Test Type: CHRONIC Route: DOSED WATER

Species/Strain: RATS/F344/N Tac

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Water disinfection byproducts (Bromodichloroacetic acid)

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

Lab: BAT

F1_RD_Rev. 1

NTP Study Number: C96014B

Lock Date: 11/17/2009

Cage Range: ALL

Date Range: ALL

Reasons For Removal: 25021 TSAC 25020 NATD 25019 MSAC

Removal Date Range: ALL

Treatment Groups: Include ALL

Study Gender: Both

TDMSE Version: 3.0.1.1_001

PWG Approval Date: NONE

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Water disinfection byproducts (Bromodichloroacetic acid)

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

Lab: BAT

| Fischer 344-Taconic RATS MALE | 0 mg/L | 250 mg/L | 500 mg/L | 1000 mg/L |
|----------------------------------|----------|----------|----------|-----------|
| Disposition Summary | | | | |
| Animals Initially In Study | 66 | 66 | 66 | 66 |
| Early Deaths | | | | |
| Moribund Sacrifice | 26 | 23 | 20 | 27 |
| Natural Death | 5 | 6 | 5 | 4 |
| Survivors | | | | |
| Terminal Sacrifice | 19 | 21 | 25 | 19 |
| Animals Examined Microscopically | 50 | 50 | 50 | 50 |
| ALIMENTARY SYSTEM | | | | |
| Esophagus | (50) | (50) | (50) | (50) |
| Intestine Large, Cecum | (50) | (50) | (49) | (50) |
| Erosion | . , | , , | 1 (2%) | . , |
| Inflammation | | | 2 (4%) | |
| Intestine Large, Colon | (50) | (50) | (50) | (50) |
| Amyloid Deposition | | 1 (2%) | | • |
| Inflammation | 1 (2%) | 1 (2%) | | |
| Parasite Metazoan | 6 (12%) | 8 (16%) | 10 (20%) | 8 (16%) |
| Thrombosis | | 1 (2%) | | |
| Intestine Large, Rectum | (50) | (50) | (50) | (50) |
| Intestine Small, Duodenum | (50) | (50) | (49) | (50) |
| Intestine Small, Ileum | (50) | (50) | (49) | (50) |
| Intestine Small, Jejunum | (50) | (50) | (49) | (50) |
| Liver | (50) | (50) | (50) | (50) |
| Angiectasis | | 1 (2%) | 3 (6%) | 4 (8%) |
| Basophilic Focus | 13 (26%) | 23 (46%) | 17 (34%) | 20 (40%) |
| Clear Cell Focus | 19 (38%) | 20 (40%) | 21 (42%) | 16 (32%) |
| Congestion | | | | 1 (2%) |
| Degeneration, Cystic | 12 (24%) | 12 (24%) | 11 (22%) | 14 (28%) |
| Eosinophilic Focus | 6 (12%) | 10 (20%) | 7 (14%) | 14 (28%) |
| Fatty Change | 8 (16%) | 7 (14%) | 4 (8%) | 1 (2%) |
| Fatty Change, Focal | | | 1 (2%) | 4 (8%) |
| Fibrosis | | | 1 (2%) | |
| Hematopoietic Cell Proliferation | 1 (2%) | | | 3 (6%) |

a - Number of animals examined microscopically at site and number of animals with lesion

Experiment Number: 96014 - 05

Species/Strain: RATS/F344/N Tac

Test Type: CHRONIC

Route: DOSED WATER

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: RATS/F344/N Tac

Experiment Number: 96014 - 05

Water disinfection byproducts (Bromodichloroacetic acid)

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

| Fischer 344-Taconic RATS MALE | 0 mg/L | 250 mg/L | 500 mg/L | 1000 mg/L | |
|-------------------------------|----------|----------|----------|-----------|--|
| Hemorrhage | | 1 (2%) | 1 (2%) | | |
| Hepatodiaphragmatic Nodule | 9 (18%) | 4 (8%) | 3 (6%) | 2 (4%) | |
| Inflammation, Chronic Active | 32 (64%) | 36 (72%) | 36 (72%) | 36 (72%) | |
| Mixed Cell Focus | 3 (6%) | 2 (4%) | 6 (12%) | 1 (2%) | |
| Necrosis | 2 (4%) | 1 (2%) | 4 (8%) | 5 (10%) | |
| Pigmentation, Hemosiderin | 1 (2%) | | 2 (4%) | 1 (2%) | |
| Regeneration | | | 1 (2%) | | |
| Tension Lipidosis | | | 1 (2%) | 2 (4%) | |
| Thrombosis | | | | 1 (2%) | |
| Bile Duct, Cyst | 1 (2%) | | | 1 (2%) | |
| Bile Duct, Hyperplasia | 49 (98%) | 48 (96%) | 49 (98%) | 48 (96%) | |
| Hepatocyte, Degeneration | | | 1 (2%) | 3 (6%) | |
| Oval Cell, Hyperplasia | | | 1 (2%) | | |
| Mesentery | (7) | (4) | (9) | (10) | |
| Fat, Necrosis | 7 (100%) | 3 (75%) | 3 (33%) | 3 (30%) | |
| Oral Mucosa | (50) | (50) | (50) | (50) | |
| Pancreas | (50) | (50) | (49) | (50) | |
| Atrophy | 18 (36%) | 19 (38%) | 15 (31%) | 21 (42%) | |
| Cytoplasmic Alteration | 1 (2%) | | | | |
| Acinus, Hyperplasia | 4 (8%) | 1 (2%) | 3 (6%) | 4 (8%) | |
| Salivary Glands | (50) | (50) | (50) | (50) | |
| Atrophy | | | 1 (2%) | | |
| Metaplasia, Serous | 1 (2%) | | | | |
| Stomach, Forestomach | (50) | (50) | (50) | (50) | |
| Erosion | | | | 1 (2%) | |
| Inflammation | 13 (26%) | 8 (16%) | 4 (8%) | | |
| Perforation | 1 (2%) | | | | |
| Ulcer | 6 (12%) | 3 (6%) | 1 (2%) | | |
| Epithelium, Dysplasia | 1 (2%) | , , | , , | | |
| Epithelium, Hyperplasia | 12 (24%) | 8 (16%) | 4 (8%) | 1 (2%) | |
| Stomach, Glandular | (50) | (50) | (50) | (50) | |
| Erosion | 1 (2%) | , , | 1 (2%) | | |
| Hyperplasia, Focal | 1 (2%) | | , , | | |
| Inflammation | 7 (14%) | 1 (2%) | 2 (4%) | | |
| Mineralization | 1 (2%) | , , | 1 (2%) | 1 (2%) | |
| Ulcer | 2 (4%) | | , | , | |

