

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:40
First Dose M/F: NA / NA
Lab: BNW

C Number:	C60560C
Lock Date:	03/24/1993
Cage Range:	All
Date Range:	All
Reasons For Removal:	All
Removal Date Range:	All
Treatment Groups:	All
Study Gender:	Both
PWG Approval Date	02/20/1996

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CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 1

TRT#: 1

SEX: Male

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26483

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Moderate
* Kidney	Pelvis, Transit Epithe Renal Tubule	Hyperplasia Hyperplasia Nephropathy	Moderate Marked Chronic, Marked
Note: solid nest of tubular cells in cortex of left kidney(see pen mark); Dx, adenoma. [Nephropathy TGLS = 2-5]			
Oral Mucosa		Hyperplasia	Moderate
Note: step sections of palate lesion: no change. Dx focal hyperplasia of mucosal epith. [Hyperplasia TGLS = 6-11]			
* Pancreas		Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Fibrosis Leukemia Mononuclear	Marked
[Fibrosis TGLS = 4-12] [Leukemia Mononuclear TGLS = 3-12]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 5-7]			

PRIMARY CAUSE OF DEATH

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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

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CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 2	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 26484
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Marked
		Pheochromocytoma Benign	
* Intestine Large, Colon		Parasite Metazoan	
* Islets, Pancreatic		Carcinoma	
[Carcinoma TGLS = 8-13]			
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Chronic, Marked
* Liver		Hepatocellular Carcinoma	
[Hepatocellular Carcinoma TGLS = 6-11]		Leukemia Mononuclear	
* Lung		Hemorrhage	Mild
[Hemorrhage TGLS = 7-3]			
Lymph Node	Renal	Ectasia	Moderate
[Ectasia TGLS = 5-12]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
Mesentery	Artery	Inflammation	Chronic, Marked
	Fat	Inflammation	Granulomatous, Marked
	Fat	Necrosis	Moderate
[Inflammation TGLS = 3-14]			
[Necrosis TGLS = 3-14]			
* Nose	Goblet Cell, Respirat Epith	Hypertrophy	Moderate

* PROTOCOL REQUIRED TISSUE

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First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 2	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 26484
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ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas [Atrophy TGLS = 8-13]		Atrophy	Marked
* Pituitary Gland [Adenoma TGLS = 1-8]	Pars Distalis	Adenoma	
* Prostate		Inflammation	Suppurative, Mild
* Spleen [Leukemia Mononuclear TGLS = 2-13]		Leukemia Mononuclear	
* Testes	Artery	Inflammation	Moderate
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

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Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 3	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 26485
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Kidney	Pelvis, Transit Epithe	Hyperplasia Nephropathy	Minimal Chronic, Moderate
[Nephropathy TGLS = 5-5]			
* Liver		Degeneration Leukemia Mononuclear	Cystic, Mild
* Lung		Hemorrhage	Minimal
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 1-11]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-7]			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

Animal Note: very early MCL, liver and spleen.

* PROTOCOL REQUIRED TISSUE

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P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 4	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 575 HISTO: 26486
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung	Artery	Infiltration Cellular	Histiocyte, Moderate
Note: Very odd lesion in large and medium sized arteries in lung. Variable numbers of round to oval small cells with round nuclei, abundant foamy cytoplasm attached to walls. Several mitotic figures. Dx sarcoma to call attention to this lesion; no primary site found. Does not appear to be related to MCL also present.			
Note: Possibly non-neoplastic aggregates of macrophages on vessel walls in response to MCL?			
Note: Made recuts, still looks the same. Good subject matter for PWG; I will leave it as histiocytic sarcoma of lung. rar			
Note: cells in pulm arteries--metastatic chordoma?			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Hemorrhage	Moderate
	Fat	Necrosis	Moderate
[Necrosis TGLS = 6-13]			
* Nose		Inflammation	Chronic, Mild
Note: focal accumulation of mucus, mixed inflam. cells on medial side of nasoturbinate in xs2.			

