LUTEA
OVARIES
OVIDUCT(S)
UTERUS
VAGINA

End of Record- 15566

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15567	DOSE GROUP: I
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 15567	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15568	DOSE GROUP: I
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, multifocal (minimal)

End of Record- 15568	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15569	DOSE GROUP: I
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (mild)

End of Record- 15569	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15570
SEX: F

DOSE GROUP: I
DEATH TYPE: Spontaneous Death

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15570

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15571
SEX: F

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

OVARIAN FOLLICLES/CORPORA LUTEA:

presence of corpora lutea
presence of growing/antral follicles

PITUITARY:

cyst(s)

UTERUS:

macrophages, pigmented (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
OVARIES

CERVIX
OVIDUCT(S)

KIDNEYS
VAGINA

LIVER

End of Record- 15571

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15572
SEX: F

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: inflammation, chronic, focal/multifocal (minimal)
OVARIAN FOLLICLES/CORPORA LUTEA: presence of corpora lutea
presence of growing/antral follicles
UTERUS: macrophages, pigmented (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
OVIDUCT(S)

CERVIX
PITUITARY

KIDNEYS
VAGINA

OVARIES

End of Record- 15572

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15573
SEX: F

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15573

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15574 DOSE GROUP: I
SEX: F DEATH TYPE: Scheduled (Random)
=====

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: basophilia, cortical tubules, focal (minimal)
OVARIAN FOLLICLES/CORPORA LUTEA: presence of corpora lutea
presence of growing/antral follicles
UTERUS: macrophages, pigmented (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	CERVIX	LIVER	OVARIES
OVIDUCT(S)	PITUITARY	VAGINA	

End of Record- 15574

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15575	DOSE GROUP: I		
SEX: F	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
<u>GENERAL:</u> No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
OVARIAN FOLLICLES/CORPORA LUTEA:	presence of corpora lutea presence of growing/antral follicles		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
ADRENAL GLANDS	CERVIX	KIDNEYS	LIVER
OVARIES	OVIDUCT(S)	PITUITARY	UTERUS
VAGINA			

End of Record- 15575			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15576
SEX: F

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: mineralization, multifocal (minimal)
OVARIAN FOLLICLES/CORPORA LUTEA: presence of corpora lutea
presence of growing/antral follicles

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
OVIDUCT(S)

CERVIX
PITUITARY

LIVER
UTERUS

OVARIES
VAGINA

End of Record- 15576

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15577	DOSE GROUP: 1
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>SPLEEN:</u> Large.	cyst(s), capsular congestion, red pulp

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>SPLEEN:</u>	cyst(s), capsular congestion, red pulp (moderate)

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
CERVIX	
KIDNEYS	
OVARIAN FOLLICLES/CORPORA LUTEA	
OVARIES	
OVIDUCT(S)	
UTERUS	
VAGINA	

End of Record- 15577	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15578
SEX: F

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15578

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15579 DOSE GROUP: I
SEX: F DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15579

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15580
SEX: F

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15580

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15581	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 15581	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15582
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15582

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15583
 SEX: F

DOSE GROUP: II
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15583

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15584
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15584

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15585
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15585

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15586
 SEX: F

DOSE GROUP: II
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15586

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15587	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, multifocal (minimal)

End of Record- 15587	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15588
 SEX: F

DOSE GROUP: II
 DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: . cyst(s), papilla
 mineralization, multifocal (minimal)

End of Record- 15588

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15589	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS (1):	hyperplasia, tubular/ductular epithelium, papilla (minimal) edema, papillary, focal (minimal)

End of Record- 15589	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15590
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15590

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15591
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: mineralization, multifocal (minimal)

End of Record- 15591

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15592	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 15592	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15593
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15593

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15594
 SEX: F

DOSE GROUP: II
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15594

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15595	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, multifocal (minimal)

End of Record- 15595	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15596	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 15596	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15597	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled

=====

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15597

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15598	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, multifocal (minimal)

End of Record- 15598	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15599
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15599

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15600
 SEX: F

DOSE GROUP: II
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15600

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15601
 SEX: F

DOSE GROUP: II
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15601

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15602
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15602

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15603	DOSE GROUP: II
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
KIDNEYS
OVARIAN FOLLICLES/CORPORA LUTEA
OVARIES
OVIDUCT(S)
UTERUS
VAGINA

End of Record- 15603

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15604
 SEX: F

DOSE GROUP: II
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15604

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15605
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15605

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15606
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15606

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15607
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15607

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15608
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 15608

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15609	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	nephritis, chronic, focal (minimal) mineralization, multifocal (minimal)

End of Record- 15609	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15610	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	cyst(s), medulla mineralization, multifocal (minimal)

End of Record- 15610	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15611
 SEX: F

DOSE GROUP: III
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15611

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15612	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 15612	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15613	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, multifocal (minimal)

End of Record- 15613	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15614
 SEX: F

DOSE GROUP: III
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15614

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15615	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 15615	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15616	DOSE GROUP: III
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>EAR(S):</u> Swollen and purple, bilateral.	Tissue not available

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal) edema, papillary, focal (minimal) mineralization, multifocal (minimal)

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
<u>EAR(S)</u>	

End of Record- 15616	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15617	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 15617	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15618
 SEX: F

DOSE GROUP: III
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15618

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15619	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: edema, papillary, focal (minimal)

End of Record- 15619

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15620	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	dilatation, pelvis (mild)

End of Record- 15620	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15621
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15621

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15622	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 15622	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15623	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 15623	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15624
 SEX: F

DOSE GROUP: III
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: . mineralization, multifocal (minimal)

End of Record- 15624

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15625
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

GENERAL: No gross changes.

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15625

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15626
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

GENERAL: No gross changes.

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15626

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15627
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: mineralization, multifocal (minimal)

End of Record- 15627

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15628
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: mineralization, pelvis (minimal)
mineralization, multifocal (minimal)

End of Record- 15628

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15629
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15629

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15630
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 15630

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15631	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	infiltration, mononuclear-cell, focal (minimal) hyperplasia, tubular/ductular epithelium, papilla (mild) edema, papillary, focal (minimal)

End of Record- 15631	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15632 DOSE GROUP: III
SEX: F DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15632

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15633	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	mineralization, multifocal (minimal)
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End of Record- 15633

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15634	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, multifocal (minimal)

End of Record- 15634	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15635
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15635

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15636
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15636

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15637
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: . mineralization, multifocal (minimal)

End of Record- 15637

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15638
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 15638

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15639	DOSE GROUP: III
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>TAIL:</u> Tip missing, 16.0cm from base.	necrosis inflammation, chronic, focal

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
TAIL:	necrosis (moderate) inflammation, chronic, focal (moderate)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 15639	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15640	DOSE GROUP: III
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
KIDNEYS
OVARIAN FOLLICLES/CORPORA LUTEA
OVARIES
OVIDUCT(S)
UTERUS
VAGINA

End of Record- 15640

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15641	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 15641	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15642	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (mild) edema, papillary, focal (minimal)
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End of Record- 15642

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15643	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (moderate) edema, papillary, focal (mild)

End of Record- 15643	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15644	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, multifocal (minimal)

End of Record- 15644	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15645	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)
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End of Record- 15645

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15646	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal) edema, papillary, focal (minimal) mineralization, multifocal (minimal)

End of Record- 15646	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15647
SEX: F

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15647

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15648	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 15648	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15649	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15649

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15650 DOSE GROUP: IV
SEX: F DEATH TYPE: Scheduled (Gross Lesion)

=====

GROSS OBSERVATION(S):

EXTREMITIES: Swollen limb, left hind paw.

HISTOMORPHOLOGIC OBSERVATION(S):

ankylosis
osteochondritis

HISTOMORPHOLOGIC OBSERVATIONS:

EXTREMITIES:

ankylosis

KIDNEYS:

osteochondritis (moderate)
necrosis, papilla, focal (moderate)
hyperplasia, tubular/ductular epithelium, papilla (mild)

End of Record- 15650

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15651	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
KIDNEYS	

End of Record- 15651	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15652
SEX: F

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

hyperplasia, tubular/ductular epithelium, papilla (mild)
mineralization, multifocal (minimal)

End of Record- 15652

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15653
SEX: F

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

KIDNEYS

End of Record- 15653

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15654
 SEX: F

DOSE GROUP: IV
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

KIDNEYS

End of Record- 15654

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15655
 SEX: F

DOSE GROUP: IV
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15655

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15656
 SEX: F

DOSE GROUP: IV
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
 edema, papillary, focal (minimal)

End of Record- 15656

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15657	DOSE GROUP: IV
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
CERVIX	
KIDNEYS	
OVARIAN FOLLICLES/CORPORA LUTEA	
OVARIES	
OVIDUCT(S)	
UTERUS	
VAGINA	

End of Record- 15657	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15658
SEX: F

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (mild)
edema, papillary, focal (minimal)
mineralization, multifocal (minimal)

End of Record- 15658

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15659	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 15659	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15660
SEX: F

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15660

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15661	DOSE GROUP: IV
SEX: F	DEATH TYPE: Moribund (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>SPLEEN:</u> Small.	atrophy pigment

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	necrosis, papilla, focal (moderate) dilatation, cortical tubules, focal (moderate) dilatation, medullary tubules (moderate) basophilia, cortical tubules, focal (moderate) hyperplasia, tubular/ductular epithelium, papilla (mild)
SPLEEN:	atrophy (moderate) pigment (mild)

End of Record- 15661	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15662	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal) edema, papillary, focal (minimal)

End of Record- 15662	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15663	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	necrosis, papilla, focal (minimal) hyperplasia, tubular/ductular epithelium, papilla (mild) edema, papillary, focal (minimal)

End of Record- 15663	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15664	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15664

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15665	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15665

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15666	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	infiltration, mononuclear-cell, focal (minimal) hyperplasia, tubular/ductular epithelium, papilla (mild) edema, papillary, focal (minimal)

End of Record- 15666	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15667	DOSE GROUP: IV
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)

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<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>SPLEEN:</u> Firm, tan area, 0.2cm in diameter.	abscess
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HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)
	mineralization, multifocal (minimal)
SPLEEN:	abscess

End of Record- 15667

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15668
SEX: F

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15668

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15669	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (mild)

End of Record- 15669	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15670
SEX: F

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15670

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15671
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (mild)

End of Record- 15671

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15672
SEX: F

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

ADRENAL GLANDS:

degeneration, cystic, cortex (minimal)

KIDNEYS:

hyperplasia, tubular/ductular epithelium, papilla (minimal)

OVARIAN FOLLICLES/CORPORA LUTEA:

edema, papillary, focal (minimal)

UTERUS:

presence of corpora lutea

presence of growing/antral follicles

macrophages, pigmented (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

CERVIX
PITUITARY

LIVER
VAGINA

OVARIES

OVIDUCT(S)

End of Record- 15672

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15673 DOSE GROUP: V
SEX: F DEATH TYPE: Scheduled (Random)

=====

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	cyst(s), medulla mineralization, multifocal (minimal)
OVARIAN FOLLICLES/CORPORA LUTEA:	hyperplasia, tubular/ductular epithelium, papilla (minimal) presence of corpora lutea
UTERUS:	presence of growing/antral follicles macrophages, pigmented (mild) distention, lumen (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	CERVIX	LIVER	OVARIES
OVIDUCT(S)	PITUITARY	VAGINA	

End of Record- 15673

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15674
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (mild)

End of Record- 15674

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15675
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
mineralization, multifocal (minimal)

End of Record- 15675

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15676	DOSE GROUP: V
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
 KIDNEYS
 OVARIAN FOLLICLES/CORPORA LUTEA
 OVARIES
 OVIDUCT(S)
 UTERUS
 VAGINA

End of Record- 15676

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15677
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

hyperplasia, tubular/ductular epithelium, papilla (mild)
edema, papillary, focal (minimal)

End of Record- 15677

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15678
SEX: F

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	dilatation, medullary tubules (moderate) dilatation, cortical tubules, focal (mild) basophilia, cortical tubules, focal (mild)
OVARIAN FOLLICLES/CORPORA LUTEA:	hyperplasia, tubular/ductular epithelium, papilla (minimal) presence of corpora lutea
UTERUS:	presence of growing/antral follicles macrophages, pigmented (moderate) distention, lumen (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	CERVIX	LIVER	OVARIES
OVIDUCT(S)	PITUITARY	VAGINA	

COMMENTS:

VAGINA Present on the section of cervix.

End of Record- 15678

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15679	DOSE GROUP: V
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
KIDNEYS
OVARIAN FOLLICLES/CORPORA LUTEA
OVARIES
OVIDUCT(S)
UTERUS
VAGINA

End of Record- 15679

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15680
SEX: F

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: mineralization, multifocal (minimal)
hyperplasia, tubular/ductular epithelium, papilla (mild)
OVARIAN FOLLICLES/CORPORA LUTEA: presence of corpora lutea
presence of growing/antral follicles
UTERUS: macrophages, pigmented (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
OVIDUCT(S)

CERVIX
PITUITARY

LIVER
VAGINA

OVARIES

End of Record- 15680

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15681
SEX: F

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)
OVARIAN FOLLICLES/CORPORA LUTEA:	presence of corpora lutea
OVARIES:	presence of growing/antral follicles
UTERUS:	cyst(s), intraovarian
	distention, lumen (marked)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
VAGINA

CERVIX

OVIDUCT(S)

PITUITARY

End of Record- 15681

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15682
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (mild)

End of Record- 15682

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15683	DOSE GROUP: V
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
KIDNEYS
OVARIAN FOLLICLES/CORPORA LUTEA
OVARIES
OVIDUCT(S)
UTERUS
VAGINA

End of Record- 15683

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15684
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (mild)

End of Record- 15684

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15685
SEX: F

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)
OVARIAN FOLLICLES/CORPORA LUTEA:	presence of corpora lutea
	presence of growing/antral follicles
UTERUS:	macrophages, pigmented (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
OVIDUCT(S)

CERVIX
PITUITARY

LIVER
VAGINA

OVARIES

End of Record- 15685

ANIMAL NUMBER: 15686 DOSE GROUP: V
SEX: F DEATH TYPE: Scheduled (Random)

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

KIDNEYS:	mineralization, multifocal (minimal) hyperplasia, tubular/ductular epithelium, papilla (mild)
OVARIAN FOLLICLES/CORPORA LUTEA:	edema, papillary, focal (minimal) presence of corpora lutea
UTERUS:	presence of growing/antral follicles macrophages, pigmented (moderate)

ADRENAL GLANDS	CERVIX	LIVER	OVARIES
OVIDUCT(S)	PITUITARY	VAGINA	

End of Record- 15686

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15687
 SEX: F

DOSE GROUP: V
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 15687

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15688	DOSE GROUP: V		
SEX: F	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
GENERAL: No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
OVARIAN FOLLICLES/CORPORA LUTEA:	presence of corpora lutea		
	presence of growing/antral follicles		
UTERUS:	macrophages, pigmented (minimal)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
ADRENAL GLANDS	CERVIX	KIDNEYS	LIVER
OVARIES	OVIDUCT(S)	PITUITARY	VAGINA

End of Record- 15688			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15689	DOSE GROUP: V
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
CERVIX	
KIDNEYS	
OVARIAN FOLLICLES/CORPORA LUTEA	
OVARIES	
OVIDUCT(S)	
UTERUS	
VAGINA	

End of Record- 15689	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15690
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

hyperplasia, tubular/ductular epithelium, papilla (minimal)
edema, papillary, focal (minimal)
mineralization, multifocal (minimal)

End of Record- 15690

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15691	DOSE GROUP: V
SEX: F	DEATH TYPE: Sacrifice-Scheduled

=====

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	dilatation, medullary tubules (minimal) hyperplasia, tubular/ductular epithelium, papilla (mild) edema, papillary, focal (minimal)
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End of Record- 15691

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15692
SEX: F

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	nephritis, chronic, focal (minimal)
	basophilia, cortical tubules, focal (minimal)
OVARIAN FOLLICLES/CORPORA LUTEA:	hyperplasia, tubular/ductular epithelium, papilla (mild)
	presence of corpora lutea
UTERUS:	presence of growing/antral follicles
	macrophages, pigmented (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
OVIDUCT(S)

CERVIX
PITUITARY

LIVER
VAGINA

OVARIES

End of Record- 15692

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15693	DOSE GROUP: V
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
CERVIX	
KIDNEYS	
OVARIAN FOLLICLES/CORPORA LUTEA	
OVARIES	
OVIDUCT(S)	
UTERUS	
VAGINA	

End of Record- 15693	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15694	DOSE GROUP: V		
SEX: F	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
GENERAL: No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (mild)		
OVARIAN FOLLICLES/CORPORA LUTEA:	presence of corpora lutea		
	presence of growing/antral follicles		
UTERUS:	macrophages, pigmented (mild)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
ADRENAL GLANDS	CERVIX	LIVER	OVARIES
OVIDUCT(S)	PITUITARY	VAGINA	

End of Record- 15694			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15695	DOSE GROUP: V
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 15695	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15696
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

dilatation, pelvis (mild)

End of Record- 15696

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15697
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

hyperplasia, tubular/ductular epithelium, papilla (mild)
edema, papillary, focal (minimal)

End of Record- 15697

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15698
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
edema, papillary, focal (minimal)
mineralization, multifocal (minimal)

End of Record- 15698

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix III
 Individual Animal Gross and Histomorphology Data
 P Generation

ANIMAL NUMBER: 15699
 SEX: F

DOSE GROUP: V
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (mild)

End of Record- 15699

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix III
Individual Animal Gross and Histomorphology Data
P Generation

ANIMAL NUMBER: 15700
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

KIDNEYS

End of Record- 15700

ORAL (GAVAGE) TWO-GENERATION
(ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS
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HISTOPATHOLOGY REPORT

APPENDIX IV

INDIVIDUAL ANIMAL GROSS AND HISTOMORPHOLOGY DATA

F1 Generation

KEY TO CORRELATION OF HISTOMORPHOLOGIC OBSERVATIONS

Not applicable = Microscopic evaluation/correlation not appropriate or not required
by protocol.