a - Number of animals examined microscopically at site and number of animals with lesion

5

Experiment Number: 96014 - 05

Test Type: CHRONIC Route: DOSED WATER

Species/Strain: RATS/F344/N Tac

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Water disinfection byproducts (Bromodichloroacetic acid)

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

| Fischer 344-Taconic RATS MALE | 0 mg/L | 250 mg/L | 500 mg/L | 1000 mg/L |
|---|----------|----------|----------|-----------|
| Epithelium, Hyperplasia | | | 1 (2%) | |
| Tongue | (50) | (50) | (50) | (50) |
| Inflammation | 1 (2%) | | | |
| Epithelium, Hyperplasia | | | 1 (2%) | 2 (4%) |
| Tooth | (1) | (0) | (0) | (0) |
| Degeneration | 1 (100%) | | , , | |
| CARDIOVASCULAR SYSTEM | | | | |
| Blood Vessel | (50) | (50) | (50) | (50) |
| Aneurysm | | | 1 (2%) | |
| Inflammation | 5 (10%) | | 3 (6%) | |
| Aorta, Mineralization | | 1 (2%) | | |
| Heart | (50) | (50) | (50) | (50) |
| Cardiomyopathy | 47 (94%) | 48 (96%) | 48 (96%) | 48 (96%) |
| Mineralization | | 3 (6%) | | |
| Atrium, Inflammation | | 1 (2%) | | |
| Atrium, Thrombosis | 5 (10%) | 6 (12%) | 7 (14%) | 5 (10%) |
| Pericardium, Inflammation, Chronic Active | 1 (2%) | | | |
| ENDOCRINE SYSTEM | | | | |
| Adrenal Cortex | (50) | (50) | (50) | (50) |
| Atrophy | 1 (2%) | | | |
| Degeneration, Cystic | 1 (2%) | 1 (2%) | 1 (2%) | 1 (2%) |
| Hyperplasia | 5 (10%) | 2 (4%) | 2 (4%) | |
| Hypertrophy | 1 (2%) | 3 (6%) | | |
| Mineralization | | | 1 (2%) | |
| Vacuolization Cytoplasmic | 14 (28%) | 9 (18%) | 17 (34%) | 13 (26%) |
| Adrenal Medulla | (50) | (50) | (50) | (50) |
| Hyperplasia | 15 (30%) | 18 (36%) | 15 (30%) | 9 (18%) |
| Islets, Pancreatic | (50) | (50) | (49) | (50) |
| Hyperplasia | | 2 (4%) | | 1 (2%) |
| Parathyroid Gland | (49) | (48) | (46) | (44) |
| Hyperplasia | 6 (12%) | 1 (2%) | 1 (2%) | 1 (2%) |

 $[\]ensuremath{\mathrm{a}}$ - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC Route: DOSED WATER

Species/Strain: RATS/F344/N Tac

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Water disinfection byproducts (Bromodichloroacetic acid)

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

Lab: BAT

| Fischer 344-Taconic RATS MALE | 0 mg/L | 250 mg/L | 500 mg/L | 1000 mg/L |
|-------------------------------|----------|----------|----------|-----------|
| Pituitary Gland | (50) | (49) | (49) | (48) |
| Atrophy | 2 (4%) | | | |
| Pars Distalis, Atrophy | 1 (2%) | | | |
| Pars Distalis, Hyperplasia | 12 (24%) | 14 (29%) | 18 (37%) | 21 (44%) |
| Thyroid Gland | (50) | (50) | (50) | (50) |
| C-cell, Hyperplasia | 22 (44%) | 20 (40%) | 21 (42%) | 24 (48%) |
| Follicle, Cyst | | | | 2 (4%) |
| Follicular Cell, Hyperplasia | 2 (4%) | | | 1 (2%) |

(50)

(50)

3 (6%)

(50)

16 (32%)

(50)

(50)

1 (2%)

2 (4%)

(50)

16 (32%)

(50)

(50)

1 (2%)

1 (2%)

(50)

17 (34%)