* PROTOCOL REQUIRED TISSUE

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Species/Strain: Rat/F 344/N

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Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 4	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 575 HISTO: 26486
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ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland Note: recuts, no change in appearance of pituitary. [Cyst TGLS = 8-8]		Cyst	Minimal
* Skin [Keratoacanthoma TGLS = 1-11]		Keratoacanthoma	
* Spleen [Leukemia Mononuclear TGLS = 5-12]		Leukemia Mononuclear	
* Testes [Adenoma TGLS = 7-7]	Interstit Cell Germinal Epith Interstit Cell	Adenoma Atrophy Hyperplasia	Marked Moderate

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

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Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 5

TRT#: 1

SEX: Male

DAY ON TEST: 661

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26487

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
		Pheochromocytoma Benign	Multiple
* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Mild
* Kidney	Renal Tubule	Degeneration	Marked
	Pelvis, Transit Epithe	Hyperplasia	Minimal
		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Marked
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 10-4]		
* Lung	Alveolar Epith	Fibrosis	Mild
	Alveolar Epith	Infiltration Cellular	Histiocyte, Moderate
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 14-3]		
Lymph Node	Deep Cervical	Leukemia Mononuclear	
	Iliac	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
	Thoracic	Leukemia Mononuclear	

Note: no axillary In choice.

[Leukemia Mononuclear TGLS = 4-15]

[Leukemia Mononuclear TGLS = 13-17]

* PROTOCOL REQUIRED TISSUE

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Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 5

TRT#: 1

SEX: Male

DAY ON TEST: 661

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26487

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 12-16]			
[Leukemia Mononuclear TGLS = 3-14]			
[Leukemia Mononuclear TGLS = 7-12]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-13]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-11]			
* Pituitary Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-8]			
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
[Fibrosis TGLS = 9-12]			
[Leukemia Mononuclear TGLS = 8-12]			
* Testes		Hemorrhage	Moderate
[Hemorrhage TGLS = 6-7]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

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Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 6	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 547 HISTO: 26488
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Brain		Hemorrhage	Minimal
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 6-5]			
* Liver		Vacuolization Cytoplasmic	Marked
[Vacuolization Cytoplasmic TGLS = 5-4]			
* Lung		Hemorrhage	Minimal
[Hemorrhage TGLS = 4-3]			
Lymph Node	Renal	Hemorrhage	Minimal
[Hemorrhage TGLS = 7-12]			
* Lymph Node, Mesenteric		Hemorrhage	Mild
* Nose		Foreign Body	
		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Stomach, Forestomach		Hyperplasia	Marked
		Inflammation	Suppurative, Marked
		Ulcer	Marked
[Hyperplasia TGLS = 8,12,13-14+15+16]			
[Inflammation TGLS = 12,13-14+16]			

* PROTOCOL REQUIRED TISSUE

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Species/Strain: Rat/F 344/N

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Date Report Requested: 10/20/2014
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First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 6	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 547 HISTO: 26488
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ORGAN AND ACCOUNTABLE SITE STATUS

[Ulcer TGLS = 8,12,13-14+15+16] * Stomach, Glandular	Inflammation Ulcer	Suppurative, Marked Marked
[Inflammation TGLS = 11-13] [Ulcer TGLS = 11-13]		

PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma
CONTRIBUTORY CAUSE OF DEATH	- Stomach;Forestomach Ulcer;Stomach;Glandular Ulcer

* PROTOCOL REQUIRED TISSUE

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Test Compound: Tetrahydrofuran

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Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 7	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Natural Death	DAY ON TEST: 573 HISTO: 26489
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea			

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy	Minimal Chronic, Mild
* Larynx		Foreign Body Inflammation	Suppurative, Mild
* Liver		Leukemia Mononuclear	
* Lung		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage Leukemia Mononuclear	Mild
[Hemorrhage TGLS = 6-2]			
[Leukemia Mononuclear TGLS = 6-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Hemorrhage	Minimal
[Hemorrhage TGLS = 4,5-11+12]			
* Pituitary Gland		Cyst Hemorrhage	Marked Marked
[Cyst TGLS = 3-8]			
[Hemorrhage TGLS = 3-8]			
* Preputial Gland		Inflammation	Suppurative, Moderate
[Inflammation TGLS = 2-7]			

* PROTOCOL REQUIRED TISSUE

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Date Report Requested: 10/20/2014
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First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 7	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Natural Death	DAY ON TEST: 573 HISTO: 26489
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ORGAN AND ACCOUNTABLE SITE STATUS			
* Prostate		Inflammation	Suppurative, Moderate
* Spleen		Fibrosis Leukemia Mononuclear	Mild
[Fibrosis TGLS = 7-14]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 8,9-7]			
* Urinary Bladder		Hemorrhage	Marked
[Hemorrhage TGLS = 10-8]			