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3001
SEX: M

DOSE GROUP: I
DEATH TYPE: Scheduled (Reduced Fertility)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

hyperplasia, tubular/ductular epithelium, papilla (minimal)

PROSTATE:

inflammation, chronic (mild)

atrophy, focal (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND
TESTIS

EPIDIDYMIS

LIVER

SEMINAL VESICLES

End of Record- 3001

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3002	DOSE GROUP: I		
SEX: M	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
GENERAL: No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
PROSTATE:	inflammation, chronic (minimal) atrophy, focal (minimal)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
ADRENAL GLANDS	COAGULATING GLAND	EPIDIDYMIS	KIDNEYS
LIVER	PITUITARY	SEMINAL VESICLES	TESTIS

End of Record- 3002			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3003	DOSE GROUP: I		
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
GENERAL: No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
PROSTATE:	inflammation, chronic (minimal) atrophy, focal (mild)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
COAGULATING GLAND	EPIDIDYMIS	KIDNEYS	LIVER
SEMINAL VESICLES	TESTIS		

End of Record- 3003			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3004	DOSE GROUP: 1
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>HEAD:</u> Palate- hole, 2 x 2mm.	fracture, PALATE hemorrhage, PALATE

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
LIVER:	inflammation, chronic, focal/multifocal (minimal)
PALATE:	fracture hemorrhage (moderate)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3004	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3005 DOSE GROUP: I
SEX: M DEATH TYPE: Scheduled (Reduced Fertility)

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMIS: microgranuloma(s)
KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
edema, papillary, focal (minimal)
LIVER: inflammation, chronic, focal/multifocal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND PROSTATE SEMINAL VESICLES TESTIS

End of Record- 3005

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3006	DOSE GROUP: I		
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
<u>GENERAL:</u> No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
EPIDIDYMIS:	infiltration, mononuclear-cell, focal (minimal)		
LIVER:	hematopoiesis, extramedullary, multifocal (minimal)		
PROSTATE:	inflammation, chronic (mild)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
COAGULATING GLAND	KIDNEYS	SEMINAL VESICLES	TESTIS

End of Record- 3006			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3007 DOSE GROUP: I
SEX: M DEATH TYPE: Scheduled (Reduced Fertility)

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

ADRENAL GLANDS: vacuolation, cortex (mild)
EPIDIDYMIS: infiltration, mononuclear-cell, focal (minimal)
PROSTATE: atrophy, focal (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	KIDNEYS	LIVER	PITUITARY
SEMINAL VESICLES	TESTIS		

End of Record- 3007

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3008
SEX: M

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

LIVER: Papillary process, firm tan areas ranging
in size from pinpoint to 1 x 1cm.

necrosis, focal/multifocal

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER:

necrosis, focal/multifocal (moderate)

PROSTATE:

atrophy, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
PITUITARY

COAGULATING GLAND
SEMINAL VESICLES

EPIDIDYMIS
TESTIS

KIDNEYS

End of Record- 3008

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3009
SEX: M

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 3009

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3010	DOSE GROUP: I
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable
=====	
<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	dilatation, pelvis (mild)
=====	
<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	
=====	
End of Record- 3010	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3011
SEX: M

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

PROSTATE: atrophy, focal (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
LIVER

COAGULATING GLAND
PITUITARY

EPIDIDYMIS
SEMINAL VESICLES

KIDNEYS
TESTIS

End of Record- 3011

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3012	DOSE GROUP: I
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 3012	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3013 DOSE GROUP: I
SEX: M DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

ADRENAL GLANDS: vacuolation, cortex (minimal)
PROSTATE: inflammation, chronic (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	EPIDIDYMIS	KIDNEYS	LIVER
PITUITARY	SEMINAL VESICLES	TESTIS	

End of Record- 3013

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3014	DOSE GROUP: I
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
LIVER:	inflammation, chronic, focal/multifocal (minimal)
PROSTATE:	inflammation, chronic (minimal)
	atrophy, focal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
COAGULATING GLAND	EPIDIDYMIS
TESTIS	KIDNEYS
	SEMINAL VESICLES

End of Record- 3014	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3015	DOSE GROUP: I
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
COAGULATING GLAND	EPIDIDYMIS
PROSTATE	SEMINAL VESICLES
	KIDNEYS
	TESTIS
	LIVER

End of Record- 3015	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3016 DOSE GROUP: I
SEX: M DEATH TYPE: Scheduled (Reduced Fertility)
=====

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: cyst(s), medulla
LIVER: inflammation, chronic, focal/multifocal (minimal)
PROSTATE: atrophy, focal (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND EPIDIDYMIS SEMINAL VESICLES TESTIS

End of Record- 3016

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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F1 Generation

ANIMAL NUMBER: 3017	DOSE GROUP: I
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
LIVER:	inflammation, chronic, focal/multifocal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3017	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3018	DOSE GROUP: I
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable
=====	
<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
LIVER:	inflammation, chronic, focal/multifocal (minimal)
PROSTATE:	prostatitis, suppurative (minimal)
=====	
<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
COAGULATING GLAND	EPIDIDYMIS
TESTIS	KIDNEYS
	SEMINAL VESICLES
=====	
End of Record- 3018	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3019	DOSE GROUP: I
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 3019	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3020	DOSE GROUP: I		
SEX: M	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
EAR(S): Swollen, right.	Tissue not available		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
ADRENAL GLANDS:	vacuolation, cortex (minimal)		
PITUITARY:	cyst(s)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
COAGULATING GLAND	EPIDIDYMIS	KIDNEYS	LIVER
PROSTATE	SEMINAL VESICLES	TESTIS	

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>			
EAR(S)			

End of Record- 3020			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3021 DOSE GROUP: I
SEX: M DEATH TYPE: Spontaneous (Reduced Fertility)

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	EPIDIDYMIS	PROSTATE	SEMINAL VESICLES
TESTIS			

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

KIDNEYS
LIVER

End of Record- 3021

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3022 DOSE GROUP: I
SEX: M DEATH TYPE: Sacrifice-Scheduled

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: infiltration, mononuclear-cell, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 3022

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3023	DOSE GROUP: I		
SEX: M	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
<u>GENERAL:</u> No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
ADRENAL GLANDS:	vacuolation, cortex (moderate)		
PITUITARY:	hyperplasia, pars distalis, focal (mild)		
PROSTATE:	inflammation, chronic (minimal)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
COAGULATING GLAND	EPIDIDYMIS	KIDNEYS	LIVER
SEMINAL VESICLES	TESTIS		

End of Record- 3023			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3024
SEX: M

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

PROSTATE: inflammation, chronic (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
LIVER

COAGULATING GLAND
PITUITARY

EPIDIDYMIS
SEMINAL VESICLES

KIDNEYS
TESTIS

End of Record- 3024

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3025
SEX: M

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS . LIVER

End of Record- 3025

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3026 DOSE GROUP: I
SEX: M DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: infiltration, mononuclear-cell, focal (minimal)
LIVER: inflammation, chronic, focal/multifocal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	COAGULATING GLAND	EPIDIDYMIS	PITUITARY
PROSTATE	SEMINAL VESICLES	TESTIS	

End of Record- 3026

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3027	DOSE GROUP: I
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 3027	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3028 DOSE GROUP: I
SEX: M DEATH TYPE: Scheduled (Random)

=====

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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HISTOMORPHOLOGIC OBSERVATIONS:

ADRENAL GLANDS:	vacuolation, cortex (mild)
PROSTATE:	inflammation, chronic (minimal)

=====

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	EPIDIDYMIS	KIDNEYS	LIVER
PITUITARY	SEMINAL VESICLES	TESTIS	

=====

End of Record- 3028

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3029	DOSE GROUP: I
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	basophilia, cortical tubules, focal (minimal) infiltration, mononuclear-cell, focal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3029	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3030	DOSE GROUP: I
SEX: M	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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GENERAL: No gross changes.	Not applicable
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THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS LIVER

End of Record- 3030

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3031	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, multifocal (minimal)
LIVER:	inflammation, chronic, focal/multifocal (minimal)

End of Record- 3031	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3032	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 3032	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3033	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 3033	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3034	DOSE GROUP: 11
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	basophilia, cortical tubules, focal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3034	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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 Individual Animal Gross and Histomorphology Data
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ANIMAL NUMBER: 3035	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	dilatation, pelvis (mild)
LIVER:	inflammation, chronic, focal/multifocal (minimal)

End of Record- 3035	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
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ANIMAL NUMBER: 3036	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 3036	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3037	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 3037	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
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ANIMAL NUMBER: 3038 DOSE GROUP: I;
SEX: M DEATH TYPE: Spontaneous (Gross Lesion)

GROSS OBSERVATION(S):

ESOPHAGUS: Perforation, 1.3cm in length.
GASTROINTESTINAL TRACT: Stomach and intestines-
distended with gas.
HEART: Pericardium- yellow, thick, firm.

HISTOMORPHOLOGIC OBSERVATION(S):

distention
bacterial colonies
No microscopic change to correlate, STOMACH
distention, INTESTINES
pleuritis, fibrinopurulent, LUNG
abscess
pericarditis, fibrinopurulent

HISTOMORPHOLOGIC OBSERVATIONS:

ESOPHAGUS: distention (moderate)
bacterial colonies
HEART: abscess
pericarditis, fibrinopurulent (marked)
INTESTINES: distention (moderate)
LUNG: pleuritis, fibrinopurulent (marked)
STOMACH: No microscopic change to correlate

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

STOMACH

COMMENTS:

LUNG Lung tissue was present on the section taken for pericardium.

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

KIDNEYS
LIVER

End of Record- 3038

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
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ANIMAL NUMBER: 3039	DOSE GROUP: II
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>EAR(S):</u> Swollen, right.	Tissue not available

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
<u>EAR(S)</u>	

End of Record- 3039	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 3040	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 3040	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3041	DOSE GROUP: II
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>KIDNEYS:</u> Left- pitted on capsule.	No microscopic change to correlate

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>KIDNEYS:</u>	No microscopic change to correlate

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
<u>KIDNEYS</u>	<u>LIVER</u>

End of Record- 3041	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
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ANIMAL NUMBER: 3042
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: basophilia, cortical tubules, focal (minimal)
infiltration, mononuclear-cell, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 3042