GENERAL BODY SYSTEM

GENITAL SYSTEM

Seminal Vesicle

Inflammation

Atrophy Hyperplasia

Atrophy

Testes

Epididymis

None

| Atrophy | 8 (16%) | 7 (14%) | 5 (10%) | 4 (8%) |
|-----------------------------|----------|----------|----------|----------|
| Inflammation | 1 (2%) | | | 1 (2%) |
| Mesothelium, Hyperplasia | | | 1 (2%) | |
| Preputial Gland | (50) | (50) | (50) | (49) |
| Hyperplasia | 1 (2%) | 2 (4%) | 2 (4%) | |
| Inflammation | 2 (4%) | | | |
| Duct, Hyperplasia, Squamous | | | 1 (2%) | |
| Duct, Inflammation | | | 1 (2%) | |
| Prostate | (50) | (50) | (50) | (50) |
| Atrophy | 1 (2%) | | | |
| Cyst | | | 1 (2%) | |
| Inflammation | 42 (84%) | 41 (82%) | 45 (90%) | 35 (70%) |
| Epithelium, Hyperplasia | 11 (22%) | 17 (34%) | 12 (24%) | 14 (28%) |
| | | | | |

(50)

1 (2%)

3 (6%)

(50)

15 (30%)

(50)

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC Route: DOSED WATER

Species/Strain: RATS/F344/N Tac

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Water disinfection byproducts (Bromodichloroacetic acid)

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

| Fischer 344-Taconic RATS MALE | 0 mg/L | 250 mg/L | 500 mg/L | 1000 mg/L | |
|---|----------|----------|----------|-----------|--|
| Inflammation | 1 (2%) | | | | |
| Germinal Epithelium, Degeneration | 8 (16%) | 10 (20%) | 8 (16%) | 9 (18%) | |
| Interstitial Cell, Hyperplasia | 23 (46%) | 26 (52%) | 24 (48%) | 19 (38%) | |
| HEMATOPOIETIC SYSTEM | | | | | |
| Bone Marrow | (50) | (50) | (50) | (50) | |
| Angiectasis | 4 (8%) | 29 (58%) | 34 (68%) | 40 (80%) | |
| Hemorrhage | | 5 (10%) | 1 (2%) | | |
| Hyperplasia | 17 (34%) | 19 (38%) | 20 (40%) | 30 (60%) | |
| Myelofibrosis | 1 (2%) | | | 2 (4%) | |
| Necrosis | | 1 (2%) | | | |
| Thrombosis | | 4 (8%) | | 1 (2%) | |
| Lymph Node | (5) | (2) | (8) | (7) | |
| Iliac, Ectasia | | | | 1 (14%) | |
| Iliac, Hyperplasia, Lymphoid | | | | 1 (14%) | |
| Iliac, Necrosis, Lymphoid | | | | 1 (14%) | |
| Inguinal, Ectasia | | | | 1 (14%) | |
| Lumbar, Ectasia | | | 1 (13%) | | |
| Lumbar, Infiltration Cellular, Histiocyte | | | 1 (13%) | | |
| Mediastinal, Hyperplasia | | | 1 (13%) | | |
| Mediastinal, Hyperplasia, Lymphoid | | 1 (50%) | | | |
| Mediastinal, Infiltration Cellular, Histiocyte | | | | 1 (14%) | |
| Mediastinal, Infiltration Cellular, Mast Cell | | 1 (50%) | | | |
| Mediastinal, Infiltration Cellular, Plasma Cell | | | | 1 (14%) | |
| Pancreatic, Inflammation, Histiocytic | | | | 1 (14%) | |
| Renal, Hyperplasia, Lymphoid | | | 1 (13%) | | |
| Renal, Infiltration Cellular, Histiocyte | | | | 1 (14%) | |
| Renal, Infiltration Cellular, Plasma Cell | 2 (40%) | | | | |
| Lymph Node, Mandibular | (50) | (50) | (50) | (50) | |
| Ectasia | 4 (8%) | 1 (2%) | 2 (4%) | | |
| Lymph Node, Mesenteric | (50) | (50) | (49) | (50) | |
| Atrophy | 2 (4%) | | | 4 (8%) | |
| Ectasia | | | 1 (2%) | 1 (2%) | |
| Hemorrhage | | | | 2 (4%) | |

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC Route: DOSED WATER

Species/Strain: RATS/F344/N Tac

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Water disinfection byproducts (Bromodichloroacetic acid)