PRIMARY CAUSE OF DEATH	- Pituitary Gland Cyst
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* PROTOCOL REQUIRED TISSUE

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CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 8	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 26490
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Brain	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	Mesentery
* Nose	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Cyst	Marked
	Pelvis, Transit Epithe	Hyperplasia	Mild
	Renal Tubule	Hyperplasia	Moderate
		Nephropathy	Chronic, Marked
Note: focal tubular epith proliferation near cyst (see arrow)interpreted as marked hyperplasia. Another focus within ink circle, also coded as hyperplasia. [Cyst TGLS = 9-5] [Nephropathy TGLS = 4-5]			
* Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 3-4]	
* Lung	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
		Leukemia Mononuclear	
Lymph Node	Renal	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 7-13]	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

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Species/Strain: Rat/F 344/N

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Date Report Requested: 10/20/2014

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First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 8	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 26490
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ORGAN AND ACCOUNTABLE SITE STATUS

* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
* Prostate	Epithelium	Hyperplasia	Minimal
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 8-14]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 5,6-7+12]			
* Thymus		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-2]			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 9	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 26491
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Adrenal Medulla	* Lymph Node, Mediastinal
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OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
Blood Vessel		Mineralization	Marked
* Heart		Cardiomyopathy	Moderate
		Mineralization	Marked
* Intestine Large, Cecum		Ulcer	Marked
[Ulcer TGLS = 7-12]			
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
	Renal Tubule	Mineralization	Marked
		Nephropathy	Chronic, Marked
Note: multifocal marked tubular hyperplasia; see ink circle and dot on slide 5.			
[Nephropathy TGLS = 5-5]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-4]			
* Lung	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Nose		Inflammation	Suppurative, Moderate
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Preputial Gland		Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:40
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 9	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 26491
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ORGAN AND ACCOUNTABLE SITE STATUS			
* Skin [Ulcer TGLS = 1-13]		Ulcer	Mild
* Spleen [Fibrosis TGLS = 4-11]		Fibrosis Leukemia Mononuclear	Mild
* Stomach, Glandular		Mineralization	Marked
* Testes [Adenoma TGLS = 2-7]	Interstit Cell Germinal Epith	Adenoma Atrophy	Marked

PRIMARY CAUSE OF DEATH	-
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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 10

TRT#: 1

SEX: Male

DAY ON TEST: 660

DOSE: CONTROL

DISP: Natural Death

HISTO: 26492

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|---------------------------|--------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Bone Marrow | * Epididymis | * Esophagus | * Intestine Small, Duodenum |
| * Islets, Pancreatic | * Larynx | * Liver | * Lymph Node, Bronchial |
| * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric | * Mammary Gland |
| * Nose | * Pancreas | * Preputial Gland | * Prostate |
| * Salivary Glands | * Seminal Vesicle | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Trachea |
| * Urinary Bladder | | | |

MISSING

- * Parathyroid Gland

AUTO PRECLUDES DIAG.

- | | | | |
|--------------------------|---------------------------|--------------------------|----------------------------|
| * Intestine Large, Cecum | * Intestine Large, Rectum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
|--------------------------|---------------------------|--------------------------|----------------------------|

OBSERVATIONS

- | | | | |
|--------------------------|---------------------------|-------------------|---------------|
| * Brain | | Hemorrhage | Moderate |
| * Heart | | Cardiomyopathy | Minimal |
| * Intestine Large, Colon | | Parasite Metazoan | |
| * Kidney | | Nephropathy | Chronic, Mild |
| * Lung | | Hemorrhage | Mild |
| * Pituitary Gland | | Cyst | Marked |
| [Cyst TGLS = 1-8] | | | |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| * Thyroid Gland | Follicular Cel | Carcinoma | |
| [Carcinoma TGLS = 2-2] | | | |

PRIMARY CAUSE OF DEATH

- Pituitary Gland Cyst

CONTRIBUTORY CAUSE OF DEATH

- Brain Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 11

TRT#: 1

SEX: Male

DAY ON TEST: 526

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26493

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Spleen	* Testes	* Thymus
* Thyroid Gland	Tissue NOS	* Trachea	* Urinary Bladder