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

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ANIMAL NUMBER: 3043      DOSE GROUP:      I!
SEX:      M      DEATH TYPE:      Scheduled (Reduced Fertility)
=====
GROSS OBSERVATION(S):      HISTOMORPHOLOGIC OBSERVATION(S):
GENERAL: No gross changes.      Not applicable
-----
HISTOMORPHOLOGIC OBSERVATIONS:
EPIDIDYMISS:      infiltration, mononuclear-cell, focal (minimal)
KIDNEYS:      cyst(s), cortex
      infiltration, mononuclear-cell, focal (minimal)
PROSTATE:      atrophy, focal (minimal)
-----
THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:
COAGULATING GLAND      LIVER      SEMINAL VESICLES      TESTIS
-----
End of Record- 3043

```

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 3044	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
LIVER:	inflammation, chronic, focal/multifocal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3044	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3045	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
LIVER:	inflammation, chronic, focal/multifocal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3045	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3046
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Moribund

GROSS OBSERVATION(S):

GENERAL: No gross changes.

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

KIDNEYS
LIVER

End of Record- 3046

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3047	DOSE GROUP: II		
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
<u>GENERAL:</u> No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
EPIDIDYMIS:	infiltration, mononuclear-cell, focal (minimal)		
KIDNEYS:	mineralization, multifocal (minimal)		
PROSTATE:	inflammation, chronic (moderate)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
COAGULATING GLAND	LIVER	SEMINAL VESICLES	TESTIS

End of Record- 3047			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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 F1 Generation

ANIMAL NUMBER: 3048	DOSE GROUP: II		
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
<u>GENERAL:</u> No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
PROSTATE:	inflammation, chronic (minimal)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
COAGULATING GLAND	EPIDIDYMIS	KIDNEYS	LIVER
SEMINAL VESICLES	TESTIS		

End of Record- 3048			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3049
SEX: M

DOSE GROUP: II
DEATH TYPE: Scheduled (Reduced Fertility)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMIS: infiltration, mononuclear-cell, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	KIDNEYS	LIVER	PROSTATE
SEMINAL VESICLES	TESTIS		

End of Record- 3049

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3050
SEX: M

DOSE GROUP: II
DEATH TYPE: Scheduled (Reduced Fertility)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMIS:	infiltration, mononuclear-cell, focal (minimal)
KIDNEYS:	infiltration, mononuclear-cell, focal (minimal)
LIVER:	lipidosis, tension, focal
TESTIS:	retained Step 19 spermatids, Stage IX/X tubules degeneration, multifocal (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	PROSTATE	SEMINAL VESICLES
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End of Record- 3050

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3051	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 3051	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3052	DOSE GROUP: II
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
KIDNEYS: Right- pelvis, dilated, marked.	dilatation, pelvis

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	dilatation, pelvis (marked)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3052	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3053	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 3053	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3054	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 3054	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 3055	DOSE GROUP: II		
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
<u>GENERAL:</u> No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
EPIDIDYMIS:	exfoliated spermatogenic cells (minimal)		
LIVER:	hyperplasia, bile duct, focal (minimal)		
	inflammation, chronic, focal/multifocal (minimal)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
COAGULATING GLAND	KIDNEYS	PROSTATE	SEMINAL VESICLES
TESTIS			

End of Record- 3055			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3056	DOSE GROUP: II
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>TESTES:</u> Bilateral- small, flaccid, purple.	atrophy, diffuse, TESTIS

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
EPIDIDYMIS:	atrophy (moderate)
	hypospermia (marked)
KIDNEYS:	dilatation, pelvis (minimal)
PROSTATE:	atrophy, focal (mild)
TESTIS:	atrophy, diffuse (marked)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
COAGULATING GLAND	LIVER SEMINAL VESICLES

End of Record- 3056	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3057	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	dilatation, pelvis (mild) hyperplasia, pelvic/papillary urothelium (mild) mineralization, pelvis (minimal) cyst(s), cortex
LIVER:	inflammation, chronic, focal/multifocal (minimal)

End of Record- 3057	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 3058	DOSE GROUP: II
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	cyst(s), medulla

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3058	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3059
SEX: M

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: inflammation, chronic, focal/multifocal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3059

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3060
SEX: M

DOSE GROUP: II
DEATH TYPE: Spontaneous Death

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS LIVER

End of Record- 3060

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3061	DOSE GROUP: III		
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
GENERAL: No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
EPIDIDYMIS:	infiltration, mononuclear-cell, focal (minimal)		
PROSTATE:	inflammation, chronic (minimal)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
COAGULATING GLAND	KIDNEYS	LIVER	SEMINAL VESICLES
TESTIS			

End of Record- 3061			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3062
SEX: M

DOSE GROUP: III
DEATH TYPE: Spontaneous Death

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

KIDNEYS
LIVER

End of Record- 3062

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3063	DOSE GROUP: III
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 3063	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3064	DOSE GROUP: III
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable
=====	
<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
PROSTATE:	inflammation, chronic (moderate)
=====	
<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
COAGULATING GLAND	EPIDIDYMIS
SEMINAL VESICLES	TESTIS
KIDNEYS	
LIVER	
=====	
End of Record- 3064	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3065
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS · LIVER

End of Record- 3065

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 3066	DOSE GROUP: III
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, pelvis (mild) edema, papillary, focal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3066	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3067	DOSE GROUP: III
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 3067	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3068	DOSE GROUP: III
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable
=====	
<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	cyst(s), papilla
	infiltration, mononuclear-cell, focal (minimal)
LIVER:	inflammation, chronic, focal/multifocal (minimal)
TESTIS:	atrophy, focal (minimal)
=====	
<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
COAGULATING GLAND	EPIDIDYMIS
	PROSTATE
	SEMINAL VESICLES
=====	
End of Record- 3068	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3069
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: infiltration, fat-cell (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 3069

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3070
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS · LIVER

End of Record- 3070

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 3071	DOSE GROUP: III
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, pelvis (mild) dilatation, pelvis (mild) hyperplasia, tubular/ductular epithelium, papilla (mild)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3071	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3072	DOSE GROUP: III
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
LIVER:	inflammation, chronic, focal/multifocal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3072	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3073
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: dilatation, pelvis (mild)
LIVER: inflammation, chronic, focal/multifocal (minimal)

End of Record- 3073

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3074	DOSE GROUP: III
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, pelvic/papillary urothelium (minimal) infiltration, mononuclear-cell, focal (minimal) dilatation, pelvis (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3074	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3075	DOSE GROUP: III
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	dilatation, pelvis (mild)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3075	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 3076
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS LIVER

End of Record- 3076

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3077
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: dilatation, pelvis (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 3077

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3078	DOSE GROUP: III
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	basophilia, cortical tubules, focal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3078	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3079	DOSE GROUP: III
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	basophilia, cortical tubules, focal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3079	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 3080	DOSE GROUP: III
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 3080	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3081
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: infiltration, mononuclear-cell, focal (minimal)
dilatation, pelvis (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 3081

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3082	DOSE GROUP: III		
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
GENERAL: No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
PROSTATE:	atrophy, focal (moderate)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
COAGULATING GLAND	EPIDIDYMIS	KIDNEYS	LIVER
SEMINAL VESICLES	TESTIS		

End of Record- 3082			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3083
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: inflammation, chronic, focal/multifocal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3083

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3084
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: infiltration, mononuclear-cell, focal (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 3084

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
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ANIMAL NUMBER: 3085	DOSE GROUP: III
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>EXTREMITIES:</u> Hind leg - left ankle swollen.	osteoarthritis, chronic inflammation, suppurative, joint capsule

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>EXTREMITIES:</u>	osteoarthritis, chronic (moderate) inflammation, suppurative, joint capsule (moderate)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
COAGULATING GLAND	EPIDIDYMIS
PROSTATE	SEMINAL VESICLES
	KIDNEYS
	TESTIS
	LIVER

End of Record- 3085	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 3086
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: inflammation, chronic, focal/multifocal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3086

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3087
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: basophilia, cortical tubules, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 3087

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3088
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: dilatation, pelvis (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 3088

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3089
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS LIVER

End of Record- 3089

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3090
SEX: M

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: pyelonephritis, multifocal (moderate)
necrosis, papilla, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 3090

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3091	DOSE GROUP: IV
SEX: M	DEATH TYPE: Scheduled (Reduced Fertility)

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable
<u>KIDNEYS:</u> Right- pelvis dilated, slight.	dilatation, pelvis

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	dilatation, pelvis (mild)
LIVER:	hypertrophy, hepatocellular (minimal)
PROSTATE:	inflammation, chronic (mild)
	atrophy, focal (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	EPIDIDYMIS	SEMINAL VESICLES	TESTIS
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End of Record- 3091

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3092	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
LIVER:	hypertrophy, hepatocellular (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3092	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

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ANIMAL NUMBER: 3093      DOSE GROUP: IV
SEX: M                  DEATH TYPE: Scheduled (Reduced Fertility)
=====
GROSS OBSERVATION(S):                HISTOMORPHOLOGIC OBSERVATION(S):

EAR(S): Swollen, right.                chondropathy, auricular
-----
HISTOMORPHOLOGIC OBSERVATIONS:

EAR(S):                                chondropathy, auricular (mild)
PROSTATE:                            atrophy, focal (minimal)
                                           prostatitis, suppurative (minimal)
-----
THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND      EPIDIDYMIS      KIDNEYS      LIVER
SEMINAL VESICLES      TESTIS
-----
End of Record- 3093

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ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3094 DOSE GROUP: IV
SEX: M DEATH TYPE: Scheduled (Reduced Fertility)

=====

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
PROSTATE: atrophy, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	EPIDIDYMIS	LIVER	SEMINAL VESICLES
TESTIS			

End of Record- 3094

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

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ANIMAL NUMBER: 3095
SEX: M
DOSE GROUP: IV
DEATH TYPE: Scheduled (Reduced Fertility)
=====
GROSS OBSERVATION(S):
HISTOMORPHOLOGIC OBSERVATION(S):
SKIN: Lesion, back, 0.5 x 1.0cm.
dermatitis, chronic, focal. SKIN (GROSS LESION)
-----
HISTOMORPHOLOGIC OBSERVATIONS:
PROSTATE: atrophy, focal (mild)
SKIN (GROSS LESION): dermatitis, chronic, focal (moderate)
-----
THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:
COAGULATING GLAND EPIDIDYMIS KIDNEYS LIVER
SEMINAL VESICLES TESTIS
-----
End of Record- 3095

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ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3096	DOSE GROUP: IV
SEX: M	DEATH TYPE: Spontaneous (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>ESOPHAGUS:</u> Perforation, 1.3cm in length.	perforation

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>ESOPHAGUS:</u>	perforation

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
KIDNEYS	
LIVER	

End of Record- 3096	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3097	DOSE GROUP: IV
SEX: M	DEATH TYPE: Moribund (Gross Lesion)

GROSS OBSERVATION(S):

ESOPHAGUS: 0.5cm tear (trimming observation).

HEART: Pericardium- distended with approximately
3cc of thin red fluid.
SKIN: Left axilla- 4.5 x 2.5 x 1.8cm, soft, tan,
cut surface reveals green caseous and green
granular material.

HISTOMORPHOLOGIC OBSERVATION(S):

necrosis
perforation
abscess, THORACIC CAVITY
pericarditis, fibrinopurulent

abscess, SKIN (GROSS LESION)

HISTOMORPHOLOGIC OBSERVATIONS:

ESOPHAGUS:	necrosis (marked)
	perforation
HEART:	pericarditis, fibrinopurulent (marked)
SKIN (GROSS LESION):	abscess
THORACIC CAVITY:	abscess

COMMENTS:

SKIN (GROSS LESION)	There is foreign material in the abscess.
THORACIC CAVITY	There is foreign material present in the area of the abscess.

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

KIDNEYS
LIVER

End of Record- 3097

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3098	DOSE GROUP: IV
SEX: M	DEATH TYPE: Spontaneous (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
TRACHEA: 0.3cm tear; approximately 2.2ml of red, clear liquid removed from chest cavity.	Advanced autolysis precludes evaluation

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
LIVER:	inflammation, chronic, focal/multifocal (minimal)
TRACHEA:	Advanced autolysis precludes evaluation

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

<u>AUTOLYSIS PRECLUDES EVALUATION:</u>	
TRACHEA	

End of Record- 3098	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3099	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, multifocal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3099	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3100
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

hyperplasia, pelvic/papillary urothelium (mild)
hemorrhage, pelvis (mild)
necrosis, papilla, focal (minimal)
hyperplasia, tubular/ductular epithelium, papilla (mild)
mineralization, pelvis (mild)
inflammation, chronic, focal/multifocal (minimal)

LIVER:

End of Record- 3100

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3101 DOSE GROUP: IV
SEX: M DEATH TYPE: Scheduled (Reduced Fertility)
=====

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMIS: infiltration, mononuclear-cell, focal (minimal)
PROSTATE: atrophy, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND KIDNEYS LIVER SEMINAL VESICLES
TESTIS

End of Record- 3101

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 3102	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 3102	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
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ANIMAL NUMBER: 3103	DOSE GROUP: IV
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>EAR(S):</u> Swollen, bilateral.	dermatitis, chronic, focal

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>EAR(S):</u>	dermatitis, chronic, focal (minimal)
<u>KIDNEYS:</u>	infiltration, mononuclear-cell, focal (minimal)
	mineralization, pelvis (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3103	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3104	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	LIVER

End of Record- 3104	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3105 DOSE GROUP: IV
SEX: M DEATH TYPE: Scheduled (Reduced Fertility)
=====

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMIS: infiltration, mononuclear-cell, focal (minimal)
KIDNEYS: infiltration, mononuclear-cell, focal (minimal)
PROSTATE: atrophy, focal (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND LIVER SEMINAL VESICLES TESTIS

End of Record- 3105

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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F1 Generation

ANIMAL NUMBER: 3106
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: cyst(s), medulla

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 3106

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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ANIMAL NUMBER: 3107
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS LIVER

End of Record- 3107