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

Lab: BAT

| Fischer 344-Taconic RATS MALE | 0 mg/L | 250 mg/L | 500 mg/L | 1000 mg/L | |
|------------------------------------|----------|----------|----------|-----------|--|
| Necrosis | | | | 1 (2%) | |
| Spleen | (50) | (50) | (49) | (50) | |
| Hematopoietic Cell Proliferation | 32 (64%) | 31 (62%) | 31 (63%) | 32 (64%) | |
| Hemorrhage | , , | , , | , , | 1 (2%) | |
| Hyperplasia, Lymphoid | | 1 (2%) | | , | |
| Infarct | 2 (4%) | 1 (2%) | | 1 (2%) | |
| Pigmentation, Hemosiderin | 35 (70%) | 36 (72%) | 32 (65%) | 28 (56%) | |
| Stromal Hyperplasia | 1 (2%) | , | 1 (2%) | 2 (4%) | |
| Thrombosis | , | | , | 1 (2%) | |
| Capsule, Fibrosis | | | | 1 (2%) | |
| Lymphoid Follicle, Atrophy | | | 3 (6%) | , | |
| Red Pulp, Atrophy | | 1 (2%) | 1 (2%) | | |
| Thymus | (48) | (47) | (48) | (49) | |
| Atrophy | 47 (98%) | 46 (98%) | 46 (96%) | 49 (100%) | |
| INTEGUMENTARY SYSTEM | | | | | |
| | (40) | (50) | (40) | (40) | |
| Mammary Gland | (49) | (50) | (49) | (49) | |
| Hyperplasia | 6 (12%) | 1 (2%) | 2 (4%) | 1 (2%) | |
| Inflammation, Chronic | 1 (2%) | | | | |
| Inflammation, Chronic Active | 1 (2%) | (50) | (50) | (50) | |
| Skin | (50) | (50) | (50) | (50) | |
| Cyst Epithelial Inclusion | 1 (2%) | 4 (00() | 2 (4%) | | |
| Hyperplasia, Squamous | - (·) | 1 (2%) | - (1-01) | - (,,) | |
| Inflammation | 3 (6%) | 5 (10%) | 5 (10%) | 5 (10%) | |
| Ulcer | 2 (4%) | 3 (6%) | 1 (2%) | 3 (6%) | |
| Dermis, Fibrosis | | | | 1 (2%) | |
| Epidermis, Hyperkeratosis | 2 (4%) | 1 (2%) | 2 (4%) | 2 (4%) | |
| Epidermis, Hyperplasia | 3 (6%) | 5 (10%) | 5 (10%) | 2 (4%) | |
| Epidermis, Hyperplasia, Basal Cell | | | | 1 (2%) | |
| Epidermis, Hyperplasia, Squamous | 1 (2%) | | | | |
| MUSCULOSKELETAL SYSTEM | | | | | |
| Bone | (50) | (50) | (50) | (50) | |

Page 7

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC Route: DOSED WATER

Species/Strain: RATS/F344/N Tac

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Water disinfection byproducts (Bromodichloroacetic acid)

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

| Fischer 344-Taconic RATS MALE | 0 mg/L | 250 mg/L | 500 mg/L | 1000 mg/L | |
|---|----------|----------|----------|-----------|--|
| Fibrous Osteodystrophy | 1 (2%) | | | | |
| Osteopetrosis | 3 (6%) | 1 (2%) | | 4 (8%) | |
| Cartilage, Sternum, Degeneration | | | | 1 (2%) | |
| Tibia, Fracture | | | | 1 (2%) | |
| Skeletal Muscle | (4) | (0) | (2) | (0) | |
| NERVOUS SYSTEM | | | | | |
| Brain | (50) | (50) | (50) | (50) | |
| Gliosis | | 1 (2%) | | | |
| Hemorrhage | | 2 (4%) | | | |
| Infiltration Cellular, Lymphocyte | | 1 (2%) | | | |
| Meninges, Hyperplasia | | | | 1 (2%) | |
| Peripheral Nerve | (0) | (2) | (0) | (0) | |
| Degeneration | | 1 (50%) | | | |
| Spinal Cord | (0) | (2) | (0) | (0) | |
| RESPIRATORY SYSTEM | | | | | |
| Lung | (50) | (50) | (50) | (50) | |
| Fibrosis | | | | 1 (2%) | |
| Inflammation, Chronic Active | 15 (30%) | 11 (22%) | 11 (22%) | 19 (38%) | |
| Metaplasia, Osseous | | | 1 (2%) | | |
| Mineralization | 1 (2%) | | | | |
| Thrombosis | 1 (2%) | | | | |
| Alveolar Epithelium, Hyperplasia | 5 (10%) | 7 (14%) | 12 (24%) | 10 (20%) | |
| Alveolar Epithelium, Hypertrophy | | | | 2 (4%) | |
| Alveolus, Infiltration Cellular, Histiocyte | 20 (40%) | 22 (44%) | 25 (50%) | 22 (44%) | |
| Bronchiole, Hyperplasia | 1 (2%) | | | | |
| Nose | (50) | (50) | (50) | (50) | |
| Foreign Body | 12 (24%) | 16 (32%) | 10 (20%) | 17 (34%) | |
| Inflammation | 15 (30%) | 21 (42%) | 14 (28%) | 22 (44%) | |
| Glands, Olfactory Epithelium, Hyperplasia | | 1 (2%) | | | |
| Glands, Respiratory Epithelium, Hyperplasia | 1 (2%) | | | | |
| Olfactory Epithelium, Metaplasia | | | | 1 (2%) | |

a - Number of animals examined microscopically at site and number of animals with lesion

Species/Strain: RATS/F344/N Tac

Test Type: CHRONIC

Route: DOSED WATER

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Water disinfection byproducts (Bromodichloroacetic acid)