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Brain	Ventricle	Hydrocephalus	Moderate
	Meninges	Hyperplasia	Moderate
	[Hydrocephalus TGLS = 7-1]		
* Kidney		Nephropathy	Chronic, Moderate
	[Nephropathy TGLS = 3-5]		
* Larynx		Foreign Body	
		Inflammation	Suppurative, Moderate
* Liver		Vacuolization Cytoplasmic	Mild
	[Vacuolization Cytoplasmic TGLS = 4-4]		
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Moderate
	[Hemorrhage TGLS = 1-3]		
	[Hyperplasia TGLS = 8-12]		
* Lym Node Mand			
	Note: mandibular LN is on slide 13; normal microscopically.		
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 2-8]		
* Skin		Schwannoma Malignant	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:40
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 11	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 526 HISTO: 26493
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ORGAN AND ACCOUNTABLE SITE STATUS

[Schwannoma Malignant TGLS = 5-11]

* Stomach, Forestomach

Hyperplasia
Inflammation
Ulcer
Inflammation

Mild
Suppurative, Moderate
Marked
Suppurative, Moderate

* Stomach, Glandular

PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma
CONTRIBUTORY CAUSE OF DEATH	- Brain Ventricle Hydrocephalus

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 12

TRT#: 1

SEX: Male

DAY ON TEST: 649

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26494

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Marked
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Necrosis	Marked
* Islets, Pancreatic		Adenoma	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Minimal
[Leukemia Mononuclear TGLS = 2-5]			
* Liver		Leukemia Mononuclear	
	Hepatocyte	Necrosis	Moderate
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-3]			
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-13]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-6]			
* Nose		Foreign Body	
	Respirat Epith	Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:40
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 12	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 649 HISTO: 26494
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ORGAN AND ACCOUNTABLE SITE STATUS

Note: lesions in xs 1 and 2 assoc with fb.		Inflammation	Suppurative, Moderate
* Skin		Hyperkeratosis Inflammation	Marked Suppurative, Marked
[Hyperkeratosis TGLS = 7-11]			
[Inflammation TGLS = 7-11]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-12]			
* Stomach, Forestomach		Hyperplasia Squamous Cell Papilloma Adenoma	Moderate
* Testes	Interstit Cell		
[Adenoma TGLS = 6-7]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 13

TRT#: 1

SEX: Male

DAY ON TEST: 422

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26495

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-11]			
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

CONTRIBUTORY CAUSE OF DEATH - Liver Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 14

TRT#: 1

SEX: Male

DAY ON TEST: 705

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26496

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Spleen	* Stomach, Glandular
* Testes	* Thymus	* Thyroid Gland	* Trachea

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Marked
* Kidney	Pelvis, Transit Epithe	Hyperplasia Nephropathy	Minimal Chronic, Marked
	[Nephropathy TGLS = 7-5+13]		
* Liver		Hepatodiaphragmatic Nodule	
	[Hepatodiaphragmatic Nodule TGLS = 5-12]		
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial GI			
	Note: preputial gland is cystic (tgl 4); since we have been told by NTP not to dx cyst of preputial gland, tgl 4 is NCL.		
* Prostate		Inflammation	Suppurative, Moderate
* Skin	Subcut Tiss	Fibroma	
	Note: this mass is surrounded by mammary gland, but no glandular tissue clearly within mass. Diff Dx fibroadenoma.		
	Note: tgl 2 is normal skel muscle, fat, conn tissue. NCL.		
	[Fibroma TGLS = 1-15]		
* Stomach, Forestomach		Hyperkeratosis Hyperplasia Ulcer	Moderate Moderate Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 14

TRT#: 1

SEX: Male

DAY ON TEST: 705

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26496

ORGAN AND ACCOUNTABLE SITE STATUS

[Hyperkeratosis TGLS = 8-14]

[Hyperplasia TGLS = 8-14]

[Ulcer TGLS = 8-14]

Tongue

Squamous Cell Papilloma

[Squamous Cell Papilloma TGLS = 3-11]