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3108
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: infiltration, mononuclear-cell, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 3108

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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F1 Generation

ANIMAL NUMBER: 3109	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hemorrhage, pelvis (moderate) hyperplasia, pelvic/papillary urothelium (minimal) necrosis, papilla, focal (minimal) hyperplasia, tubular/ductular epithelium, papilla (minimal) mineralization, pelvis (moderate)
LIVER:	inflammation, chronic, focal/multifocal (minimal)

End of Record- 3109	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3110
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: necrosis, focal/multifocal (minimal)
inflammation, chronic, focal/multifocal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3110

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3111	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	dilatation, pelvis (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3111	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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ANIMAL NUMBER: 3112 DOSE GROUP: IV
SEX: M DEATH TYPE: Scheduled (Reduced Fertility)
=====

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMIS: infiltration, mononuclear-cell, focal (minimal)
KIDNEYS: cyst(s), papilla
nephritis, chronic, focal (minimal)
hyperplasia, tubular/ductular epithelium, papilla (minimal)
dilatation, pelvis (minimal)
LIVER: cellular alteration, eosinophilic, focal (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND PROSTATE SEMINAL VESICLES TESTIS

End of Record- 3112

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3113	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
LIVER:	hypertrophy, hepatocellular (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3113	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3114	DOSE GROUP: IV
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
EAR(S): Discolored, bilateral, purple; swollen, bilateral.	dermatitis, chronic, focal

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
EAR(S):	dermatitis, chronic, focal (minimal)
KIDNEYS:	dilatation, pelvis (mild)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3114	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3115	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, pelvic/papillary urothelium (minimal)
	hyperplasia, tubular/ductular epithelium, papilla (minimal)
	mineralization, pelvis (mild)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3115	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3116
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: . necrosis, focal/multifocal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3116

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3117
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: dilatation, pelvis (minimal)
LIVER: inflammation, chronic, focal/multifocal (minimal)

End of Record- 3117

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3118	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	nephritis, chronic, focal (minimal) basophilia, cortical tubules, focal (minimal) dilatation, pelvis (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3118	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3119
SEX: M

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

hyperplasia, pelvic/papillary urothelium (minimal)
dilatation, pelvis (mild)

LIVER:

inflammation, chronic, focal/multifocal (minimal)

End of Record- 3119

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3120	DOSE GROUP: IV
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	basophilia, cortical tubules, focal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3120	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3121
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (mild)
edema, papillary, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
PITUITARY

COAGULATING GLAND
PROSTATE

EPIDIDYMIS
SEMINAL VESICLES

LIVER
TESTIS

End of Record- 3121

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3122 DOSE GROUP: V
SEX: M DEATH TYPE: Scheduled (Reduced Fertility)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMIS: hypospermia (mild)
exfoliated spermatogenic cells (moderate)
KIDNEYS: basophilia, cortical tubules, focal (minimal)
hyperplasia, tubular/ductular epithelium, papilla (mild)
PROSTATE: inflammation, chronic (minimal)
atrophy, focal (minimal)
TESTIS: degeneration, multifocal (mild)
retained Step 19 spermatids, Stage IX/X tubules

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND LIVER PITUITARY SEMINAL VESICLES

End of Record- 3122

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3123	DOSE GROUP: V
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	basophilia, cortical tubules, focal (minimal)
LIVER:	hypertrophy, hepatocellular (minimal)

End of Record- 3123	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3124
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: dilatation, cortical tubules, focal (mild)
hyperplasia, tubular/ductular epithelium, papilla (mild)
LIVER: necrosis, focal/multifocal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	COAGULATING GLAND	EPIDIDYMIS	PITUITARY
PROSTATE	SEMINAL VESICLES	TESTIS	

End of Record- 3124

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3125	DOSE GROUP: V
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hemorrhage, papilla (mild) basophilia, cortical tubules, focal (mild) hyperplasia, tubular/ductular epithelium, papilla (mild) edema, papillary, focal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3125	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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F1 Generation

ANIMAL NUMBER: 3126
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Reduced Fertility)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (mild)
edema, papillary, focal (minimal)
LIVER: hypertrophy, hepatocellular (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	EPIDIDYMIS	PROSTATE	SEMINAL VESICLES
TESTIS			

End of Record- 3126

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3127	DOSE GROUP: V
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (mild)
LIVER:	hypertrophy, hepatocellular (minimal)

End of Record- 3127	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3128
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

ADRENAL GLANDS:
LIVER:

vacuolation, cortex (moderate)
hypertrophy, hepatocellular (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND
PROSTATE

EPIDIDYMIS
SEMINAL VESICLES

KIDNEYS
TESTIS

PITUITARY

End of Record- 3128

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3129
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

ADRENAL GLANDS:
KIDNEYS:

vacuolation, cortex (moderate)
hyperplasia, tubular/ductular epithelium, papilla (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND
PROSTATE

EPIDIDYMIS
SEMINAL VESICLES

LIVER
TESTIS

PITUITARY

End of Record- 3129

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3130	DOSE GROUP: V		
SEX: M	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
<u>GENERAL:</u> No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
LIVER:	necrosis, focal/multifocal (mild)		
	hypertrophy, hepatocellular (minimal)		
PROSTATE:	atrophy, focal (minimal)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
ADRENAL GLANDS	COAGULATING GLAND	EPIDIDYMIS	KIDNEYS
PITUITARY	SEMINAL VESICLES	TESTIS	

End of Record- 3130			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3131 DOSE GROUP: V
SEX: M DEATH TYPE: Scheduled (Reduced Fertility)
=====

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

TAIL: Tip missing, 8.5cm from base. No microscopic change to correlate

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hemorrhage, papilla (mild)
hemorrhage, pelvis (mild)
hyperplasia, tubular/ductular epithelium, papilla (mild)
PROSTATE: atrophy, focal (mild)
TAIL: No microscopic change to correlate

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND	EPIDIDYMISS	LIVER	SEMINAL VESICLES
TAIL	TESTIS		

End of Record- 3131

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3132
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Reduced Fertility)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMIS:	infiltration, mononuclear-cell, focal (minimal)
KIDNEYS:	infiltration, mononuclear-cell, focal (minimal)
	hyperplasia, tubular/ductular epithelium, papilla (minimal)
	edema, papillary, focal (minimal)
LIVER:	hypertrophy, hepatocellular (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND

PROSTATE

SEMINAL VESICLES

TESTIS

End of Record- 3132

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3133	DOSE GROUP: V
SEX: M	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
------------------------------	---

<u>GENERAL:</u> No gross changes.	Not applicable
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HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	hemorrhage, papilla (minimal) pyelonephritis (minimal)
LIVER:	hyperplasia, tubular/ductular epithelium, papilla (mild) hypertrophy, hepatocellular (minimal)

End of Record- 3133

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3134
SEX: M

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: hypertrophy, hepatocellular (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3134

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3135
SEX: M

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, pelvic/papillary urothelium (minimal)
hyperplasia, tubular/ductular epithelium, papilla (mild)
edema, papillary, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 3135

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3136
SEX: M

DOSE GROUP: V
DEATH TYPE: Spontaneous (Gross Lesion)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

ESOPHAGUS: Perforation, 1.5 x 0.2cm; thoracic
cavity contains approximately 40ml of dark red
fluid.

perforation
hemorrhage

HISTOMORPHOLOGIC OBSERVATIONS:

ESOPHAGUS:

perforation
hemorrhage (moderate)

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

KIDNEYS
LIVER

End of Record- 3136

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3137	DOSE GROUP: V
SEX: M	DEATH TYPE: Spontaneous (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
KIDNEYS	
LIVER	

End of Record- 3137	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3138
SEX: M

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

hyperplasia, tubular/ductular epithelium, papilla (mild)

LIVER:

hypertrophy, hepatocellular (minimal)

End of Record- 3138

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3139
SEX: M

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

GENERAL: No gross changes.

HISTOMORPHOLOGIC OBSERVATION(S):

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
edema, papillary, focal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

End of Record- 3139

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3140	DOSE GROUP: V
SEX: M	DEATH TYPE: Scheduled (Gross Lesion)

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
------------------------------	---

ADRENAL GLANDS: Left- large.	adenoma, cortical
------------------------------	-------------------

HISTOMORPHOLOGIC OBSERVATIONS:

ADRENAL GLANDS:	adenoma, cortical, benign
KIDNEYS:	hemorrhage, pelvis (mild)
	hyperplasia, pelvic/papillary urothelium (minimal)
	basophilia, cortical tubules, focal (minimal)
	hyperplasia, tubular/ductular epithelium, papilla (mild)
	mineralization, pelvis (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

LIVER

NEOPLASMS:

ADRENAL GLANDS	adenoma, cortical, benign
----------------	---------------------------

End of Record- 3140

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3141
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMIS:	infiltration, mononuclear-cell, focal (minimal)
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (mild)
	edema, papillary, focal (minimal)
LIVER:	inflammation, chronic, focal/multifocal (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
SEMINAL VESICLES

COAGULATING GLAND
TESTIS

PITUITARY

PROSTATE

End of Record- 3141

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3142
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hemorrhage, pelvis (moderate)
mineralization, pelvis (moderate)
LIVER: hypertrophy, hepatocellular (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
PROSTATE

COAGULATING GLAND
SEMINAL VESICLES

EPIDIDYMIS
TESTIS

PITUITARY

End of Record- 3142

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3143
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Reduced Fertility)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

EPIDIDYMIS:

infiltration, mononuclear-cell, focal (minimal)

KIDNEYS:

hyperplasia, tubular/ductular epithelium, papilla (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND
TESTIS

LIVER

PROSTATE

SEMINAL VESICLES

End of Record- 3143

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3144
SEX: M

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
dilatation, pelvis (mild)

LIVER: hypertrophy, hepatocellular (minimal)

End of Record- 3144

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3145
SEX: M

DOSE GROUP: V
DEATH TYPE: Scheduled (Reduced Fertility)

=====

GROSS OBSERVATION(S):

TAIL: Tip missing, 7.5cm from base.

HISTOMORPHOLOGIC OBSERVATION(S):

hyperplasia/hyperkeratosis
dermatitis, chronic

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	basophilia, cortical tubules, focal (mild)
	hyperplasia, tubular/ductular epithelium, papilla (mild)
LIVER:	inflammation, chronic, focal/multifocal (minimal)
	hypertrophy, hepatocellular (minimal)
TAIL:	hyperplasia/hyperkeratosis (moderate)
	dermatitis, chronic (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND
TESTIS

EPIDIDYMIS

PROSTATE

SEMINAL VESICLES

End of Record- 3145

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3146
SEX: M

DOSE GROUP: V
DEATH TYPE: Spontaneous (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

ADRENAL GLANDS:

vacuolation, cortex (minimal)

LIVER:

congestion, acute (moderate)

hypertrophy, hepatocellular (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

COAGULATING GLAND
PROSTATE

EPIDIDYMIS
SEMINAL VESICLES

KIDNEYS
TESTIS

PITUITARY

End of Record- 3146

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3147	DOSE GROUP: V
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal) edema, papillary, focal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3147	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3148 DOSE GROUP: V
 SEX: M DEATH TYPE: Scheduled (Random)

=====

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)
LIVER:	inflammation, chronic, focal/multifocal (minimal)
PROSTATE:	hypertrophy, hepatocellular (minimal)
	atrophy, focal (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	COAGULATING GLAND	EPIDIDYMIS	PITUITARY
SEMINAL VESICLES	TESTIS		

End of Record- 3148

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3149	DOSE GROUP: V
SEX: M	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	cyst(s), medulla

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
LIVER	

End of Record- 3149	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3150	DOSE GROUP: V		
SEX: M	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
GENERAL: No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
EPIDIDYMIS:	infiltration, mononuclear-cell, focal (minimal)		
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)		
	edema, papillary, focal (minimal)		
PROSTATE:	inflammation, chronic (minimal)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
ADRENAL GLANDS	COAGULATING GLAND	LIVER	PITUITARY
SEMINAL VESICLES	TESTIS		

End of Record- 3150			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3151 DOSE GROUP: I
SEX: F DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

LIVER: cytoplasmic vacuolation, diffuse (moderate)
OVARIAN FOLLICLES/CORPORA LUTEA: presence of corpora lutea
presence of growing/antral follicles
UTERUS: macrophages, pigmented (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	CERVIX	KIDNEYS	OVARIES
OVIDUCT(S)	PITUITARY	VAGINA	

End of Record- 3151

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3152
SEX: F

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

SKIN: Mass-lesion, ulceration, right axilla, 0.5
x 0.5cm; mass, right axilla, 4.0 x 5.0 x 4.0cm.

adenocarcinoma, MAMMARY GLAND

HISTOMORPHOLOGIC OBSERVATIONS:

MAMMARY GLAND:
OVARIAN FOLLICLES/CORPORA LUTEA:
UTERUS:

adenocarcinoma, malignant
presence of corpora lutea
presence of growing/antral follicles
macrophages, pigmented (minimal)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
OVARIES

CERVIX
OVIDUCT(S)

KIDNEYS
PITUITARY

LIVER
VAGINA

COMMENTS:

MAMMARY GLAND

Both lesions described in the right axilla are part of the
mammary adenocarcinoma.

NEOPLASMS:

MAMMARY GLAND

adenocarcinoma, malignant

End of Record- 3152

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3153	DOSE GROUP: I
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
CERVIX	
KIDNEYS	
OVARIAN FOLLICLES/CORPORA LUTEA	
OVARIES	
OVIDUCT(S)	
UTERUS	
VAGINA	

End of Record- 3153	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3154
 SEX: F

DOSE GROUP: I
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: mineralization, multifocal (minimal)

End of Record- 3154

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3155	DOSE GROUP: I
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
KIDNEYS
OVARIAN FOLLICLES/CORPORA LUTEA
OVARIES
OVIDUCT(S)
UTERUS
VAGINA

End of Record- 3155

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3156	DOSE GROUP: I
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
EYES: Corneal opacity, both eyes.	cataract, bilateral

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
EYES:	cataract, bilateral
KIDNEYS:	dilatation, cortical tubules, focal (moderate)
	pyelitis, chronic (moderate)

End of Record- 3156	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3157	DOSE GROUP: I
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3157	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3158	DOSE GROUP: I
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3158	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3159	DOSE GROUP: 1
SEX: F	DEATH TYPE: Sacrifice-Unscheduled

=====

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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TISSUE(S) NOT AVAILABLE FOR EVALUATION:

KIDNEYS

End of Record- 3159

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3160	DOSE GROUP: I
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3160	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3161
SEX: F

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

OVARIAN FOLLICLES/CORPORA LUTEA: presence of corpora lutea
presence of growing/antral follicles
UTERUS: macrophages, pigmented (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
OVARIES

CERVIX
OVIDUCT(S)

KIDNEYS
PITUITARY

LIVER
VAGINA

End of Record- 3161

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3162	DOSE GROUP: I
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
CERVIX	
KIDNEYS	
OVARIAN FOLLICLES/CORPORA LUTEA	
OVARIES	
OVIDUCT(S)	
UTERUS	
VAGINA	

End of Record- 3162	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3163	DOSE GROUP: 1
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
KIDNEYS
OVARIAN FOLLICLES/CORPORA LUTEA
OVARIES
OVIDUCT(S)
UTERUS
VAGINA

End of Record- 3163

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3164	DOSE GROUP: I
SEX: F	ON TEST:
	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
CERVIX	
KIDNEYS	
OVARIAN FOLLICLES/CORPORA LUTEA	
OVARIES	
OVIDUCT(S)	
UTERUS	
VAGINA	

End of Record- 3164	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3165	DOSE GROUP: I		
SEX: F	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
<u>GENERAL:</u> No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
ADRENAL GLANDS:	degeneration, cystic, cortex (mild)		
OVARIAN FOLLICLES/CORPORA LUTEA:	presence of corpora lutea		
	presence of growing/antral follicles		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
CERVIX	KIDNEYS	LIVER	OVARIES
OVIDUCT(S)	PITUITARY	UTERUS	VAGINA