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

| Fischer 344-Taconic RATS MALE | 0 mg/L | 250 mg/L | 500 mg/L | 1000 mg/L | |
|--|----------------|----------|----------|-----------|--|
| Respiratory Epithelium, Hyperplasia Trachea | 4 (8%) (50) | (50) | (50) | (50) | |
| SPECIAL SENSES SYSTEM | | | | | |
| Ear | (1) | (0) | (0) | (0) | |
| Eye | (50) | (50) | (50) | (50) | |
| Anterior Chamber, Inflammation | | | 1 (2%) | 1 (2%) | |
| Cornea, Inflammation | | | | 1 (2%) | |
| Iris, Inflammation | 1 (2%) | 1 (2%) | | | |
| Lens, Cataract | 2 (4%) | 5 (10%) | 1 (2%) | 6 (12%) | |
| Retina, Degeneration | 4 (8%) | 2 (4%) | 3 (6%) | 5 (10%) | |
| Retina, Dysplasia | | | | 1 (2%) | |
| Retina, Gliosis | | 2 (4%) | | | |
| Harderian Gland | (50) | (50) | (50) | (50) | |
| Hyperplasia, Squamous | | | | 1 (2%) | |
| Inflammation | 1 (2%) | | 1 (2%) | | |
| Metaplasia, Squamous | | | | 1 (2%) | |
| Zymbal's Gland | (1) | (2) | (0) | (2) | |
| URINARY SYSTEM | | | | | |
| Kidney | (50) | (50) | (50) | (50) | |
| Accumulation, Hyaline Droplet | 3 (6%) | | 1 (2%) | | |
| Mineralization | 16 (32%) | 21 (42%) | 25 (50%) | 23 (46%) | |
| Nephropathy | 48 (96%) | 49 (98%) | 49 (98%) | 49 (98%) | |
| Cortex, Cyst | 1 (2%) | 1 (2%) | | | |
| Cortex, Inflammation, Focal | 1 (2%) | | | | |
| Pelvis, Dilatation | | 2 (4%) | | | |
| Renal Tubule, Dilatation | | 2 (4%) | | | |
| Renal Tubule, Hyperplasia, Atypical | | | | 1 (2%) | |
| Renal Tubule, Necrosis | | | | 1 (2%) | |
| Urinary Bladder | (50) | (50) | (50) | (50) | |
| Inflammation | 1 (2%) | 2 (4%) | | | |

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC Route: DOSED WATER

Species/Strain: RATS/F344/N Tac

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Water disinfection byproducts (Bromodichloroacetic acid)

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

Lab: BAT

| Fischer 344-Taconic RATS MALE | 0 mg/L | 250 mg/L | 500 mg/L | 1000 mg/L | |
|-------------------------------|--------|----------|----------|-----------|--|
| | | | | | |

*** END OF MALE ***

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Test Type: CHRONIC Route: DOSED WATER

Species/Strain: RATS/F344/N Tac

Experiment Number: 96014 - 05

 $Water\ disinfection\ by products\ (Bromodichloroacetic\ acid)$

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

| Fischer 344-Taconic RATS FEMALE | 0 mg/L | 250 mg/L | 500 mg/L | 1000 mg/L | |
|----------------------------------|----------|----------|----------|-----------|--|
| Disposition Summary | | | | | |
| Animals Initially In Study | 66 | 66 | 66 | 66 | |
| Early Deaths | | | | | |
| Moribund Sacrifice | 10 | 22 | 42 | 44 | |
| Natural Death | 6 | 2 | 1 | 4 | |
| Survivors | | | | | |
| Terminal Sacrifice | 34 | 26 | 7 | 2 | |
| Animals Examined Microscopically | 50 | 50 | 50 | 50 | |
| ALIMENTARY SYSTEM | | | | | |
| Esophagus | (50) | (50) | (50) | (50) | |
| Intestine Large, Cecum | (50) | (50) | (50) | (50) | |
| Inflammation | , | 1 (2%) | , | , | |
| Intestine Large, Colon | (50) | (50) | (50) | (50) | |
| Parasite Metazoan | 6 (12%) | 9 (18%) | 5 (10%) | 4 (8%) | |
| Intestine Large, Rectum | (50) | (50) | (50) | (50) | |
| Intestine Small, Duodenum | (50) | (50) | (50) | (50) | |
| Intestine Small, Ileum | (50) | (50) | (50) | (50) | |
| Intestine Small, Jejunum | (50) | (50) | (50) | (50) | |
| Liver | (50) | (50) | (50) | (50) | |
| Angiectasis | 3 (6%) | | 1 (2%) | 2 (4%) | |
| Basophilic Focus | 42 (84%) | 46 (92%) | 46 (92%) | 46 (92%) | |
| Clear Cell Focus | 14 (28%) | 10 (20%) | 5 (10%) | 8 (16%) | |
| Degeneration, Cystic | 1 (2%) | 1 (2%) | | | |
| Eosinophilic Focus | 6 (12%) | 13 (26%) | 21 (42%) | 22 (44%) | |
| Fatty Change | 10 (20%) | 7 (14%) | 5 (10%) | 5 (10%) | |
| Fatty Change, Focal | 1 (2%) | 2 (4%) | | | |
| Hematopoietic Cell Proliferation | 3 (6%) | 7 (14%) | 14 (28%) | 9 (18%) | |
| Hepatodiaphragmatic Nodule | 5 (10%) | 9 (18%) | 12 (24%) | 15 (30%) | |
| Inflammation, Chronic Active | 36 (72%) | 33 (66%) | 40 (80%) | 35 (70%) | |
| Mixed Cell Focus | 2 (4%) | 3 (6%) | 2 (4%) | 3 (6%) | |
| Necrosis | 2 (4%) | 1 (2%) | 1 (2%) | 2 (4%) | |
| Necrosis, Multifocal | 1 (2%) | | | | |
| Tension Lipidosis | 1 (2%) | | | | |