* Urinary Bladder

Transit Epithe

Hyperplasia

Mild

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

CONTRIBUTORY CAUSE OF DEATH

- Stomach;Forestomach Ulcer

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 15

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26497

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Liver	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Hemorrhage	Mild
		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 5-5]			
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
* Stomach, Forestomach		Hyperkeratosis	Moderate
		Hyperplasia	Moderate
		Ulcer	Mild
* Stomach, Glandular		Mineralization	Moderate
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[Adenoma TGLS = 1-7]			
[Atrophy TGLS = 2-7]			

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 16

TRT#: 1

SEX: Male

DAY ON TEST: 635

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26498

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Carcinoma	
[Carcinoma TGLS = 3-11]			
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 4-5]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
[Hyperplasia TGLS = 9-3]			
[Infiltration Cellular TGLS = 9-3]			
Lymph Node	Renal	Pigmentation	Moderate
[Pigmentation TGLS = 7-12]			
* Mammary Gland		Galactocele	Moderate
Note: tgl's 6 and 8 were describing the same lesion, i.e, the galactocele on slide 11.			
[Galactocele TGLS = 6,8-11]			
* Nose	Respirat Epith	Foreign Body	
		Hyperplasia	Moderate
		Inflammation	Suppurative, Moderate
Note: hyperplasia, inflam focal, assoc w/ fb in xs2.			
* Spleen		Accessory Spleen	
[Accessory Spleen TGLS = 5-4]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:40
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 16	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 635 HISTO: 26498
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ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Forestomach		Hyperkeratosis	Mild
		Hyperplasia	Mild
* Testes	Interstit Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[Adenoma TGLS = 1,10-12]			
[Atrophy TGLS = 2-7]			

PRIMARY CAUSE OF DEATH - Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 17

TRT#: 1

SEX: Male

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26499

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Moderate
		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Marked
	[Nephropathy TGLS = 4-5+13]		
* Liver		Degeneration	Cystic, Mild
	[Leukemia Mononuclear TGLS = 3-4]	Leukemia Mononuclear	
* Lung	Alveolar Epith	Hyperplasia	Minimal
	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-7]		
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
* Skin		Hyperkeratosis	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:40
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 17	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 26499
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ORGAN AND ACCOUNTABLE SITE STATUS

Note: lesions are on tail, as indicated in tgl 1. NEED A SKIN SITE OF TAIL (VS. LIP, PINNA, OR NIPPLE). [Hyperkeratosis TGLS = 1-11] [Hyperplasia TGLS = 1-11]	Hyperplasia	Moderate
* Spleen [Fibrosis TGLS = 6-12] [Leukemia Mononuclear TGLS = 5-12]	Fibrosis Leukemia Mononuclear	Mild
* Testes * Urin Bladder Note: tgl 7 is a large mass of coagulated seminal vesicular fluid. NCL .	Germinal Epith Atrophy	Moderate

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 18

TRT#: 1

SEX: Male

DAY ON TEST: 453

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26500

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Liver	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Pituitary Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Brain		Developmental Malformation	
Note: Part of cortex is missing, covered by meninges. Does not appear to involve ventricles. [Developmental Malformation TGLS = 2-1]			
* Heart		Cardiomyopathy	Mild
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Pancreas		Atrophy	Mild
Note: need to add acinus to sites for pancreas			
* Preputial Gland		Carcinoma	
[Carcinoma TGLS = 1-12]			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

- Preputial Gland Carcinoma

Animal Note: tgl 3 is not In, is prostate. Must be remnant left after removal of prostate.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 19

TRT#: 1

SEX: Male

DAY ON TEST: 244

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26501

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Bone | * Bone Marrow | * Brain |
| * Epididymis | * Esophagus | * Heart | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic | * Kidney | * Larynx |
| * Liver | * Lymph Node, Bronchial | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric |
| * Mammary Gland | * Pancreas | * Parathyroid Gland | * Pituitary Gland |
| * Preputial Gland | * Prostate | * Salivary Glands | * Seminal Vesicle |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Testes | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

INSUFFICIENT TISSUE

- * Adrenal Medulla

OBSERVATIONS

- | | | | |
|---|----------------|--------------|-----------------------|
| * Lung | | Hemorrhage | Minimal |
| * Lymph Node, Mandibular | | Hyperplasia | Lymphoid, Moderate |
| Note: probly related to ulcerated hard palate.
[Hyperplasia TGLS = 1-11] | | | |
| * Nose | Nasolacrim Dct | Inflammation | Suppurative, Minimal |
| Oral Mucosa | | Inflammation | Suppurative, Moderate |
| | | Ulcer | Moderate |
| Note: ulcer on hard palate ventral to xs1; possibly sequel to malocclusion. | | | |