End of Record- 3165			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3166	DOSE GROUP: 1
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, multifocal (minimal)

End of Record- 3166	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3167	DOSE GROUP: I
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	dilatation, pelvis (minimal)

End of Record- 3167	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3168
SEX: F

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

OVARIAN FOLLICLES/CORPORA LUTEA:

presence of corpora lutea
presence of growing/antral follicles
macrophages, pigmented (minimal)

UTERUS:

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
OVARIES

CERVIX
OVIDUCT(S)

KIDNEYS
PITUITARY

LIVER
VAGINA

End of Record- 3168

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3169
SEX: F

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

OVARIAN FOLLICLES/CORPORA LUTEA:

presence of corpora lutea
presence of growing/antral follicles
macrophages, pigmented (moderate)

UTERUS:

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
OVARIES

CERVIX
OVIDUCT(S)

KIDNEYS
PITUITARY

LIVER
VAGINA

End of Record- 3169

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3170	DOSE GROUP: I
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
UTERUS: Hydrometra, slight, bilateral, horns.	distention, lumen

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
CERVIX:	distention (moderate)
OVARIAN FOLLICLES/CORPORA LUTEA:	presence of corpora lutea
	presence of growing/antral follicles
OVARIES:	cystic bursa(e)
	cyst(s), intraovarian
UTERUS:	distention, lumen (marked)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
OVIDUCT(S)	

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
KIDNEYS	
VAGINA	

End of Record- 3170	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3171 DOSE GROUP: I
SEX: F DEATH TYPE: Scheduled (Random)
=====

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes. Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
OVARIAN FOLLICLES/CORPORA LUTEA: presence of corpora lutea
presence of growing/antral follicles
UTERUS: macrophages, pigmented (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	CERVIX	LIVER	OVARIES
OVIDUCT(S)	PITUITARY	VAGINA	

End of Record- 3171

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3172 DOSE GROUP: I
SEX: F DEATH TYPE: Scheduled (Random)

=====

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
------------------------------	---

<u>GENERAL:</u> No gross changes.	Not applicable
-----------------------------------	----------------

=====

HISTOMORPHOLOGIC OBSERVATIONS:

OVARIAN FOLLICLES/CORPORA LUTEA:	presence of corpora lutea
	presence of growing/antral follicles
UTERUS:	macrophages, pigmented (mild)

=====

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	CERVIX	KIDNEYS	LIVER
OVARIES	OVIDUCT(S)	PITUITARY	VAGINA

=====

End of Record- 3172

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3173
SEX: F

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3173

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3174
 SEX: F

DOSE GROUP: I
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3174

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3175
SEX: F

DOSE GROUP: I
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3175

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3176
 SEX: F

DOSE GROUP: I
 DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 3176

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3177	DOSE GROUP: I
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>EAR(S):</u> Swollen, bilateral.	chondropathy, auricular

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>EAR(S):</u>	chondropathy, auricular (marked)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3177	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3178
SEX: F

DOSE GROUP: I
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

OVARIAN FOLLICLES/CORPORA LUTEA:

presence of corpora lutea

UTERUS:

presence of growing/antral follicles
macrophages, pigmented (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
OVARIES

CERVIX
OVIDUCT(S)

KIDNEYS
PITUITARY

LIVER
VAGINA

End of Record- 3178

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3179	DOSE GROUP: I		
SEX: F	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
<u>GENERAL:</u> No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
OVARIAN FOLLICLES/CORPORA LUTEA:	presence of corpora lutea		
	presence of growing/antral follicles		
UTERUS:	macrophages, pigmented (moderate)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
ADRENAL GLANDS	CERVIX	KIDNEYS	LIVER
OVARIES	OVIDUCT(S)	PITUITARY	VAGINA

End of Record- 3179			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3180	DOSE GROUP: I
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, multifocal (minimal)

End of Record- 3180	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3181	DOSE GROUP: I1
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
KIDNEYS
OVARIAN FOLLICLES/CORPORA LUTEA
OVARIES
OVIDUCT(S)
UTERUS
VAGINA

End of Record- 3181

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3182
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3182

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3183	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3183

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3184
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3184

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3185
 SEX: F

DOSE GROUP: II
 DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3185

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3186	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3186	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3187	DOSE GROUP: II
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
UTERUS: Hydrometra, 0.5cm in diameter, slight.	distention, lumen

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
OVARIAN FOLLICLES/CORPORA LUTEA:	presence of corpora lutea
	presence of growing/antral follicles
OVARIES:	cyst(s), intraovarian
UTERUS:	distention, lumen (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
CERVIX	OVIDUCT(S)

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
KIDNEYS	
VAGINA	

End of Record- 3187	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3188	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3188	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3189
 SEX: F

DOSE GROUP: II
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3189

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3190
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3190

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3191	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3191	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3192	DOSE GROUP: II
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>KIDNEYS:</u> Right- pelvis, dilation, slight.	dilatation, pelvis

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>KIDNEYS:</u>	dilatation, pelvis (mild)

End of Record- 3192	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3193
 SEX: F

DOSE GROUP: II
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3193

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3194	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, multifocal (minimal)

End of Record- 3194	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3195	DOSE GROUP: II
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
CERVIX	
KIDNEYS	
OVARIAN FOLLICLES/CORPORA LUTEA	
OVARIES	
OVIDUCT(S)	
UTERUS	
VAGINA	

End of Record- 3195	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3197	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, multifocal (minimal)

End of Record- 3197	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3198	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 3198	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3199
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3199

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3200	DOSE GROUP: II
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
EAR(S): Discolored, bilateral, purple; swollen, bilateral.	chondropathy, auricular

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
EAR(S):	chondropathy, auricular (marked)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3200	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3201	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3201	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3202
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: mineralization, pelvis (minimal)

End of Record- 3202

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3203
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3203

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3204
 SEX: F

DOSE GROUP: II
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: infiltration, mononuclear-cell, focal (minimal)

End of Record- 3204

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3205
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3205

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3206	DOSE GROUP: II
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>EAR(S):</u> Discolored, bilateral, purple; swollen, bilateral.	chondropathy, auricular

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>EAR(S):</u>	chondropathy, auricular (marked)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3206	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3207	DOSE GROUP: II
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
THYMUS: Small.	atrophy

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
THYMUS:	atrophy (mild)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3207	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3208	DOSE GROUP: II
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
KIDNEYS
OVARIAN FOLLICLES/CORPORA LUTEA
OVARIES
OVIDUCT(S)
UTERUS
VAGINA

End of Record- 3208

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3209
SEX: F

DOSE GROUP: II
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3209

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3210	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3210	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 6551	DOSE GROUP: II
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	cyst(s), medulla mineralization, multifocal (minimal)

End of Record- 6551	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3211	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable
=====	
<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	
=====	
End of Record- 3211	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3212	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3212

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3213
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3213

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3214	DOSE GROUP: III
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
EYES: Traumatized cornea, exophthalmos, left eye.	atrophy, retinal keratitis, chronic, focal

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
EYES:	atrophy, retinal (mild) keratitis, chronic, focal (minimal)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3214	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
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ANIMAL NUMBER: 3215	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3215

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3216	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3216

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3217	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	dilatation, pelvis (minimal)
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End of Record- 3217

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3218	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3218

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3219
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3219

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3220	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3220

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3221	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)
	mineralization, multifocal (minimal)

End of Record- 3221

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3222	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 3222	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3223	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3223

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3224	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3224

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3225	DOSE GROUP: III
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
KIDNEYS
OVARIAN FOLLICLES/CORPORA LUTEA
OVARIES
OVIDUCT(S)
UTERUS
VAGINA

End of Record- 3225

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3226
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3226

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3227
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3227

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3228
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3228

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3229
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

=====

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3229

=====

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3230	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, multifocal (minimal)

End of Record- 3230	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3231
 SEX: F

DOSE GROUP: III
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3231

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3232
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

basophilia, cortical tubules, focal (minimal)
infiltration, mononuclear-cell, focal (minimal)

End of Record- 3232

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3233	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3233	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3234	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	basophilia, cortical tubules, focal (minimal)

End of Record- 3234	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7465.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3235	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3235	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3236	DOSE GROUP: III
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3236	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3237 DOSE GROUP: III
SEX: F DEATH TYPE: Scheduled (Reduced Fertility)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
KIDNEYS
OVARIAN FOLLICLES/CORPORA LUTEA
OVARIES
OVIDUCT(S)
UTERUS
VAGINA

End of Record- 3237

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3238
SEX: F

DOSE GROUP: III
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3238

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3239	DOSE GROUP: III
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>KIDNEYS:</u> Right- pelvis, slight dilation.	dilatation, pelvis

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>KIDNEYS:</u>	dilatation, pelvis (mild)

End of Record- 3239	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3240
 SEX: F

DOSE GROUP: III
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3240

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3241
SEX: F

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
edema, papillary, focal (minimal)

End of Record- 3241

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3242	DOSE GROUP: IV
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
KIDNEYS
OVARIAN FOLLICLES/CORPORA LUTEA
OVARIES
OVIDUCT(S)
UTERUS
VAGINA

End of Record- 3242

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3243	DOSE GROUP: IV
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>EAR(S):</u> Swollen, bilateral.	chondropathy, auricular

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
EAR(S):	chondropathy, auricular (marked)
KIDNEYS:	hemorrhage, papilla (minimal)
	hyperplasia, tubular/ductular epithelium, papilla (mild)

End of Record- 3243	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3244	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (mild)

End of Record- 3244	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3245	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (mild) edema, papillary, focal (mild)

End of Record- 3245	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3246
SEX: F

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3246

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3247	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled

=====

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	edema, papillary, focal (minimal)
----------	-----------------------------------

End of Record- 3247

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3248
SEX: F

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3248

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3249
SEX: F

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3249

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3250	DOSE GROUP: IV
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
EAR(S): Swollen, bilateral; discolored, bilateral, purple.	chondropathy, auricular

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
EAR(S):	chondropathy, auricular (marked)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3250	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3251
SEX: F

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 3251

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3252	DOSE GROUP: IV
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>EAR(S):</u> Bilateral, purple.	chondropathy, auricular

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>EAR(S):</u>	chondropathy, auricular (moderate)

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
CERVIX	
KIDNEYS	
OVARIAN FOLLICLES/CORPORA LUTEA	
OVARIES	
OVIDUCT(S)	
UTERUS	
VAGINA	

End of Record- 3252	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3253
SEX: F

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 3253

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3254	DOSE GROUP: IV
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>ADRENAL GLANDS:</u> Left- large; right- large.	vacuolation, cortical, focal
<u>LIVER:</u> Left lateral lobe, red, dark reaised area	hypertrophy, cortex, diffuse
1.5 x 1.0cm.	hemorrhage, acute, focal

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
ADRENAL GLANDS:	vacuolation, cortical, focal (minimal)
KIDNEYS:	hypertrophy, cortex, diffuse (moderate)
LIVER:	pyelitis, chronic (minimal)
	hemorrhage, acute, focal (moderate)

<u>COMMENTS:</u>	
LIVER	The hemorrhage in the liver appears to be of traumatic origin.

End of Record- 3254	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3255	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	dilatation, cortical tubules, focal (mild) necrosis, papilla, focal (mild) basophilia, cortical tubules, focal (mild) hyperplasia, tubular/ductular epithelium, papilla (moderate)

End of Record- 3255	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3256
SEX: F

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (mild)

End of Record- 3256

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3257	DOSE GROUP: IV
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
EAR(S): Swollen, bilateral; discolored, bilateral, purple.	chondropathy, auricular

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
EAR(S):	chondropathy, auricular (marked)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3257	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3258
SEX: F

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (mild)

End of Record- 3258

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3259	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 3259	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3260
 SEX: F

DOSE GROUP: IV
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3260

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3261	DOSE GROUP: IV
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>EXTREMITIES:</u> Right front paw- missing digit, 3rd digit.	dermatitis, chronic, focal tendonitis, chronic