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC Route: DOSED WATER

Species/Strain: RATS/F344/N Tac

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Water disinfection byproducts (Bromodichloroacetic acid)

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

| Sischer 344-Taconic RATS FEMALE | 0 mg/L | 250 mg/L | 500 mg/L | 1000 mg/L | |
|---------------------------------|----------|----------|----------|-----------|--|
| Bile Duct, Hyperplasia | 28 (56%) | 27 (54%) | 28 (56%) | 22 (44%) | |
| Oval Cell, Hyperplasia | 2 (4%) | | | | |
| Serosa, Fibrosis | | | | 1 (2%) | |
| Mesentery | (3) | (4) | (3) | (2) | |
| Fat, Necrosis | 3 (100%) | 4 (100%) | 3 (100%) | 2 (100%) | |
| Oral Mucosa | (0) | (0) | (0) | (1) | |
| Pancreas | (50) | (50) | (50) | (50) | |
| Atrophy | 9 (18%) | 13 (26%) | 11 (22%) | 14 (28%) | |
| Acinus, Hyperplasia | 6 (12%) | 1 (2%) | | | |
| Salivary Glands | (50) | (50) | (50) | (50) | |
| Degeneration | | 1 (2%) | · | | |
| Inflammation | | 1 (2%) | | | |
| Stomach, Forestomach | (50) | (50) | (50) | (50) | |
| Inflammation | 2 (4%) | 1 (2%) | 1 (2%) | , | |
| Ulcer | 1 (2%) | 1 (2%) | 1 (2%) | | |
| Epithelium, Dysplasia | , | , | , | 1 (2%) | |
| Epithelium, Hyperplasia | 2 (4%) | 1 (2%) | 4 (8%) | , | |
| Stomach, Glandular | (50) | (50) | (50) | (50) | |
| Erosion | , | (| (| 1 (2%) | |
| Mineralization | 1 (2%) | | | , | |
| Tongue | (50) | (50) | (50) | (50) | |
| Foreign Body | 1 (2%) | (/ | (/ | () | |
| Inflammation | 1 (2%) | | | | |
| Ulcer | 1 (2%) | | | | |
| Epithelium, Hyperplasia | 1 (2%) | | | | |
| CARDIOVASCULAR SYSTEM | | | | | |
| Blood Vessel | (50) | (50) | (50) | (50) | |
| Heart | (50) | (50) | (50) | (50) | |
| Cardiomyopathy | 45 (90%) | 42 (84%) | 39 (78%) | 35 (70%) | |
| Atrium, Thrombosis | () | 1 (2%) | () | () | |
| Epicardium, Inflammation | | . (=,0) | | 1 (2%) | |
| 1 | | | | . (-,-) | |

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC Route: DOSED WATER

Species/Strain: RATS/F344/N Tac

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Water disinfection byproducts (Bromodichloroacetic acid)

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

Lab: BAT

| Fischer 344-Taconic RATS FEMALE | 0 mg/L | 250 mg/L | 500 mg/L | 1000 mg/L | |
|--|----------|----------|----------|-----------|--|
| ENDOCRINE SYSTEM | | | | | |
| Adrenal Cortex | (50) | (50) | (50) | (50) | |
| Degeneration, Cystic | 4 (8%) | 2 (4%) | 2 (4%) | 6 (12%) | |
| Hematopoietic Cell Proliferation | 1 (2%) | | | | |
| Hyperplasia | | 1 (2%) | | | |
| Hypertrophy | 5 (10%) | | 1 (2%) | 5 (10%) | |
| Necrosis | | | | 2 (4%) | |
| Vacuolization Cytoplasmic | 3 (6%) | 6 (12%) | 2 (4%) | | |
| Zona Fasciculata, Hyperplasia | | 4 (8%) | 1 (2%) | 1 (2%) | |
| Adrenal Medulla | (50) | (50) | (50) | (50) | |
| Hyperplasia | 2 (4%) | | 5 (10%) | 1 (2%) | |
| Islets, Pancreatic | (50) | (50) | (50) | (50) | |
| Parathyroid Gland | (47) | (46) | (49) | (49) | |
| Pituitary Gland | (50) | (50) | (49) | (50) | |
| Cyst | | 1 (2%) | | | |
| Inflammation | | 1 (2%) | | | |
| Pars Distalis, Angiectasis | | | 1 (2%) | 1 (2%) | |
| Pars Distalis, Cyst | | | 1 (2%) | | |
| Pars Distalis, Hyperplasia | 15 (30%) | 18 (36%) | 22 (45%) | 17 (34%) | |
| Pars Distalis, Vacuolization Cytoplasmic | | | 1 (2%) | | |
| Thyroid Gland | (50) | (50) | (50) | (50) | |
| Atrophy | | | 1 (2%) | | |
| Cyst | | 1 (2%) | | | |
| C-cell, Hyperplasia | 33 (66%) | 31 (62%) | 26 (52%) | 26 (52%) | |
| Follicular Cell, Hyperplasia | 1 (2%) | 2 (4%) | | 1 (2%) | |

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Clitoral Gland (50) (49) (49)

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC Route: DOSED WATER

Species/Strain: RATS/F344/N Tac

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Water disinfection byproducts (Bromodichloroacetic acid)