PRIMARY CAUSE OF DEATH

- Oral Mucosa Ulcer

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 20

TRT#: 1

SEX: Male

DAY ON TEST: 406

DOSE: CONTROL

DISP: Natural Death

HISTO: 26502

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	Skeletal Muscle
* Skin	Spinal Cord	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Brain		Hemorrhage	Minimal
* Kidney		Nephropathy	Chronic, Minimal
* Lymph Node, Mandibular		Hemorrhage	Minimal
[Hemorrhage TGLS = 3-7]			
Mesentery	Fat	Inflammation	Granulomatous, Moderate
[Inflammation TGLS = 2-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Cyst TGLS = 4-8]		Cyst	Marked
* Preputial Gland		Adenoma	
[Adenoma TGLS = 1-7]			

PRIMARY CAUSE OF DEATH

- UNCERTAIN

CONTRIBUTORY CAUSE OF DEATH

- Brain Hemorrhage;Pituitary Gland Pars Distalis Adenoma;Pituitary Gland Cyst

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 21

TRT#: 1

SEX: Male

DAY ON TEST: 514

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26503

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Glandular	* Testes	* Thymus
* Trachea	* Urinary Bladder		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Brain		Hemorrhage	Minimal
		Hydrocephalus	Marked
* Kidney		Nephropathy	Chronic, Mild
* Lung		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Stomach, Forestomach		Hyperkeratosis	Mild
[Hyperkeratosis TGLS = 4-11]			
* Thyroid Gland	Follicular Cel	Adenoma	
[Adenoma TGLS = 2-2]			

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH - Brain Hemorrhage;Brain Hydrocephalus

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 22

TRT#: 1

SEX: Male

DAY ON TEST: 649

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26504

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Testes	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
		Pheochromocytoma Benign	
* Brain	Ventricle	Hydrocephalus	Moderate
* Kidney		Nephropathy	Chronic, Marked
* Liver		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
		[Hepatodiaphragmatic Nodule TGLS = 2-4]	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Galactoceles	Marked
		[Galactoceles TGLS = 5-12]	
* Pituitary Gland	Pars Distalis	Adenoma	
		[Adenoma TGLS = 3-8]	
* Skin	Epidermis	Cyst	Moderate
		[Cyst TGLS = 1-11]	
* Spleen		Leukemia Mononuclear	
* Stomach, Glandular		Mineralization	Minimal
* Thymus		Thymoma Benign	
* Thyroid Gland	C Cell	Adenoma	
Zymbal's Gland		Carcinoma	
		[Carcinoma TGLS = 4-13]	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:40
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 22

TRT#: 1

SEX: Male

DAY ON TEST: 649

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26504

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

- Zymbal's Gland Carcinoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 23

TRT#: 1

SEX: Male

DAY ON TEST: 621

DOSE: CONTROL

DISP: Natural Death

HISTO: 26505

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex
* Epididymis
* Larynx
* Pancreas
* Salivary Glands
* Stomach, Glandular
* Urinary Bladder

Blood Vessel
* Esophagus
* Lymph Node, Mesenteric
* Parathyroid Gland
* Seminal Vesicle
* Thymus

* Bone
* Intestine Large, Rectum
* Mammary Gland
* Preputial Gland
* Skin
* Thyroid Gland

* Brain
* Islets, Pancreatic
* Nose
* Prostate
* Stomach, Forestomach
* Trachea

MISSING

* Pituitary Gland

AUTO PRECLUDES DIAG.

* Intestine Large, Colon

* Intestine Small, Duodenum

* Intestine Small, Ileum

* Intestine Small, Jejunum

OBSERVATIONS

* Adrenal Medulla

Hyperplasia
Moderate

* Bone Marrow

Pheochromocytoma Benign

* Heart

Leukemia Mononuclear

* Intestine Large, Cecum

Mesothelioma Malignant

Metastatic (Pleura)

* Kidney

Parasite Metazoan

Note: kidneys very autolyzed.