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
<u>EXTREMITIES:</u>	dermatitis, chronic, focal (moderate) tendonitis, chronic (mild)

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>	
KIDNEYS	

End of Record- 3261	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3262
 SEX: F

DOSE GROUP: IV
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)
 edema, papillary, focal (minimal)

End of Record- 3262

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3263	DOSE GROUP: IV
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>	
CERVIX	
KIDNEYS	
OVARIAN FOLLICLES/CORPORA LUTEA	
OVARIES	
OVIDUCT(S)	
UTERUS	
VAGINA	

End of Record- 3263	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3264
SEX: F

DOSE GROUP: IV
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

hyperplasia, tubular/ductular epithelium, papilla (minimal)
edema, papillary, focal (minimal)

End of Record- 3264

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3265	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3265

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3266	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	mineralization, multifocal (minimal)

End of Record- 3266	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3267	DOSE GROUP: IV		
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
UTERUS: Hydrometra, bilateral, slight.	distention, lumen		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
OVARIAN FOLLICLES/CORPORA LUTEA:	presence of corpora lutea		
	presence of growing/antral follicles		
UTERUS:	distention, lumen (minimal)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
CERVIX	OVARIES	OVIDUCT(S)	VAGINA

<u>TISSUE(S) NOT AVAILABLE FOR EVALUATION:</u>			
KIDNEYS			

End of Record- 3267			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3268	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal) edema, papillary, focal (minimal)

End of Record- 3268	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3269	DOSE GROUP: IV
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	edema, papillary, focal (minimal)

End of Record- 3269	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3270
SEX: F

DOSE GROUP: IV
DEATH TYPE: Scheduled (Reduced Fertility)

GROSS OBSERVATION(S):

TAIL: Tip missing, 16.0cm from base.

HISTOMORPHOLOGIC OBSERVATION(S):

necrosis
abscess
inflammation, chronic
hyperplasia/hyperkeratosis

HISTOMORPHOLOGIC OBSERVATIONS:

TAIL:

necrosis (mild)
abscess
inflammation, chronic (moderate)
hyperplasia/hyperkeratosis (moderate)

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
KIDNEYS
OVARIAN FOLLICLES/CORPORA LUTEA
OVARIES
OVIDUCT(S)
UTERUS
VAGINA

End of Record- 3270

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3271	DOSE GROUP: V
SEX: F	DEATH TYPE: Scheduled (Gross Lesion)
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
EAR(S): Swollen, bilateral; discolored, bilateral, purple.	chondropathy, auricular

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
EAR(S):	chondropathy, auricular (mild)
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 3271	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3272 DOSE GROUP: V
SEX: F DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):
EAR(S): Discolored ears, bilateral, purple; chondropathy, auricular
swollen ears, bilateral.

HISTOMORPHOLOGIC OBSERVATIONS:
EAR(S): chondropathy, auricular (moderate)
OVARIAN FOLLICLES/CORPORA LUTEA: presence of corpora lutea
presence of growing/antral follicles

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	CERVIX	KIDNEYS	LIVER
OVARIES	OVIDUCT(S)	PITUITARY	UTERUS
VAGINA			

End of Record- 3272

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3273
SEX: F

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	necrosis, papilla, focal (mild)
	hyperplasia, tubular/ductular epithelium, papilla (mild)
OVARIAN FOLLICLES/CORPORA LUTEA:	presence of corpora lutea
	presence of growing/antral follicles
UTERUS:	macrophages, pigmented (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
OVIDUCT(S)

CERVIX
PITUITARY

LIVER
VAGINA

OVARIES

End of Record- 3273

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3274
SEX: F

DOSE GROUP: V
DEATH TYPE: Scheduled (Reduced Fertility)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
KIDNEYS
OVARIAN FOLLICLES/CORPORA LUTEA
OVARIES
OVIDUCT(S)
UTERUS
VAGINA

End of Record- 3274

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3275
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, pelvic/papillary urothelium (minimal)
cyst(s), medulla
hemorrhage, papilla (minimal)
hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 3275

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3276	DOSE GROUP: V
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal) edema, papillary, focal (minimal)

End of Record- 3276	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3277
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 3277

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3278
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Unscheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (moderate)
edema, papillary, focal (mild)

End of Record- 3278

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3279	DOSE GROUP: V
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (mild)

End of Record- 3279	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3281	DOSE GROUP: V
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	cyst(s), cortex mineralization, multifocal (minimal)

End of Record- 3281	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3281
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

basophilia, cortical tubules, focal (minimal)
hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 3281

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3282	DOSE GROUP: V
SEX: F	DEATH TYPE: Sacrifice-Unscheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
GENERAL: No gross changes.	Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

KIDNEYS

End of Record- 3282

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3283
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: mineralization, multifocal (minimal)

End of Record- 3283

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3284 DOSE GROUP: V
 SEX: F DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S): HISTOMORPHOLOGIC OBSERVATION(S):

EXTREMITIES: Missing digit. dermatitis, chronic, focal

HISTOMORPHOLOGIC OBSERVATIONS:

EXTREMITIES: dermatitis, chronic, focal (mild)
 OVARIAN FOLLICLES/CORPORA LUTEA: presence of corpora lutea
 presence of growing/antral follicles
 UTERUS: macrophages, pigmented (mild)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS	CERVIX	KIDNEYS	LIVER
OVARIES	OVIDUCT(S)	PITUITARY	VAGINA

End of Record- 3284

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3285
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

KIDNEYS

End of Record- 3285

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3286
SEX: F

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

ABDOMINAL CAVITY: Mass, 0.5 x 0.2 x 0.1cm, yellow
in color, connected proximal to the spleen and
pancreas.

Tissue not available

HISTOMORPHOLOGIC OBSERVATIONS:

OVARIAN FOLLICLES/CORPORA LUTEA:

presence of corpora lutea
presence of growing/antral follicles
UTERUS: macrophages, pigmented (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
OVARIES

CERVIX
OVIDUCT(S)

KIDNEYS
PITUITARY

LIVER
VAGINA

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

ABDOMINAL CAVITY

End of Record- 3286

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3287	DOSE GROUP: V		
SEX: F	DEATH TYPE: Scheduled (Random)		
=====			
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>		
<u>GENERAL:</u> No gross changes.	Not applicable		

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>			
OVARIAN FOLLICLES/CORPORA LUTEA:	presence of corpora lutea		
	presence of growing/antral follicles		
UTERUS:	macrophages, pigmented (moderate)		

<u>THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:</u>			
ADRENAL GLANDS	CERVIX	KIDNEYS	LIVER
OVARIES	OVIDUCT(S)	PITUITARY	VAGINA

End of Record- 3287			

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3288
 SEX: F

DOSE GROUP: V
 DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

OVARIAN FOLLICLES/CORPORA LUTEA:

presence of corpora lutea

UTERUS:

presence of growing/antral follicles

macrophages, pigmented (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
 OVARIES

CERVIX
 OVIDUCT(S)

KIDNEYS
 PITUITARY

LIVER
 VAGINA

End of Record- 3288

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3289
SEX: F

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

OVARIAN FOLLICLES/CORPORA LUTEA:

presence of corpora lutea

UTERUS:

presence of growing/antral follicles

macrophages, pigmented (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
OVIDUCT(S)

KIDNEYS
PITUITARY

LIVER
VAGINA

OVARIES

COMMENTS:

CERVIX

The cervix was received damaged and the section that could be obtained was not adequate for evaluation.

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX

End of Record- 3289

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3290
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (mild)

End of Record- 3290

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3291
SEX: F

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	hemorrhage, papilla (mild) infiltration, mononuclear-cell, focal (minimal) basophilia, cortical tubules, focal (mild)
LIVER:	hyperplasia, tubular/ductular epithelium, papilla (mild)
OVARIAN FOLLICLES/CORPORA LUTEA:	inflammation, chronic, focal/multifocal (minimal) presence of corpora lutea presence of growing/antral follicles

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
PITUITARY

CERVIX
UTERUS

OVARIES
VAGINA

OVIDUCT(S)

End of Record- 3291

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3292
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (mild)

End of Record- 3292

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3293	DOSE GROUP: V
SEX: F	DEATH TYPE: Sacrifice-Scheduled
=====	
<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
<u>GENERAL:</u> No gross changes.	Not applicable

<u>HISTOMORPHOLOGIC OBSERVATIONS:</u>	
KIDNEYS:	hyperplasia, tubular/ductular epithelium, papilla (minimal) edema, papillary, focal (minimal)

End of Record- 3293	

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
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Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3294
 SEX: F

DOSE GROUP: V
 DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:

hyperplasia, tubular/ductular epithelium, papilla (mild)
 edema, papillary, focal (minimal)

End of Record- 3294

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3295	DOSE GROUP: V
SEX: F	DEATH TYPE: Scheduled (Reduced Fertility)

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
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<u>GENERAL:</u> No gross changes.	Not applicable
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TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
KIDNEYS
OVARIAN FOLLICLES/CORPORA LUTEA
OVARIES
OVIDUCT(S)
UTERUS
VAGINA

End of Record- 3295

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3296
SEX: F

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

OVARIAN FOLLICLES/CORPORA LUTEA:

presence of corpora lutea

UTERUS:

presence of growing/antral follicles
macrophages, pigmented (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
OVARIES

CERVIX
OVIDUCT(S)

KIDNEYS
PITUITARY

LIVER
VAGINA

End of Record- 3296

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
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Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3297
SEX: F

DOSE GROUP: V
DEATH TYPE: Scheduled (Random)

=====

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

OVARIAN FOLLICLES/CORPORA LUTEA:

presence of corpora lutea

UTERUS:

presence of growing/antral follicles
macrophages, pigmented (moderate)

THE FOLLOWING TISSUE(S) WERE WITHIN NORMAL LIMITS:

ADRENAL GLANDS
PITUITARY

KIDNEYS
VAGINA

LIVER

OVARIES

COMMENTS:

CERVIX

The cervix was received damaged and the section that could be
obtained was not adequate for evaluation.

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

CERVIX
OVIDUCT(S)

End of Record- 3297

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
Individual Animal Gross and Histomorphology Data
F1 Generation

ANIMAL NUMBER: 3298
SEX: F

DOSE GROUP: V
DEATH TYPE: Sacrifice-Scheduled

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS: hyperplasia, tubular/ductular epithelium, papilla (minimal)

End of Record- 3298

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7465.13

Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3299	DOSE GROUP: V
SEX: F	DEATH TYPE: Sacrifice-Scheduled

<u>GROSS OBSERVATION(S):</u>	<u>HISTOMORPHOLOGIC OBSERVATION(S):</u>
------------------------------	---

<u>GENERAL:</u> No gross changes.	Not applicable
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HISTOMORPHOLOGIC OBSERVATIONS:

KIDNEYS:	basophilia, cortical tubules, focal (mild) hyperplasia, tubular/ductular epithelium, papilla (mild)
----------	--

End of Record- 3299

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
 REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
 (PFBS) IN RATS
 PROTOCOL 418-021
 SPONSOR'S STUDY NUMBER: T-7485.13

Appendix IV
 Individual Animal Gross and Histomorphology Data
 F1 Generation

ANIMAL NUMBER: 3300
 SEX: F

DOSE GROUP: V
 DEATH TYPE: Spontaneous Death

GROSS OBSERVATION(S):

HISTOMORPHOLOGIC OBSERVATION(S):

GENERAL: No gross changes.

Not applicable

TISSUE(S) NOT AVAILABLE FOR EVALUATION:

KIDNEYS

End of Record- 3300

APPENDIX L
SPERM EVALUATION

SPERM ANALYSIS REPORT

FOR

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS

PRIMEDICA-ARGUS STUDY NUMBER: 418-021

PREPARED FOR

PRIMEDICA-ARGUS RESEARCH LABORATORIES, INC.
905 SHEEHY DRIVE, BUILDING A
HORSHAM, PA 19044-1297

PREPARED BY

PATHOLOGY ASSOCIATES (PAI)
A DIVISION OF CHARLES RIVER LABORATORIES, INC.

Primedica-Argus Study No.: 418-021

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Primedica-Argus Study No.: 418-021

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Sperm Analysis Report

Oral (Gavage) Two-Generation (One Litter per Generation) Reproduction
Study of Potassium Perfluorobutane Sulfonate (PFBS) in Rats

Primedica-Argus Study Number: 418-021

QUALITY ASSURANCE STATEMENT

This sperm analysis project has been inspected and audited by the PAI Quality Assurance Unit (QAU) as required by the Good Laboratory Practice (GLP) regulations promulgated by the U.S. Environmental Protection Agency (EPA) and the Organization for Economic Cooperation and Development (OECD). The sperm analysis report is an accurate reflection of the recorded data. The following table is a record of the inspections/audits performed and reported by the QAU.

<u>Date of Inspection</u>	<u>Phase Inspected</u>	<u>Date Findings Reported to Reproductive Toxicologist/PAI Management</u>	<u>Date Findings Reported to Study Director/Study Director Management</u>
06/25/01	Sperm Motility	06/25/01	11/07/01
11/05,06/01	Individual Animal Data	11/06/01	11/07/01
11/05,06/01	Draft Sperm Analysis Report	11/06/01	11/07/01
03/20/03	Final Sperm Analysis Report	03/20/03	03/20/03

Karen E. Butler

Quality Assurance Manager

Date

Primedica-Argus Study No.: 418-021

Oral (Gavage) Two-Generation (One Litter per Generation)
Reproduction Study of Potassium Perfluorobutane Sulfonate (PFBS)
in Rats

II. MATERIALS AND METHODS

A. Sample Collection

Following completion of their respective cohabitation periods, all surviving adult male rats from the P and F₁ generations were euthanized by carbon dioxide asphyxiation. For all animals, a gross necropsy of the thoracic, abdominal and pelvic visceral was performed. PAI technicians using PRL Standard Operating Procedures conducted the necropsy. The sperm analysis, including motility assessment, was conducted by PAI using PAI Standard Operating Procedures.

For motility assessment, the right vas deferens was dissected away from the testis and immediately placed in a petri dish containing 10 ml of a solution consisting of 1% Bovine Serum Albumin dissolved in Phosphate Buffered Saline. The solution was prewarmed to a temperature of approximately 38°C. A minimum 3-minute period was allowed for the sperm to disperse from the vas deferens.

The right epididymis was then removed, weighed and divided in half by cross sectioning at the middle. The cauda and distal midsection was placed on dry ice and transferred to Pathology Associates, A Division of Charles River Laboratories, Inc. (formerly known as Pathology Associates International until January 8, 2001), Frederick, MD and stored frozen at -70°C until evaluation for caudal epididymal sperm and testicular spermatid counts (total sperm counts).

B. Sperm Motility Evaluation

Following the dispersal period, a sperm sample was obtained using a 100 μ m deep cannula. The cannula was immediately loaded into the prewarmed stage of the Hamilton Thorne IVOS automated sperm analyzer. Five fields were automatically selected by the analyzer and each motion image was recorded and stored digitally. The images were subsequently analyzed for percent motility. The images were permanently stored to optical media.

C. Total Sperm Count Determination

Each frozen epididymis was removed from the freezer, thawed and the caudal section was trimmed and weighed. Each frozen testis was removed from the freezer, thawed, the tunica removed and the testicular parenchyma weighed. The cauda epididymis and

Primedica-Argus Study No.: 418-021

testicular parenchyma were homogenized in deionized water and the suspensions were transferred to plastic test tubes and vortexed. A 100 μ l sample was transferred to a violet reaction vial containing a Hoechst dye (H33342) that uniquely stains the head of the sperm. A sample of the stained sperm was placed into a 20 μ m deep Cell-Vu glass slide that was loaded into the analyzer. Twenty fields were automatically selected by the analyzer for each animal and the number of cauda epididymal sperm and testicular spermatids determined. The counts reported were adjusted for caudal epididymal or testicular weight.

D. Sperm Morphology Evaluation

Two Eosin stained slides were prepared for each animal from the caudal epididymis count preparation. The slides were evaluated and a minimum of 200 sperm cells/animal was examined for morphological development.

E. Statistical Analyses

The means and standard deviations for the sperm motility, caudal epididymal sperm count, testicular spermatid count and sperm morphology data were calculated and compared across groups using the Kruskal-Wallis nonparametric ANOVA test. If a significant effect occurred ($p < 0.05$), the Mann-Whitney U test was used for pair-wise comparisons of each treated group to the control group. Statistical analyses were performed using an IBMTM compatible computer with SAS computer programs (SAS/STAT User's Guide, 1989).

F. GLP Compliance Statement

The portion of this study performed by PAI was conducted in compliance with Good Laboratory Practice Regulations cited below:

U.S. Environmental Protection Agency. Federal Insecticide, Fungicide and Rodenticide Act/Toxic Substances Control Act (FIFRA/TSCA); Good Laboratory Practice Standards; Final Rule. 40 CFR Part 160/Part 792.

Organization for Economic Cooperation and Development (1988). The Revised OECD Principles of Good Laboratory Practices [C(97)186/Final].

Primedica-Argus Study No.: 418-021

III. RESULTS

A. Sperm Motility

Table 1 and 2 (Summary Data)
Appendix A and B (Individual Data)

No apparent treatment-related effects were observed in the percent motility data for either generation. Group mean values were comparable between the study groups and ranged from 94% to 96% and 92% to 95% for the P and the F₁ generations, respectively. No evidence of reduced motility due to treatment with PFBS was observed.

B. Total Sperm Count

Table 1 and 2 (Summary Data)
Appendix A and B (Individual Data)

The number of sperm/gram of cauda epididymis was comparable between the study groups for both generations. Group mean values ranged from 956.7 to 1033.2 million sperm/gram for the P generation and 769.8 to 928.4 million sperm/gram for the F₁ generation. No treatment-related differences were observed.