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

| Fischer 344-Taconic RATS FEMALE | 0 mg/L | 250 mg/L | 500 mg/L | 1000 mg/L | |
|---|----------|----------|----------|------------|--|
| Cyst | 1 (2%) | 1 (2%) | | | |
| Hyperplasia | 1 (2%) | 5 (10%) | 3 (6%) | | |
| Inflammation | 2 (4%) | , , | , , | | |
| Ovary | (50) | (50) | (50) | (50) | |
| Atrophy | 9 (18%) | 9 (18%) | 6 (12%) | 3 (6%) | |
| Cyst | 10 (20%) | 12 (24%) | 10 (20%) | 6 (12%) | |
| Infiltration Cellular, Histiocyte | 1 (2%) | | | | |
| Uterus | (50) | (50) | (50) | (50) | |
| Atrophy | | 1 (2%) | | | |
| Cervix, Hypertrophy | | 1 (2%) | 1 (2%) | | |
| Cervix, Inflammation | 2 (4%) | 3 (6%) | , , | 1 (2%) | |
| Cervix, Metaplasia, Squamous | 2 (4%) | 1 (2%) | | 1 (2%) | |
| Cervix, Epithelium, Hyperplasia | 1 (2%) | , , | | , , | |
| Endometrium, Hyperplasia, Adenomatous | , , | | 1 (2%) | | |
| Endometrium, Hyperplasia, Cystic | 10 (20%) | 9 (18%) | 12 (24%) | 9 (18%) | |
| Vagina | (1) | (0) | (0) | (0) | |
| Epithelium, Hyperplasia | 1 (100%) | . , | · , | , , | |
| HEMATOPOIETIC SYSTEM | | | | | |
| Bone Marrow | (50) | (50) | (50) | (50) | |
| Angiectasis | 1 (2%) | 19 (38%) | 32 (64%) | 39 (78%) | |
| Atrophy | , , | , , | , , | 1 (2%) | |
| Hemorrhage | 1 (2%) | 1 (2%) | | , , | |
| Hyperplasia | 23 (46%) | 35 (70%) | 40 (80%) | 43 (86%) | |
| Infiltration Cellular, Histiocyte | , , | 1 (2%) | 1 (2%) | 1 (2%) | |
| Myelofibrosis | | , , | , , | 1 (2%) | |
| Necrosis | 1 (2%) | | | 1 (2%) | |
| Lymph Node | (4) | (4) | (2) | (2) | |
| Inguinal, Infiltration Cellular, Plasma Cell | 1 (25%) | ` ' | ` ' | ` ' | |
| Lumbar, Ectasia | , , | 1 (25%) | | | |
| Mediastinal, Hyperplasia, Lymphoid | | 1 (25%) | | | |
| Mediastinal, Infiltration Cellular, Histiocyte | 1 (25%) | , , | | | |
| | \ -·-/ | | | 4 (500() | |
| Mediastinal, Infiltration Cellular, Plasma Cell | | | | 1 (50%) | |

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC Route: DOSED WATER

Species/Strain: RATS/F344/N Tac

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Water disinfection byproducts (Bromodichloroacetic acid)

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

| Fischer 344-Taconic RATS FEMALE | 0 mg/L | 250 mg/L | 500 mg/L | 1000 mg/L | |
|------------------------------------|----------------|----------|----------|-----------|--|
| Lymph Node, Mandibular | (50) | (50) | (50) | (50) | |
| Atrophy | | | 1 (2%) | | |
| Infiltration Cellular, Plasma Cell | 1 (2%) | | 1 (2%) | | |
| Lymph Node, Mesenteric | (50) | (50) | (50) | (50) | |
| Atrophy | 4 (8%) | | 2 (4%) | | |
| Ectasia | | | 1 (2%) | | |
| Infiltration Cellular, Histiocyte | | | | 1 (2%) | |
| Spleen | (50) | (50) | (50) | (50) | |
| Hematopoietic Cell Proliferation | 6 (12%) | 13 (26%) | 29 (58%) | 31 (62%) | |
| Hyperplasia, Lymphoid | | 1 (2%) | | | |
| Pigmentation, Hemosiderin | 39 (78%) | 43 (86%) | 41 (82%) | 39 (78%) | |
| Thrombosis | , , | , , | , , | 2 (4%) | |
| Capsule, Mineralization | 1 (2%) | | | ` , | |
| Lymphoid Follicle, Atrophy | 5 (10%) | 1 (2%) | 1 (2%) | 3 (6%) | |
| Thymus | (48) | (49) | (47) | (48) | |
| Atrophy | 45 (94%) | 48 (98%) | 44 (94%) | 45 (94%) | |
| INTEGUMENTARY SYSTEM | | | | | |
| Mammary Gland | (50) | (50) | (50) | (50) | |
| Galactocele | | 1 (2%) | | | |
| Hyperplasia | | 4 (8%) | 2 (4%) | 10 (20%) | |
| Inflammation | 1 (2%) | | | | |
| Skin | (50) | (50) | (50) | (50) | |
| Cyst Epithelial Inclusion | 1 (2%) | 1 (2%) | | | |
| Inflammation | 3 (6%) | | | 2 (4%) | |
| Ulcer | 2 (4%) | | | | |
| Epidermis, Hyperkeratosis | | | | 1 (2%) | |
| Epidermis, Hyperplasia, Squamous | 2 (4%) | | | 1 (2%) | |
| Sebaceous Gland, Hyperplasia | | | 1 (2%) | | |
| MUSCULOSKELETAL SYSTEM | | | | | |
| Bone | (50) 1 (2%) | (50) | (50) | (50) | |
| Fibrous Osteodystrophy | | 1 (2%) | | | |