Nephropathy

Chronic, Mild

* Liver

Degeneration

Cystic, Moderate

Bile Duct

Hyperplasia

Moderate

* Lung

Leukemia Mononuclear

* Lymph Node, Bronchial

Leukemia Mononuclear

* Lymph Node, Mandibular

Leukemia Mononuclear

* Lymph Node, Mediastinal

Leukemia Mononuclear

[Mesothelioma Malignant TGLS = 2-2]

Mesothelioma Malignant

Metastatic (Pleura)

Mesentery

Fat

Inflammation

Granulomatous, Marked

Fat

Necrosis

Moderate

[Inflammation TGLS = 4-13]

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:40
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 23	TRT#: 1	SEX: Male	DAY ON TEST: 621
	DOSE: CONTROL	DISP: Natural Death	HISTO: 26505

ORGAN AND ACCOUNTABLE SITE STATUS

[Necrosis TGLS = 4-13]			
Pleura		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 1-2+3+12]			
* Spleen		Leukemia Mononuclear	
		Necrosis	Marked
[Leukemia Mononuclear TGLS = 5,6-11]			
[Necrosis TGLS = 6-11]			
* Testes	Germinal Epith	Atrophy	Marked
[Atrophy TGLS = 3-7]			

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

Animal Note: slides 14 and 15 are additional sections of testis and epididymis; no tumor found.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:40
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 24

TRT#: 1
DOSE: CONTROL

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 563
HISTO: 26506

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Brain	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Marked
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Lumbar	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-12]			
[Leukemia Mononuclear TGLS = 4-11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-7]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:40
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 24

TRT#: 1

SEX: Male

DAY ON TEST: 563

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26506

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 25

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26507

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Nose	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Pheochromocytoma Benign	Multiple
Blood Vessel		Mineralization	Marked
* Bone Marrow		Leukemia Mononuclear	
* Kidney	Pelvis, Transit Epithe Renal Tubule	Hyperplasia	Minimal
		Hyperplasia	Marked
		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 7-5]			
* Liver	Bile Duct	Degeneration	Cystic, Mild
		Hyperplasia	Moderate
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-4]			
* Lung		Hemorrhage	Mild
		Leukemia Mononuclear	
[Hemorrhage TGLS = 2-11]			
[Leukemia Mononuclear TGLS = 8,9-3]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:40
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 25	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 729 HISTO: 26507
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ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Fibrosis TGLS = 5-13] [Leukemia Mononuclear TGLS = 4-12]		Fibrosis Leukemia Mononuclear	Moderate
* Stomach, Glandular		Mineralization	Moderate
* Testes [Adenoma TGLS = 3-7]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:40
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 26 **TRT#:** 1 **SEX:** Male **DAY ON TEST:** 602
DOSE: CONTROL **DISP:** Moribund Sacrifice **HISTO:** 26508

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Moderate
* Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-6]			
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Skin		Hyperkeratosis	Marked
[Hyperkeratosis TGLS = 3-12]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-11]			
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 27

TRT#: 1

SEX: Male

DAY ON TEST: 635

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26509

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Kidney		Cyst	Marked
		Fibrosis	Moderate
	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Chronic, Marked
[Cyst TGLS = 5-13]			
[Nephropathy TGLS = 4-5]			
* Liver		Angiectasis	Moderate
		Degeneration	Cystic, Moderate
[Angiectasis TGLS = 7-11]			
[Degeneration TGLS = 7-11]			
Mesentery	Fat	Necrosis	Mild
Note: necrotic fat is adjacent to epididymis; put under mesenteric fat because peri- epididymal fat not available as site.			
[Necrosis TGLS = 8-14]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Fibrosis	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:40
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 27	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 635 HISTO: 26509
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ORGAN AND ACCOUNTABLE SITE STATUS

[Fibrosis TGLS = 3-12]			
* Stomach, Forestomach		Hyperplasia	Mild
* Testes	Germinal Epith	Atrophy	Marked
[Atrophy TGLS = 2-7]			

PRIMARY CAUSE OF DEATH	- Kidney Nephropathy
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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 28