A statistically significant reduction in the number of spermatids/gram of testis was observed in the 1000 mg/kg/day dose group of the P generation. The difference was not considered biologically meaningful since there was not a similar statistical reduction observed in the F₁ generation. Group mean values for the F₁ generation ranged from 106.6 to 124.0 million sperm/gram of tissue.

C. Sperm Morphology

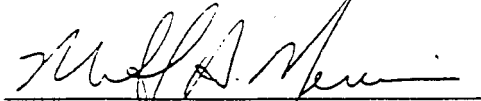
Table 1 and 2 (Summary Data)
Appendix C and D (Individual Data)

A low incidence of head and/or tail abnormalities was observed for animals in all treatment groups of both sacrifice periods. No treatment-related differences were observed. Group mean values were comparable between the study groups and ranged from 1.5 to 2.0 percent abnormal sperm for the P generation. An incidental but statistically significant increase in the percent of abnormal sperm in the 1000 mg/kg/day dose group of the F₁ generation was observed. This increase was not considered biologically meaningful since the mean percent of abnormal sperm in the P and F₁ 1000 mg/kg/day dose groups was equivalent.

Primedica-Argus Study No.: 418-021

IV. DISCUSSION AND CONCLUSIONS

Sperm motility, epididymal sperm count, testicular spermatid count and sperm morphology were not affected by treatment with PFBS at dosage levels of 30, 100, 300 and 1000 mg/kg/day in the P or F₁ generations. No biologically meaningful differences were observed between the study groups of either generation.

Date: 3/20/03

Michael D. Mercieca, B.S.
Reproductive Toxicologist
Pathology Associates
A Charles River Company

V. REFERENCES

SAS Institute Inc., SAS/STAT User's Guide, Version 6, Fourth Edition, Cary, NC: SAS Institute Inc., 1989. Vol. 2 p. 1195-1210.

PRIMEDICA-ARGUS STUDY NO.: 418-021

TABLE 1

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS

SUMMARY OF P GENERATION SPERM ANALYSIS PARAMETERS

Group: Level: PFBS (MG/KG/DAY)	I 0	II 30	III 100	IV 300	V 1000
MOTILITY (%)					
Mean	96	95	94	95	95
SD	4	5	12	4	5
N	30	30	30	30	28
EPIDIDYMAL COUNT (MILLION SPERM/GRAM)					
Mean	1030.4	1033.2	956.7	1018.9	969.4
SD	209.1	226.2	217.1	181.3	274.7
N	30	30	30	30	29
TESTICULAR COUNT (MILLION SPERM/GRAM)					
Mean	147.9	135.7	146.4	132.3	121.8*
SD	38.9	34.0	36.1	20.5	35.7
N	30	30	30	30	29
SPERM MORPHOLOGY* (% ABNORMAL)					
Mean	1.7	2.0	1.6	1.5	2.0
SD	1.5	1.3	1.0	0.6	0.6
N	30	30	30	30	29

*MEAN AND STANDARD DEVIATIONS WERE CALCULATED USING THE TOTAL NUMBER OF ABNORMAL SPERM AS A PERCENTAGE OF THE NUMBER OF SPERM EXAMINED.

• SIGNIFICANTLY DIFFERENT FROM CONTROL ($p < 0.05$).

PRIMEDICA-ARGUS STUDY NO.: 418-021

TABLE 2

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS

SUMMARY OF F₂ GENERATION SPERM ANALYSIS PARAMETERS

Group: Level: PFBS (MG/KG/DAY)	I 0	II 30	III 100	IV 300	V 1000
MOTILITY (%)					
Mean	92	92	94	95	92
SD	10	10	6	3	10
N	29	26	29	27	27
EPIDIDYMAL COUNT (MILLION SPERM/GRAM)					
Mean	836.6	769.8	839.9	856.6	928.4
SD	237.2	282.4	261.5	221.6	273.3
N	29	27	29	27	27
TESTICULAR COUNT (MILLION SPERM/GRAM)					
Mean	124.0	109.4	107.0	109.5	106.6
SD	32.8	33.7	29.2	24.2	31.7
N	29	27	29	27	27
SPERM MORPHOLOGY* (% ABNORMAL)					
Mean	1.5	1.3	1.4	1.5	1.9*
SD	0.7	0.6	0.5	0.6	0.5
N	29	27	29	27	27

*MEAN AND STANDARD DEVIATIONS WERE CALCULATED USING THE TOTAL NUMBER OF ABNORMAL SPERM AS A PERCENTAGE OF THE NUMBER OF SPERM EXAMINED.

*SIGNIFICANTLY DIFFERENT FROM CONTROL ($p < 0.05$).

PRIMEDICA-ARGUS STUDY NO.: 418-021

APPENDIX A

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS

INDIVIDUAL P GENERATION MALE SPERM MOTILITY AND COUNT DATA

Group I: 0 MG/KG/DAY (PFBS)

Animal No.	Motility (%)	S P E R M C O U N T	
		Homogenization Resistant Testicular (million sperm/gram)	Caudal Epididymal
0-15401	94	104.4	706.6
0-15402	99	127.1	921.8
0-15403	97	140.3	1481.8
0-15404	100	177.9	1318.2
0-15405	99	106.3	1376.0
0-15406	98	185.0	946.7
0-15407	76	146.8	853.3
0-15408	98	132.9	857.8
0-15409	96	104.5	1230.4
0-15410	97	152.1	1012.4
0-15411	97	196.8	1115.8
0-15412	99	136.1	1008.3
0-15413	98	224.9	1377.3
0-15414	100	167.7	801.4
0-15415	100	127.1	1110.1
0-15416	98	155.3	918.7
0-15417	97	122.8	1069.5
0-15418	100	134.6	906.4
0-15419	92	164.7	1059.2
0-15420	99	122.1	871.7
0-15421	94	112.8	798.0
0-15422	98	107.8	802.5
0-15423	94	192.1	1171.5
0-15424	97	202.3	1135.4
0-15425	96	157.7	1295.9
0-15426	92	105.5	917.7
0-15427	97	128.6	1000.5
0-15428	97	259.4	667.5
0-15429	95	131.5	1221.4
0-15430	98	108.9	957.6

PRIMEDICA-ARGUS STUDY NO.: 418-021

APPENDIX A

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS

INDIVIDUAL P GENERATION MALE SPERM MOTILITY AND COUNT DATA

Group II: 30 MG/KG/DAY (PFBS)

Animal No.	Motility (%)	S P E R M C O U N T	
		Homogenization Resistant Testicular (million sperm/gram)	Caudal Epididymal
0-15431	99	172.0	948.8
0-15432	82	128.8	1500.6
0-15433	95	123.4	1255.7
0-15434	95	120.9	655.7
0-15435	96	107.1	756.0
0-15436	98	160.6	1261.6
0-15437	98	143.9	1050.3
0-15438	98	127.2	1190.1
0-15439	96	103.6	1157.1
0-15440	99	110.4	983.5
0-15441	98	97.9	806.3
0-15442	97	115.7	882.3
0-15443	98	124.1	1011.5
0-15444	95	167.4	542.6
0-15445	96	105.0	704.5
0-15446	97	222.4	1201.9
0-15447	100	159.5	952.4
0-15448	89	153.3	1045.5
0-15449	94	125.1	1174.1
0-15450	98	213.8	782.2
0-15451	98	135.8	912.8
0-15452	85	110.2	1106.9
0-15453	92	98.5	921.5
0-15454	98	166.0	1217.3
0-15455	78	101.1	1269.1
0-15456	97	146.6	1013.4
0-15457	98	108.4	1468.3
0-15458	93	103.5	1225.7
0-15459	98	197.2	965.4
0-15460	95	122.7	1032.8

PRIMEDICA-ARGUS STUDY NO.: 418-021

APPENDIX A

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS

INDIVIDUAL P GENERATION MALE SPERM MOTILITY AND COUNT DATA

Group III: 100 MG/KG/DAY (PFBS)

Animal No.	Motility (%)	S P E R M C O U N T	
		Homogenization Resistant Testicular (million sperm/gram)	Caudal Epididymal
0-15461	99	120.3	665.3
0-15462	94	167.6	724.2
0-15463	97	150.3	810.0
0-15464	100	157.9	776.2
0-15465	95	93.8	1228.9
0-15466	98	139.9	1193.0
0-15467	88	148.0	1232.7
0-15468	96	110.8	906.4
0-15469	96	110.5	1157.1
0-15470	94	197.9	1188.6
0-15471	97	116.4	942.2
0-15472	100	126.4	955.7
0-15473	99	160.0	975.3
0-15474	36	143.6	1172.5
0-15475	95	105.7	794.5
0-15476	97	116.4	1259.9
0-15477	93	111.8	835.7
0-15478	99	147.8	1403.4
0-15479	93	158.7	540.0
0-15480	97	132.7	825.1
0-15481	98	161.4	727.3
0-15482	98	166.4	1070.3
0-15483	96	261.3	674.3
0-15484	91	154.5	1076.1
0-15485	98	191.0	731.3
0-15486	97	167.1	925.7
0-15487	92	89.7	1115.0
0-15488	98	202.2	731.4
0-15489	76	130.5	1066.2
0-15490	100	152.7	995.9

PRIMEDICA-ARGUS STUDY NO.: 418-021

APPENDIX A

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS

INDIVIDUAL P GENERATION MALE SPERM MOTILITY AND COUNT DATA

Group IV: 300 MG/KG/DAY (PFBS)

Animal No.	Motility (%)	S P E R M C O U N T	
		Homogenization Resistant Testicular (million sperm/gram)	Caudal Epididymal
0-15491	97	124.4	1359.6
0-15492	96	144.8	1057.9
0-15493	98	117.1	821.2
0-15494	97	120.6	1025.4
0-15495	99	152.0	686.0
0-15496	93	129.0	785.2
0-15497	97	137.2	983.5
0-15498	87	128.4	1059.9
0-15499	94	185.5	948.8
0-15500	97	174.4	1111.6
0-15501	93	104.4	1136.4
0-15502	99	119.3	852.4
0-15503	100	134.2	1330.6
0-15504	99	154.0	948.1
0-15505	97	149.9	729.5
0-15506	83	134.2	747.7
0-15507	96	127.1	996.1
0-15508	94	131.0	1053.3
0-15509	93	133.3	885.8
0-15510	98	106.0	1432.4
0-15511	92	120.3	1234.2
0-15512	100	134.1	1054.7
0-15513	98	129.3	1070.3
0-15514	100	117.9	994.2
0-15515	96	136.2	884.3
0-15516	88	107.2	985.8
0-15517	94	129.6	1091.5
0-15518	97	123.2	971.2
0-15519	100	93.2	1131.4
0-15520	92	170.0	1199.2

PRIMEDICA-ARGUS STUDY NO.: 418-021

APPENDIX A

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS

INDIVIDUAL P GENERATION MALE SPERM MOTILITY AND COUNT DATA

Group V: 1000 MG/KG/DAY (PFBS)

Animal No.	Motility (%)	S P E R M C O U N T	
		Homogenization Resistant Testicular (million sperm/gram)	Caudal Epididymal
0-15521	96	101.5	941.6
0-15522	83	134.4	1123.1
0-15523	99	104.4	754.0
0-15524	94	138.6	874.8
0-15525	94	175.3	1055.3
0-15526	97	167.5	1108.1
0-15527	94	132.6	991.3
0-15528	99	110.7	697.9
0-15529	^a	0.0	0.0
0-15530	99	106.4	900.9
0-15531	89	119.6	1016.6
0-15532	95	96.4	974.6
0-15533	98	102.4	805.8
0-15534	97	168.2	1121.2
0-15535	94	101.5	1109.2
0-15536	98	121.1	655.7
0-15537	98	175.2	678.8
0-15538	99	141.9	1119.8
0-15539	99	119.6	1283.6
0-15540	94	123.4	1628.5
0-15541	96	102.1	1133.9
0-15542	81	92.6	925.7
0-15543	96	100.1	1071.4
0-15544	97	117.7	1137.1
0-15545	100	100.1	921.0
0-15546	97	193.3	1002.8
0-15547	^b		
0-15548	85	126.3	1018.2
0-15549	97	130.0	1250.5
0-15550	97	128.1	810.0

^aNO SPERM PRESENT FOR ANALYSIS.^bANIMAL DIED PRIOR TO SCHEDULED NECROPSY.

PRIMEDICA-ARGUS STUDY NO.: 418-021

APPENDIX B

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS

INDIVIDUAL F₂ GENERATION MALE SPERM MOTILITY AND COUNT DATA

Group I: 0 MG/KG/DAY (PFBS)

Animal No.	Motility (%)	S P E R M C O U N T	
		Homogenization Resistant Testicular (million sperm/gram)	Caudal Epididymal
0-03001	54	94.2	734.3
0-03002	94	102.6	844.7
0-03003	96	205.6	475.2
0-03004	97	114.2	925.7
0-03005	91	141.3	480.6
0-03006	95	82.0	495.4
0-03007	59	131.6	933.9
0-03008	99	137.9	907.0
0-03009	94	146.8	661.9
0-03010	99	128.7	567.0
0-03011	97	156.8	703.5
0-03012	98	108.8	600.8
0-03013	91	150.5	772.6
0-03014	97	105.4	1108.6
0-03015	89	91.8	854.7
0-03016	95	82.0	1085.3
0-03017	95	101.8	781.0
0-03018	90	90.4	447.7
0-03019	95	90.2	567.7
0-03020	96	127.0	937.6
0-03021	^a		
0-03022	99	136.6	983.5
0-03023	94	120.1	1045.1
0-03024	91	112.7	1135.4
0-03025	97	140.2	1203.4
0-03026	98	223.6	778.0
0-03027	90	105.6	1037.1
0-03028	94	110.2	972.0
0-03029	83	117.0	1349.9
0-03030	88	139.3	871.9

^aANIMAL DIED PRIOR TO SCHEDULED NECROPSY.

PRIMEDICA-ARGUS STUDY NO.: 418-021

APPENDIX B

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS

INDIVIDUAL F₁ GENERATION MALE SPERM MOTILITY AND COUNT DATA

Group II: 30 MG/KG/DAY (PFBS)

Animal No.	Motility (%)	S P E R M C O U N T	
		Homogenization Resistant Testicular (million sperm/gram)	Caudal Epididymal
0-03031	96	116.4	647.1
0-03032	92	181.2	721.5
0-03033	85	75.0	636.4
0-03034	81	139.7	797.1
0-03035	97	73.6	665.3
0-03036	94	109.6	1004.1
0-03037	98	103.6	569.3
0-03038	^a		
0-03039	99	81.6	848.5
0-03040	91	125.0	865.3
0-03041	98	94.4	911.2
0-03042	98	150.9	697.8
0-03043	92	103.0	959.4
0-03044	87	86.1	574.4
0-03045	94	107.1	526.7
0-03046	^a		
0-03047	97	92.2	752.1
0-03048	96	90.8	772.6
0-03049	99	178.7	201.6
0-03050	66	92.6	1260.8
0-03051	89	110.4	702.8
0-03052	92	102.0	1192.1
0-03053	98	93.9	1268.5
0-03054	94	124.2	591.4
0-03055	54	96.7	703.2
0-03056	^b	27.6	0.0
0-03057	96	109.5	1028.0
0-03058	96	112.9	891.0
0-03059	100	175.0	997.5
0-03060	^a		

^aANIMAL DIED PRIOR TO SCHEDULED NECROPSY.^bFEWER THAN 25 SPERM CELLS COUNTED; EXCLUDED FROM STATISTICAL ANALYSIS.

PRIMEDICA-ARGUS STUDY NO.: 418-021

APPENDIX B

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATSINDIVIDUAL F₁ GENERATION MALE SPERM MOTILITY AND COUNT DATA

Group III: 100 MG/KG/DAY (PFBS)

Animal No.	Motility (%)	S P E R M C O U N T	
		Homogenization Resistant Testicular (million sperm/gram)	Caudal Epididymal
0-03061	96	99.7	918.0
0-03062	^a		
0-03063	99	108.0	703.2
0-03064	94	61.6	1250.4
0-03065	98	102.2	640.5
0-03066	92	89.7	801.1
0-03067	94	105.4	603.3
0-03068	95	62.9	727.3
0-03069	95	173.2	1049.6
0-03070	98	90.7	752.1
0-03071	84	139.0	636.4
0-03072	91	73.9	536.9
0-03073	93	74.8	907.2
0-03074	96	112.0	664.3
0-03075	95	93.6	599.2
0-03076	95	101.3	841.9
0-03077	100	112.8	634.3
0-03078	95	99.5	1179.3
0-03079	100	117.3	735.9
0-03080	99	85.4	502.7
0-03081	99	140.2	894.5
0-03082	96	147.5	640.8
0-03083	93	105.6	876.7
0-03084	98	90.6	888.3
0-03085	71	165.7	874.2
0-03086	92	103.0	1817.3
0-03087	95	95.0	799.4
0-03088	96	165.1	925.7
0-03089	90	107.4	990.5
0-03090	87	80.0	967.0

^aANIMAL DIED PRIOR TO SCHEDULED NECROPSY.

PRIMEDICA-ARGUS STUDY NO.: 418-021

APPENDIX B

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATSINDIVIDUAL F₁ GENERATION MALE SPERM MOTILITY AND COUNT DATA

Group IV: 300 MG/KG/DAY (PFBS)

Animal No.	Motility (%)	S P E R M C O U N T	
		Homogenization Resistant Testicular (million sperm/gram)	Caudal Epididymal
0-03091	96	98.9	1157.1
0-03092	91	82.9	596.1
0-03093	90	149.7	907.2
0-03094	94	69.2	670.3
0-03095	94	108.9	544.3
0-03096	a		
0-03097	a		
0-03098	a		
0-03099	93	98.3	1065.5
0-03100	94	95.4	975.3
0-03101	93	87.1	407.7
0-03102	94	145.6	801.4
0-03103	97	71.5	1072.5
0-03104	87	156.0	737.6
0-03105	99	111.9	880.2
0-03106	95	102.5	824.9
0-03107	98	89.5	743.8
0-03108	98	133.3	934.9
0-03109	97	120.3	505.7
0-03110	92	134.5	1002.8
0-03111	94	99.4	734.5
0-03112	95	100.5	956.8
0-03113	95	147.3	685.0
0-03114	87	79.5	941.6
0-03115	99	106.8	1265.1
0-03116	97	109.4	1243.9
0-03117	91	140.9	582.5
0-03118	99	103.5	942.8
0-03119	99	112.0	918.0
0-03120	97	100.8	1031.7

*ANIMAL DIED PRIOR TO SCHEDULED NECROPSY.

PRIMEDICA-ARGUS STUDY NO.: 418-021

APPENDIX B

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS

INDIVIDUAL F₂ GENERATION MALE SPERM MOTILITY AND COUNT DATA

Group V: 1000 MG/KG/DAY (PFBS)

Animal No.	Motility (%)	S P E R M C O U N T	
		Homogenization Resistant Testicular (million sperm/gram)	Caudal Epididymal
0-03121	94	158.5	789.3
0-03122	67	157.3	211.0
0-03123	94	84.2	970.5
0-03124	98	83.8	640.8
0-03125	96	81.7	959.4
0-03126	98	86.2	921.2
0-03127	95	90.3	1019.0
0-03128	95	86.2	590.5
0-03129	94	110.5	1276.8
0-03130	93	199.1	1027.5
0-03131	53	114.2	1095.1
0-03132	90	65.5	942.8
0-03133	91	108.5	562.6
0-03134	99	90.4	1049.6
0-03135	94	107.7	937.6
0-03136	^a		
0-03137	^a		
0-03138	87	115.7	511.8
0-03139	98	104.7	913.3
0-03140	98	107.6	657.2
0-03141	97	109.7	1020.7
0-03142	94	151.7	817.7
0-03143	98	99.5	1142.2
0-03144	99	105.1	1004.2
0-03145	95	66.1	993.2
0-03146	^a		
0-03147	89	77.9	1344.0
0-03148	94	82.3	1330.6
0-03149	99	85.2	925.7
0-03150	81	149.8	1412.4

^aANIMAL DIED PRIOR TO SCHEDULED NECROPSY.

APPENDIX C

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS

INDIVIDUAL P GENERATION MALE SPERM MORPHOLOGY DATA

GROUP I: 0 MG/KG/DAY (PFBS)

Animal No.	Normal	-----H e a d-----				-----T a i l-----			
		Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	Other
0-15401	197	3	0	0	0	0	0	0	0
0-15402	195	5	0	0	0	0	0	0	0
0-15403	197	3	0	0	0	0	0	0	0
0-15404	197	3	0	0	0	0	0	0	0
0-15405	196	2	2	0	0	0	0	0	0
0-15406	198	2	0	0	0	0	0	0	0
0-15407	199	1	0	0	0	0	0	0	0
0-15408	197	3	0	0	0	0	0	0	0
0-15409	196	4	0	0	0	0	0	0	0
0-15410	200	0	0	0	0	0	0	0	0
0-15411	188	2	2	8	0	0	0	0	0
0-15412	199	1	0	0	0	0	0	0	0
0-15413	192	3	0	5	0	0	0	0	0
0-15414	197	3	0	0	0	0	0	0	0
0-15415	200	0	0	0	0	0	0	0	0
0-15416	196	4	0	0	0	0	0	0	0
0-15417	198	2	0	0	0	0	0	0	0
0-15418	189	8	0	3	0	0	0	0	0
0-15419	196	4	0	0	0	0	0	0	0
0-15420	198	2	0	0	0	0	0	0	0
0-15421	200	0	0	0	0	0	0	0	0
0-15422	200	0	0	0	0	0	0	0	0
0-15423	197	3	0	0	0	0	0	0	0
0-15424	198	2	0	0	0	0	0	0	0
0-15425	196	4	0	0	0	0	0	0	0
0-15426	194	6	0	0	0	0	0	0	0
0-15427	198	2	0	0	0	0	0	0	0
0-15428	197	3	0	0	0	0	0	0	0
0-15429	194	3	0	3	0	0	0	0	0
0-15430	199	1	0	0	0	0	0	0	0

APPENDIX C

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS

INDIVIDUAL P GENERATION MALE SPERM MORPHOLOGY DATA

GROUP II: 30 MG/KG/DAY (PFBS)

Animal No.	Normal	-----H e a d-----				-----T a i l-----			
		Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	Other
0-15431	196	4	0	0	0	0	0	0	0
0-15432	198	2	0	0	0	0	0	0	0
0-15433	197	3	0	0	0	0	0	0	0
0-15434	197	3	0	0	0	0	0	0	0
0-15435	191	3	0	6	0	0	0	0	0
0-15436	198	2	0	0	0	0	0	0	0
0-15437	197	3	0	0	0	0	0	0	0
0-15438	199	1	0	0	0	0	0	0	0
0-15439	197	3	0	0	0	0	0	0	0
0-15440	196	4	0	0	0	0	0	0	0
0-15441	199	1	0	0	0	0	0	0	0
0-15442	198	2	0	0	0	0	0	0	0
0-15443	198	2	0	0	0	0	0	0	0
0-15444	200	0	0	0	0	0	0	0	0
0-15445	197	3	0	0	0	0	0	0	0
0-15446	196	4	0	0	0	0	0	0	0
0-15447	191	9	0	0	0	0	0	0	0
0-15448	194	3	0	3	0	0	0	0	0
0-15449	195	5	0	0	0	0	0	0	0
0-15450	196	4	0	0	0	0	0	0	0
0-15451	196	4	0	0	0	0	0	0	0
0-15452	189	11	0	0	0	0	0	0	0
0-15453	197	3	0	0	0	0	0	0	0
0-15454	190	10	0	0	0	0	0	0	0
0-15455	198	2	0	0	0	0	0	0	0
0-15456	199	1	0	0	0	0	0	0	0
0-15457	196	4	0	0	0	0	0	0	0
0-15458	196	4	0	0	0	0	0	0	0
0-15459	195	5	0	0	0	0	0	0	0
0-15460	197	3	0	0	0	0	0	0	0

APPENDIX C

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS

INDIVIDUAL P GENERATION MALE SPERM MORPHOLOGY DATA

GROUP III: 100 MG/KG/DAY (PFBS)

Animal No.	Normal	-----H e a d-----				-----T a i l-----			
		Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	Other
0-15461	196	4	0	0	0	0	0	0	0
0-15462	197	3	0	0	0	0	0	0	0
0-15463	198	2	0	0	0	0	0	0	0
0-15464	199	1	0	0	0	0	0	0	0
0-15465	194	4	0	2	0	0	0	0	0
0-15466	196	4	0	0	0	0	0	0	0
0-15467	197	3	0	0	0	0	0	0	0
0-15468	198	2	0	0	0	0	0	0	0
0-15469	199	1	0	0	0	0	0	0	0
0-15470	197	4	0	0	0	0	0	0	0
0-15471	199	1	0	0	0	0	0	0	0
0-15472	197	3	0	0	0	0	0	0	0
0-15473	198	1	1	0	0	0	0	0	0
0-15474	200	0	0	0	0	0	0	0	0
0-15475	199	1	0	0	0	0	0	0	0
0-15476	191	9	0	0	0	0	0	0	0
0-15477	197	3	0	0	0	0	0	0	0
0-15478	193	6	1	0	0	0	0	0	0
0-15479	196	4	0	0	0	0	0	0	0
0-15480	196	4	0	0	0	0	0	0	0
0-15481	194	6	0	0	0	0	0	0	0
0-15482	197	3	0	0	0	0	0	0	0
0-15483	198	2	0	0	0	0	0	0	0
0-15484	195	5	0	0	0	0	0	0	0
0-15485	198	2	0	0	0	0	0	0	0
0-15486	196	4	0	0	0	0	0	0	0
0-15487	197	3	0	0	0	0	0	0	0
0-15488	198	2	0	0	0	0	0	0	0
0-15489	197	3	0	0	0	0	0	0	0
0-15490	198	2	0	0	0	0	0	0	0

APPENDIX C

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS

INDIVIDUAL P GENERATION MALE SPERM MORPHOLOGY DATA

GROUP IV: 300 MG/KG/DAY (PFBS)

Animal No.	Normal	-----H e a d-----				-----T a i l-----			Other
		Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	
0-15491	196	4	0	0	0	0	0	0	0
0-15492	194	6	0	0	0	0	0	0	0
0-15493	197	3	0	0	0	0	0	0	0
0-15494	195	5	0	0	0	0	0	0	0
0-15495	195	5	0	0	0	0	0	0	0
0-15496	196	4	0	0	0	0	0	0	0
0-15497	196	4	0	0	0	0	0	0	0
0-15498	197	3	0	0	0	0	0	0	0
0-15499	197	3	0	0	0	0	0	0	0
0-15500	198	2	0	0	0	0	0	0	0
0-15501	197	3	0	0	0	0	0	0	0
0-15502	199	1	0	0	0	0	0	0	0
0-15503	197	3	0	0	0	0	0	0	0
0-15504	198	2	0	0	0	0	0	0	0
0-15505	197	3	0	0	0	0	0	0	0
0-15506	196	4	0	0	0	0	0	0	0
0-15507	198	2	0	0	0	0	0	0	0
0-15508	198	1	0	1	0	0	0	0	0
0-15509	198	2	0	0	0	0	0	0	0
0-15510	197	3	0	0	0	0	0	0	0
0-15511	199	1	0	0	0	0	0	0	0
0-15512	198	2	0	0	0	0	0	0	0
0-15513	196	4	0	0	0	0	0	0	0
0-15514	196	4	0	0	0	0	0	0	0
0-15515	198	2	0	0	0	0	0	0	0
0-15516	199	1	0	0	0	0	0	0	0
0-15517	199	1	0	0	0	0	0	0	0
0-15518	197	3	0	0	0	0	0	0	0
0-15519	197	3	0	0	0	0	0	0	0
0-15520	198	2	0	0	0	0	0	0	0

APPENDIX C

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATS

INDIVIDUAL P GENERATION MALE SPERM MORPHOLOGY DATA

GROUP V: 1000 MG/KG/DAY (PFBS)

Animal No.	Normal	-----H e a d-----				-----T a i l-----			
		Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	Other
0-15521	193	7	0	0	0	0	0	0	0
0-15522	195	5	0	0	0	0	0	0	0
0-15523	196	4	0	0	0	0	0	0	0
0-15524	197	3	0	0	0	0	0	0	0
0-15525	197	3	0	0	0	0	0	0	0
0-15526	198	2	0	0	0	0	0	0	0
0-15527	196	3	1	0	0	0	0	0	0
0-15528	196	4	0	0	0	0	0	0	0
0-15529	196	4	0	0	0	0	0	0	0
0-15530	197	3	0	0	0	0	0	0	0
0-15531	195	4	1	0	0	0	0	0	0
0-15532	194	6	0	0	0	0	0	0	0
0-15533	195	5	0	0	0	0	0	0	0
0-15534	196	4	0	0	0	0	0	0	0
0-15535	197	3	0	0	0	0	0	0	0
0-15536	196	3	1	0	0	0	0	0	0
0-15537	197	3	0	0	0	0	0	0	0
0-15538	196	4	0	0	0	0	0	0	0
0-15539	197	3	0	0	0	0	0	0	0
0-15540	197	3	0	0	0	0	0	0	0
0-15541	194	5	1	0	0	0	0	0	0
0-15542	197	3	0	0	0	0	0	0	0
0-15543	196	4	0	0	0	0	0	0	0
0-15544	195	2	0	3	0	0	0	0	0
0-15545	197	4	0	0	0	0	0	0	0
0-15546	195	5	0	0	0	0	0	0	0
0-15547	^a								
0-15548	197	3	0	0	0	0	0	0	0
0-15549	198	2	0	0	0	0	0	0	0
0-15550	196	3	1	0	0	0	0	0	0

^aANIMAL DIED PRIOR TO SCHEDULED NECROPSY.

APPENDIX D

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATSINDIVIDUAL F₁ GENERATION MALE SPERM MORPHOLOGY DATA

GROUP I: 0 MG/KG/DAY (PFBS)

Animal No.	Normal	-----H e a d-----				-----T a i l-----			
		Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	Other
0-03001	196	3	0	1	0	0	0	0	0
0-03002	198	2	0	0	0	0	0	0	0
0-03003	197	3	0	0	0	0	0	0	0
0-03004	196	4	0	0	0	0	0	0	0
0-03005	197	3	0	0	0	0	0	0	0
0-03006	199	1	0	0	0	0	0	0	0
0-03007	198	1	1	0	0	0	0	0	0
0-03008	197	3	0	0	0	0	0	0	0
0-03009	198	2	0	0	0	0	0	0	0
0-03010	191	3	0	6	0	0	0	0	0
0-03011	197	3	0	0	0	0	0	0	0
0-03012	196	3	1	0	0	0	0	0	0
0-03013	197	2	1	0	0	0	0	0	0
0-03014	198	2	0	0	0	0	0	0	0
0-03015	197	3	0	0	0	0	0	0	0
0-03016	197	3	0	0	0	0	0	0	0
0-03017	199	1	0	0	0	0	0	0	0
0-03018	198	2	0	0	0	0	0	0	0