Test Type: CHRONIC Route: DOSED WATER

Species/Strain: RATS/F344/N Tac

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Water disinfection byproducts (Bromodichloroacetic acid)

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

| Fischer 344-Taconic RATS FEMALE | 0 mg/L | 250 mg/L | 500 mg/L | 1000 mg/L |
|---|----------|----------|----------|-----------|
| Hyperplasia | | | 1 (2%) | |
| Osteopetrosis | 2 (4%) | 2 (4%) | 8 (16%) | 5 (10%) |
| Tibia, Fracture | , | 1 (2%) | , | , |
| Vertebra, Fracture | | , | | 1 (2%) |
| Skeletal Muscle | (0) | (1) | (0) | (0) |
| NERVOUS SYSTEM | | | | |
| Brain | (50) | (50) | (50) | (50) |
| Hemorrhage | , | 2 (4%) | , | , |
| Necrosis | | 1 (2%) | | |
| Spinal Cord | (0) | (0) | (1) | (0) |
| RESPIRATORY SYSTEM | | | | |
| Lung | (50) | (50) | (50) | (50) |
| Inflammation, Chronic Active | 20 (40%) | 26 (52%) | 26 (52%) | 28 (56%) |
| Alveolar Epithelium, Hyperplasia | 11 (22%) | 4 (8%) | 8 (16%) | 8 (16%) |
| Alveolar Epithelium, Hypertrophy | 1 (2%) | | | |
| Alveolus, Hyperplasia | | | 1 (2%) | |
| Alveolus, Infiltration Cellular, Histiocyte | 38 (76%) | 46 (92%) | 43 (86%) | 43 (86%) |
| Bronchiole, Hyperplasia | | 1 (2%) | | 1 (2%) |
| Mediastinum, Inflammation | 1 (2%) | | | |
| Nose | (50) | (50) | (50) | (50) |
| Foreign Body | 2 (4%) | 1 (2%) | 2 (4%) | 1 (2%) |
| Inflammation | 5 (10%) | 5 (10%) | 9 (18%) | 5 (10%) |
| Respiratory Epithelium, Hyperplasia | | | 1 (2%) | |
| Trachea | (50) | (50) | (50) | (50) |
| SPECIAL SENSES SYSTEM | | | | |
| Eye | (50) | (50) | (50) | (50) |
| Fibrosis | ` ' | ` ' | 1 (2%) | , , |
| Anterior Chamber, Inflammation | | | 1 (2%) | |

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC Route: DOSED WATER

Species/Strain: RATS/F344/N Tac

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Water disinfection byproducts (Bromodichloroacetic acid)

CAS Number: 71133-14-7

Date Report Requested: 03/05/2013 Time Report Requested: 08:02:50 First Dose M/F: 10/26/06 / 10/27/06

| Fischer 344-Taconic RATS FEMALE | 0 mg/L | 250 mg/L | 500 mg/L | 1000 mg/L | |
|---|----------|----------|----------|-----------|--|
| Ciliary Body, Fibrosis | 1 (2%) | | | | |
| Cornea, Inflammation | | 1 (2%) | | 1 (2%) | |
| Iris, Inflammation | 1 (2%) | | | | |
| Lens, Cataract | 5 (10%) | 1 (2%) | 6 (12%) | 3 (6%) | |
| Posterior Chamber, Inflammation | 1 (2%) | | | | |
| Retina, Degeneration | 6 (12%) | 2 (4%) | 5 (10%) | 3 (6%) | |
| Retina, Gliosis | 1 (2%) | 1 (2%) | 1 (2%) | | |
| Harderian Gland | (50) | (50) | (50) | (50) | |
| Inflammation | | | 1 (2%) | 1 (2%) | |
| Lacrimal Gland | (0) | (2) | (0) | (0) | |
| Zymbal's Gland | (0) | (0) | (0) | (2) | |
| JRINARY SYSTEM | | | | | |
| Kidney | (50) | (50) | (50) | (50) | |
| Infarct | 1 (2%) | 1 (2%) | | 1 (2%) | |
| Infiltration Cellular, Lymphoid | | 1 (2%) | | | |
| Inflammation | 1 (2%) | | | | |
| Mineralization | 28 (56%) | 21 (42%) | 20 (40%) | 27 (54%) | |
| Nephropathy | 43 (86%) | 40 (80%) | 44 (88%) | 46 (92%) | |
| Cortex, Cyst | 1 (2%) | | 1 (2%) | | |
| Papilla, Necrosis | 1 (2%) | | | 1 (2%) | |
| Pelvis, Calculus Micro Observation Only | | 3 (6%) | 4 (8%) | | |
| Pelvis, Inflammation | 1 (2%) | | 1 (2%) | | |
| Renal Tubule, Dilatation | | | | 1 (2%) | |
| Renal Tubule, Hyperplasia, Atypical | | 1 (2%) | 1 (2%) | | |
| Renal Tubule, Necrosis | | | | 1 (2%) | |
| Urinary Bladder | (50) | (50) | (50) | (50) | |
| Transitional Epithelium, Hyperplasia | · · | 1 (2%) | | • • | |

^{***} END OF REPORT ***

a - Number of animals examined microscopically at site and number of animals with lesion