0-03019	198	2	0	0	0	0	0	0	0
0-03020	197	3	0	0	0	0	0	0	0
0-03021	^a								
0-03022	196	4	0	0	0	0	0	0	0
0-03023	198	2	0	0	0	0	0	0	0
0-03024	197	3	0	0	0	0	0	0	0
0-03025	195	5	0	0	0	0	0	0	0
0-03026	198	2	0	0	0	0	0	0	0
0-03027	197	3	0	0	0	0	0	0	0
0-03028	196	4	0	0	0	0	0	0	0
0-03029	197	3	0	0	0	0	0	0	0
0-03030	198	2	0	0	0	0	0	0	0

^aANIMAL DIED PRIOR TO SCHEDULED NECROPSY.

APPENDIX D

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATSINDIVIDUAL F₁ GENERATION MALE SPERM MORPHOLOGY DATA

GROUP II: 30 MG/KG/DAY (PFBS)

Animal No.	Normal	-----H e a d-----				-----T a i l-----			
		Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	Other
0-03031	197	2	1	0	0	0	0	0	0
0-03032	200	0	0	0	0	0	0	0	0
0-03033	196	4	0	0	0	0	0	0	0
0-03034	197	2	1	0	0	0	0	0	0
0-03035	198	2	0	0	0	0	0	0	0
0-03036	200	0	0	0	0	0	0	0	0
0-03037	199	1	0	0	0	0	0	0	0
0-03038	^a								
0-03039	198	2	0	0	0	0	0	0	0
0-03040	196	4	0	0	0	0	0	0	0
0-03041	199	1	0	0	0	0	0	0	0
0-03042	197	3	0	0	0	0	0	0	0
0-03043	196	4	0	0	0	0	0	0	0
0-03044	196	4	0	0	0	0	0	0	0
0-03045	198	2	0	0	0	0	0	0	0
0-03046	^a								
0-03047	197	3	0	0	0	0	0	0	0
0-03048	197	3	0	0	0	0	0	0	0
0-03049	198	2	0	0	0	0	0	0	0
0-03050	196	2	0	2	0	0	0	0	0
0-03051	198	2	0	0	0	0	0	0	0
0-03052	198	2	0	0	0	0	0	0	0
0-03053	196	4	0	0	0	0	0	0	0
0-03054	197	3	0	0	0	0	0	0	0
0-03055	197	3	0	0	0	0	0	0	0
0-03056	195	5	0	0	0	0	0	0	0
0-03057	198	2	0	0	0	0	0	0	0
0-03058	197	2	1	0	0	0	0	0	0
0-03059	197	3	0	0	0	0	0	0	0
0-03060	^a								

^aANIMAL DIED PRIOR TO SCHEDULED NECROPSY.

APPENDIX D

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATSINDIVIDUAL F₁ GENERATION MALE SPERM MORPHOLOGY DATA

GROUP III: 100 MG/KG/DAY (PFBS)

Animal No.	Normal	-----H e a d-----				-----T a i l-----			
		Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	Other
0-03061	198	2	0	0	0	0	0	0	0
0-03062	198 ^a								
0-03063	198	2	0	0	0	0	0	0	0
0-03064	197	3	0	0	0	0	0	0	0
0-03065	197	3	0	0	0	0	0	0	0
0-03066	196	4	0	0	0	0	0	0	0
0-03067	198	2	0	0	0	0	0	0	0
0-03068	196	4	0	0	0	0	0	0	0
0-03069	197	3	0	0	0	0	0	0	0
0-03070	198	2	0	0	0	0	0	0	0
0-03071	196	3	1	0	0	0	0	0	0
0-03072	196	4	0	0	0	0	0	0	0
0-03073	197	3	0	0	0	0	0	0	0
0-03074	197	3	0	0	0	0	0	0	0
0-03075	196	3	1	0	0	0	0	0	0
0-03076	196	4	0	0	0	0	0	0	0
0-03077	195	2	0	3	0	0	0	0	0
0-03078	197	3	0	0	0	0	0	0	0
0-03079	199	1	0	0	0	0	0	0	0
0-03080	198	2	0	0	0	0	0	0	0
0-03081	198	2	0	0	0	0	0	0	0
0-03082	197	3	0	0	0	0	0	0	0
0-03083	198	1	1	0	0	0	0	0	0
0-03084	199	1	0	0	0	0	0	0	0
0-03085	197	3	0	0	0	0	0	0	0
0-03086	196	4	0	0	0	0	0	0	0
0-03087	198	2	0	0	0	0	0	0	0
0-03088	198	2	0	0	0	0	0	0	0
0-03089	196	4	0	0	0	0	0	0	0
0-03090	197	3	0	0	0	0	0	0	0

^aANIMAL DIED PRIOR TO SCHEDULED NECROPSY.

APPENDIX D

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATSINDIVIDUAL F₁ GENERATION MALE SPERM MORPHOLOGY DATA

GROUP IV: 300 MG/KG/DAY (PFBS)

Animal No.	Normal	-----H e a d-----				-----T a i l-----			
		Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	Other
0-03091	199	1	0	0	0	0	0	0	0
0-03092	198	2	0	0	0	0	0	0	0
0-03093	196	3	0	0	0	0	1	0	0
0-03094	195	4	1	0	0	0	0	0	0
0-03095	199	1	0	0	0	0	0	0	0
0-03096	a								
0-03097	a								
0-03098	a								
0-03099	196	3	0	0	0	0	1	0	0
0-03100	197	3	0	0	0	0	0	0	0
0-03101	197	3	0	0	0	0	0	0	0
0-03102	198	2	0	0	0	0	0	0	0
0-03103	196	3	1	0	0	0	0	0	0
0-03104	196	2	2	0	0	0	0	0	0
0-03105	196	4	0	0	0	0	0	0	0
0-03106	196	4	0	0	0	0	0	0	0
0-03107	197	3	0	0	0	0	0	0	0
0-03108	196	3	0	1	0	0	0	0	0
0-03109	196	4	0	0	0	0	0	0	0
0-03110	198	2	0	0	0	0	0	0	0
0-03111	198	2	0	0	0	0	0	0	0
0-03112	198	2	0	0	0	0	0	0	0
0-03113	197	3	0	0	0	0	0	0	0
0-03114	196	4	0	0	0	0	0	0	0
0-03115	197	3	0	0	0	0	0	0	0
0-03116	197	2	1	0	0	0	0	0	0
0-03117	199	1	0	0	0	0	0	0	0
0-03118	195	4	1	0	0	0	0	0	0
0-03119	197	3	0	0	0	0	0	0	0
0-03120	198	1	1	0	0	0	0	0	0

*ANIMAL DIED PRIOR TO SCHEDULED NECROPSY.

APPENDIX D

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION) REPRODUCTION STUDY OF
POTASSIUM PERFLUOROBUTANE SULFONATE (PFBS) IN RATSINDIVIDUAL F₁ GENERATION MALE SPERM MORPHOLOGY DATA

GROUP V: 1000 MG/KG/DAY (PFBS)

Animal No.	Normal	-----H e a d-----				-----T a i l-----			
		Amorphous	Small	Enlarged	Double	Coiled	Bent	Double	Other
0-03121	196	4	0	0	0	0	0	0	0
0-03122	196	3	1	0	0	0	0	0	0
0-03123	196	4	0	0	0	0	0	0	0
0-03124	195	5	0	0	0	0	0	0	0
0-03125	195	3	2	0	0	0	0	0	0
0-03126	196	3	1	0	0	0	0	0	0
0-03127	197	3	0	0	0	0	0	0	0
0-03128	195	3	2	0	0	0	0	0	0
0-03129	197	2	1	0	0	0	0	0	0
0-03130	196	4	0	0	0	0	0	0	0
0-03131	198	2	0	0	0	0	0	0	0
0-03132	197	3	0	0	0	0	0	0	0
0-03133	199	1	0	0	0	0	0	0	0
0-03134	196	4	0	0	0	0	0	0	0
0-03135	198	1	0	0	0	0	1	0	0
0-03136	^a								
0-03137	^a								
0-03138	196	4	0	0	0	0	0	0	0
0-03139	196	2	2	0	0	0	0	0	0
0-03140	197	2	1	0	0	0	0	0	0
0-03141	195	4	1	0	0	0	0	0	0
0-03142	195	3	2	0	0	0	0	0	0
0-03143	196	4	0	0	0	0	0	0	0
0-03144	198	2	0	0	0	0	0	0	0
0-03145	196	4	0	0	0	0	0	0	0
0-03146	^a								
0-03147	196	2	1	0	0	0	1	0	0
0-03148	195	3	2	0	0	0	0	0	0
0-03149	195	5	0	0	0	0	0	0	0
0-03150	196	4	0	0	0	0	0	0	0

^aANIMAL DIED PRIOR TO SCHEDULED NECROPSY.

APPENDIX M
QUALITY ASSURANCE STATEMENT

905 Sheehy Drive, Bldg. A
Horsham, PA 19044
Telephone: (215) 443-8710
Telefax: (215) 443-8587



ARGUS RESEARCH

Charles River Laboratories
Discovery and Development Services

QUALITY ASSURANCE STATEMENT

Argus Protocol: 418-021

Sponsor's Study Number: T-7485.13

Study Director: Raymond G. York, Ph.D., DABT

The protocol, critical phases, raw data and final report were inspected by the Quality Assurance Unit (QAU), to assure conformance with:

U.S. Environmental Protection Agency. Federal Insecticide, Fungicide and Rodenticide Act/Toxic Substances Control Act (FIFRA/TSCA); Good Laboratory Practice Standards; Final Rule. 40 CFR Part 160/Part 792.

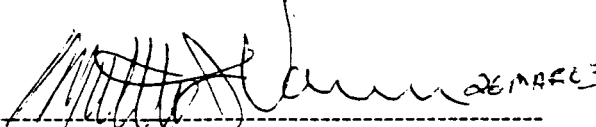
Organisation for Economic Co-operation and Development (1998). The Revised OECD Principles of Good Laboratory Practices [C(97)186/Final].

The undersigned indicate that the report is an accurate representation of the raw data. Data provided by the Sponsor or a subcontractor were not audited by the Argus Research Quality Assurance Unit.

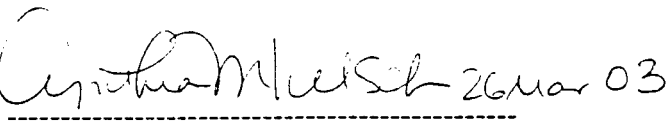
The QAU inspection and report audit dates are listed below:

Inspection Phase	Inspection Date(s)	Date(s) Findings Submitted to Study Director	Date(s) Findings Submitted to Management
Protocol	18.19 DEC 00	19 DEC 00	19 DEC 00
TS Administration	28 DEC 00	02 JAN 01	02 JAN 01
TS Preparation	18 JAN 01	29 JAN 01	29 JAN 01
Natural Delivery/ Litter Observations	30 MAR 01	30 MAR 01	30 MAR 01
Dam/Litter Sacrifice Male Sacrifice/ Sperm Evaluations	20 APR 01	01 MAY 01	01 MAY 01
Preputial Separation	27 APR 01	04 MAY 01	04 MAY 01
Vaginal Patency	02 MAY 01	11 MAY 01	11 MAY 01
F1 Natural Delivery/ Litter Observations	03 MAY 01	11 MAY 01	11 MAY 01
F1 Dam/Litter Sacrifice	08 AUG 01	08 AUG 01	08 AUG 01
F1 Male Sacrifice/ Sperm Evaluations	29 AUG 01	14 SEP 01	14 SEP 01
In-Life Data	07 SEP 01	14 SEP 01	14 SEP 01
	14-17 AUG 01 and 20-22 AUG 01	23 AUG 01	23 AUG 01
	23-24 AUG 01, 27-31 AUG 01 and 04 SEP 01	04 SEP 01	04 SEP 01
	04-07 DEC 01 and 10-14 DEC 01	14 DEC 01	14 DEC 01
	19 DEC 01 through 09 JAN 02	09 JAN 02	09 JAN 02
Necropsy Data	17-18 DEC 01	18 DEC 01	18 DEC 01
	08-10 JAN 02	10 JAN 02	10 JAN 02
Formulations Data	26-27 SEP 01	28 SEP 01	28 SEP 01
	12 DEC 01 and 10-11 JAN 02	11 JAN 02	11 JAN 02

<u>Inspection Phase</u>	<u>Inspection Date(s)</u>	<u>Date(s) Findings Submitted to Study Director</u>	<u>Date(s) Findings Submitted to Management</u>
Report Tables	23-25 SEP 01	25 SEP 01	25 SEP 01
	05-06 SEP 01 and		
	21-26 SEP 01	26 SEP 01	26 SEP 01
	09-11 & 14 JAN 02	22 JAN 02	22 JAN 02
	15-18 JAN 02 and		
Report Text	21-22 JAN 02	22 JAN 02	22 JAN 02
	24 & 26 SEP 01	27 SEP 01	27 SEP 01
	27 SEP 01	28 SEP 01	28 SEP 01
	28 SEP 01	28 SEP 01	28 SEP 01
	28-30 JAN 02	30 JAN 02	30 JAN 02
	30-31 JAN 02	31 JAN 02	31 JAN 02
Revised Report	03 JUL 02	03 JUL 02	03 JUL 02



 Matthew J. Vaneman, B.S. Date
 Manager of Regulatory Compliance



 Cynthia M. Kelsch, LAT Date
 Quality Assurance Associate/
 Team Leader and Principal Auditor

FOR

3M CORPORATE TOXICOLOGY

Study Title

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE SULFONATE
(PFBS) IN RATS

SPONSOR'S STUDY NUMBER: T-7485.13

Data Requirement

U.S. Environmental Protection Agency.
Health Effects Test Guidelines; Reproduction and Fertility Effects.
Office of Prevention, Pesticides and Toxic Substances (OPPTS) 870.3800.

U.S. Environmental Protection Agency.
Toxic Substances Control Act (TSCA) Test Guidelines; Final Rule.
Reproduction and Fertility Effects, 799.9380.

Study Director

Raymond G. York, Ph.D., DABT

Study Completed On

5 May 2004
(Report Amendment 1)

Performing Laboratory

Argus Research
905 Sheehy Drive, Building A
Horsham, Pennsylvania 19044

Laboratory Project ID

Argus Research, Protocol Number: 418-021

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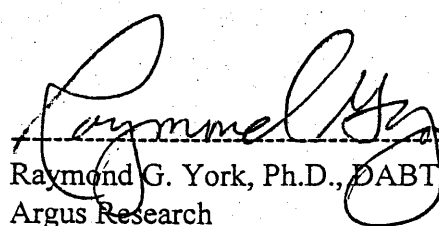
MAY 06 2004

GOOD LABORATORY PRACTICE STATEMENT

This study was conducted according to U.S. Environmental Protection Agency. Federal Insecticide, Fungicide and Rodenticide Act/Toxic Substances Control Act (FIFRA/TSCA); Good Laboratory Practice Standards; Final Rule. 40 CFR Part 160/Part 792 and The Organisation for Economic Co-operation and Development (1998). The Revised OECD Principles of Good Laboratory Practices [C(97)186/Final]. Any areas of noncompliance are documented in the study record. No deviations existed that affected the validity of the study.

Submitter: _____

Study Director: _____


Raymond G. York, Ph.D., DABT
Argus Research

Date

05-MAY-2004

Sponsor: _____


3M Corporate Toxicology

06-MAY-2004

Flagging Page

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ARGUS RESEARCH
Charles River Laboratories
Discovery and Development Services

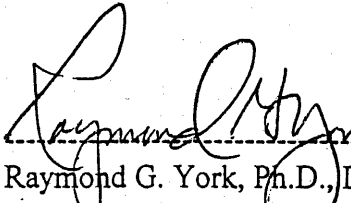
REPORT AMENDMENT 1
5 MAY 2004

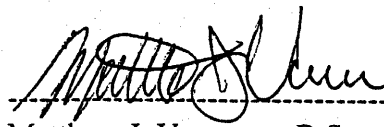
PROTOCOL 418-021
SPONSOR'S STUDY NUMBER: T-7485.13

ORAL (GAVAGE) TWO-GENERATION (ONE LITTER PER GENERATION)
REPRODUCTION STUDY OF POTASSIUM PERFLUOROBUTANE (PFBS)
IN RATS

FINAL REPORT

1. Page 20 - Section 1.2.4. F1 Generation Female Rats was replaced with the correct information. In paragraph 4, sentence 2, was changed to "Terminal body weights of the F1 generation female rats were significantly increased in the four treatment groups, compared to the control group value." rather than "Terminal body weights of the F1 generation female rats were significantly increased in the five respective dosage groups."
2. Page 21 - Section 1.3. In paragraph 1, sentence 2 "The maternal NOAEL is 300 mg/kg/day (the 1000 mg/kg/day dosage had a significantly reduced brain weight)." rather than "The maternal NOAEL is 300 mg/kg/day (the 1000 mg/kg/day dosage significantly reduced liver weight and liver weight to terminal body weight and to brain weight ratios)."
3. Pages 49 and 50 - Section 3.2.7. Natural Delivery and Litter Data for P Generation Female Rats was replaced with the correct information.


Raymond G. York, Ph.D., DABT Date 05-MAY-2004
Associate Director of Research and
Study Director


Matthew J. Vaneman, B.S. Date 05 May 04
Senior Manager, Regulatory Compliance

Absolute and relative feed consumption values during the prehabitation, gestation and lactation periods were unaffected by dosages of the test substance as high as 1000 mg/kg/day.

The age of vaginal patency for the F1 generation female rats was comparable among the dosage groups and did not significantly differ.

The average numbers of estrous stages per 21 days were comparable among the five dosage groups and did not significantly differ. All mating and fertility parameters were unaffected by dosages of the test substance as high as 1000 mg/kg/day.

All necropsy observations were considered unrelated to the test substance. Terminal body weights of the F1 generation female rats were significantly increased in the five respective dosage groups. Terminal body weights were 106%, 107%, 105% and 105% for the 30, 100, 300 and 1000 mg/kg/day dosage groups, respectively, above the control group.

The absolute organ weights and the ratios of the organ weights to the terminal body weights and to the brain weights were comparable to control values and did not significantly differ.

Microscopic examination of the kidneys of female rats revealed treatment-related effects similar to those in the P generation female rats. No treatment-related microscopic changes were observed in the reproductive organs of any female F1 generation rat selected for histopathologic evaluation that had been given 1000 mg/kg/day of the test substance.

Pregnancy occurred in 24 to 28 rats in each dosage group. Natural delivery observations were unaffected by dosages of the test substance as high as 1000 mg/kg/day.

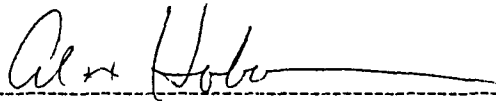
The number of pups surviving per litter, the percentage male pups, litter size and average pup body weight per litter were comparable and did not differ significantly on DLs 1, 5, 8, 15 or 22 for any of the dosage groups when compared to the control group.

No clinical or necropsy observations for F2 generation pups were attributable to dosages of the test substance as high as 1000 mg/kg/day. F2 generation weanling rats had comparable terminal body weights on DL 22; the values did not significantly differ. None of the significant differences in organ weights or organ weight ratios for the F2 generation pups were considered treatment-related because they were not dosage-dependent.

1.3. Conclusion

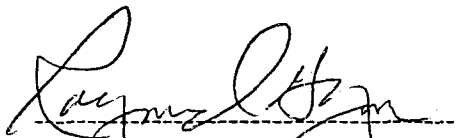
On the basis of these data, the P generation paternal no-observable-adverse-effect-level (NOAEL) for Potassium Perfluorobutane (PFBS) is less than 300 mg/kg/day (the 300 mg/kg/day dosage caused significant increases in the liver weight to the brain weight to the terminal body weight ratios). The maternal NOAEL is 300 mg/kg/day (the 1000 mg/kg/day dosage significantly reduced liver weight and liver weight to terminal body weight and to brain weight ratios). The reproductive NOAEL in the males and female P generation rats is greater than 1000 mg/kg/day (the 1000 mg/kg/day dosage had no effect on mating, fertility or maternal delivery parameters).

The F1 generation paternal no-observable-adverse-effect-level (NOAEL) for (PFBS) is 300 mg/kg/day (the 1000 mg/kg/day dosage caused a significant increase in excess salivation and significant decrease in terminal body weight, organ weights and body weight gain and delayed sexual maturation). The F1 generation maternal NOAEL is 300 mg/kg/day (the 1000 mg/kg/day dosage caused a significant increase in excess salivation and terminal body weights and delayed sexual maturation) increased postweaning mortality, decreased postweaning body weight, body weight gain and feed consumption. The reproductive NOAEL in the males and female F1 generation rats is greater than 1000 mg/kg/day (the 1000 mg/kg/day dosage had no effect on mating, fertility or maternal delivery parameters). The F2 generation terminal body weights did not differ among the groups. None of the significant differences in organ weights or organ weight ratios for the F2 generation pups were considered treatment-related.

 26-MAR-03

Alan M. Hoberman, Ph.D., DABT
Director of Research

Date

 26 MAR 2003

Raymond G. York, Ph.D., DABT
Associate Director of Research
and Study Director

Date

Treatment-related microscopic changes were observed in the kidneys of female rats in the 300 and 1000 mg/kg/day dosage groups. The primary treatment-related microscopic change consisted of an increased incidence and severity of hyperplasia of the tubular and ductular epithelium of the inner medulla/papilla region. The affected tubules were more densely cellular with variable-sized nuclei. Also, there was an increased incidence of minimal or mild focal papillary edema in the 300 and 1000 mg/kg/day dosage groups. Focal necrosis of the papilla occurred in three female rats in the 300 mg/kg/day dosage group and medullary tubular dilatation was seen in one 300 mg/kg/day dosage group rat and two 1000 mg/kg/day dosage group rats.

No treatment-related microscopic changes were observed in the reproductive organs of any female P generation rat selected for histopathologic evaluation that had been given 1000 mg/kg/day of the test substance.

**3.2.6. Terminal Body Weights and Organ Weight Ratios (%) of Organ Weight to Terminal Body Weight and Brain Weight - P Generation Female Rats
(Summary - Tables C16 through C18; Individual Data - Tables C33 and C34)**

Terminal body weights of the P generation female rats were comparable among the five dosage groups and did not significantly differ.

All organ weights (pituitary, liver, left and right adrenals, left and right kidneys, spleen, thymus, left and right ovary and uterus with oviducts) and the ratios of these organ weights to the terminal body weight and the brain weight were unaffected by dosages of the test substance as high as 1000 mg/kg/day. The weight of the brain was significantly decreased ($p \leq 0.01$) in the 1000 mg/kg/day dosage group. Although this reduction occurred in the highest dosage tested it was not considered toxicologically important because: 1) the value was 96% of the control group value; and 2) brain weights were not similarly reduced for the male rats.

**3.2.7. Natural Delivery and Litter Data - P Generation Female Rats
(Summaries - Tables C19 and C20; Individual Data - Tables C35 through C38)**

Pregnancy occurred in all 15 rats (100%) assigned to the 0, 10 and 50 mg/kg/day dosage groups and 13 rats (86.7%) assigned to the 250 mg/kg/day dosage group. All pregnant rats delivered a litter.

Natural delivery observations were unaffected by dosages of the test substance as high as 250 mg/kg/day. Values for the numbers of dams delivering litters, the duration of gestation, averages for implantation sites per delivered litter, the gestation index (number of dams with one or more liveborn pups/number of pregnant rats), the numbers of dams with stillborn pups, dams with all pups dying, stillborn pups, pup sex ratios and body weights were comparable among the four dosage groups and did not significantly differ.

The number of pups found dead or presumed cannibalized on day 1 and days 2 to 5 postpartum were significantly increased ($p \leq 0.01$) in the 250 mg/kg/day dosage group. This resulted in the viability index being significantly reduced ($p \leq 0.05$) in the 250 mg/kg/day dosage group, compared to the control group value. The average number of surviving pups per litter on DL 5 was also significantly reduced in the 250 mg/kg/day dosage group. These reductions were considered related to the test substance.

3.2.8. Clinical and Necropsy Observations - F1 Generation Litters (Summaries - Tables C21 and C22; Individual Data - Tables C39 and C40)

No clinical or necropsy observations in the F1 generation pups were attributable to dosages of the test substance as high as 1000 mg/kg/day because: 1) the incidences were not dosage-dependent; and 2) the observation occurred in only one or two litters. These clinical observations included cold to touch, not nursing, umbilical hernia, not nesting, alopecia on back or head, abrasion on back, scab on the back or head, dehydration, missing or black tip of tail, decreased motor activity, corneal opacity, bruised eye or back and absent portion of tail. Necropsy observations included no milk in stomach, liver adhered to diaphragm, pedunculated areas of the liver, dilation of ureter, opaque tan material in anterior chamber of the left eye, large spleen, diaphragmatic hernia, moderate dilation of the renal pelvis and extreme dilation of the lateral ventricles of the brain.

3.2.9. Terminal Body Weights, Organ Weights and Ratios (%) of Organ Weight to Terminal Body Weight and Brain Weight - F1 Generation Litters (Summary - Table C23; Individual Data - Table C41)

Terminal body weights of the F1 generation pups selected for organ weight evaluation were comparable among the five dosage groups and did not significantly differ. The weights of the brain, spleen, liver, kidneys and thymus and the ratios of these organ weights to the terminal body weight and brain weight were unaffected by dosages of the test substance as high as 1000 mg/kg/day.