TRT#: 1

SEX: Male

DAY ON TEST: 563

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26510

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Brain	Ventricle	Hydrocephalus	Moderate
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 5-5]			
Lymph Node	Iliac	Pigmentation	Mild
	Lumbar	Pigmentation	Moderate
Note: pigment in lumbar ln is yellow, not tattoo ink. Probly related to mesenteric fat necrosis.			
Note: TATTOO INK AND YELLOW PIGMENT IN ILIAC LN. YELLOW PIGMENT MAY BE RELATRD TO MESENERIC F			
[Pigmentation TGLS = 7-13]			
[Pigmentation TGLS = 6-12]			
Mesentery	Fat	Inflammation	Granulomatous, Moderate
	Fat	Necrosis	Moderate
[Inflammation TGLS = 3-16]			
[Necrosis TGLS = 3-16]			
* Pancreas		Atrophy	Minimal
Note: slide 14(tgl 8)contains only normal pancreas.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Preputial Gland		Inflammation	Chronic, Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:40
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 28	TRT#: 1	SEX: Male	DAY ON TEST: 563
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 26510

ORGAN AND ACCOUNTABLE SITE STATUS

[Inflammation TGLS = 2-7]			
* Spleen		Accessory Spleen	
[Accessory Spleen TGLS = 4-11]			
* Stomach, Forestomach		Hyperplasia	Moderate
		Inflammation	Suppurative, Moderate
		Ulcer	Marked
[Hyperplasia TGLS = 9-15]			
[Inflammation TGLS = 9-15]			
[Ulcer TGLS = 9-15]			

PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma
CONTRIBUTORY CAUSE OF DEATH	- Brain Ventricle Hydrocephalus;Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:40

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 29

TRT#: 1

SEX: Male

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26511

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Marked
* Kidney	Pelvis, Transit Epithe Renal Tubule	Hyperplasia Hyperplasia Nephropathy	Moderate Marked Chronic, Marked
[Nephropathy TGLS = 8-5+12]			
* Liver		Degeneration Leukemia Mononuclear	Cystic, Mild
[Leukemia Mononuclear TGLS = 9-4]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 6-13]			
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Preputial Gland		Hyperplasia Inflammation	Moderate Suppurative, Moderate
* Spleen		Fibrosis Leukemia Mononuclear	Moderate
[Fibrosis TGLS = 7-11]			
* Testes	Interstit Cell Germinal Epith	Adenoma Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 29

TRT#: 1

SEX: Male

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26511

ORGAN AND ACCOUNTABLE SITE STATUS

Artery

Inflammation

Moderate

[Adenoma TGLS = 5-7]

[Atrophy TGLS = 4-7]

* Thyroid Gland

C Cell

Carcinoma

[Carcinoma TGLS = 2-2]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 30

TRT#: 1

SEX: Male

DAY ON TEST: 551

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26512

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	Coagulating Gland	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Brain	Ventricle	Hydrocephalus	Mild
* Kidney		Cyst	Minimal
		Nephropathy	Chronic, Moderate
[Cyst TGLS = 2-5]			
* Larynx	Epithelium	Metaplasia	Squamous, Mild
Note: epith lining right U-cartilage and anterior VP.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Testes	Interstit Cell	Hyperplasia	Minimal
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 31

TRT#: 1

SEX: Male

DAY ON TEST: 729

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26513

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Marked
* Bone Marrow		Leukemia Mononuclear	
* Brain	Ventricle	Hydrocephalus	Marked
* Islets, Pancreatic		Adenoma	
* Kidney	Pelvis, Transit Epithe	Hyperplasia Nephropathy	Minimal Chronic, Marked
[Nephropathy TGLS = 6-5]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Prostate		Inflammation	Suppurative, Moderate
* Skin		Ulcer	Mild
[Ulcer TGLS = 2-12]			
* Spleen		Fibrosis Leukemia Mononuclear	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 31	TRT#: 1	SEX: Male	DAY ON TEST: 729
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 26513

ORGAN AND ACCOUNTABLE SITE STATUS

[Fibrosis TGLS = 7-11]			
[Leukemia Mononuclear TGLS = 4-11]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 3-7]			
* Urinary Bladder		Inflammation	Suppurative, Marked
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 32

TRT#: 1

SEX: Male

DAY ON TEST: 639

DOSE: CONTROL

DISP: Natural Death

HISTO: 26514

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mediastinal	* Mammary Gland	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Larynx		Foreign Body	
	Glands	Inflammation	Suppurative, Moderate
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose		Foreign Body	
	Globet Cell, Respirat Epith	Hypertrophy	Moderate
Note: lesions assoc with fb in xs2.			
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Skin		Ulcer	Marked
[Ulcer TGLS = 6-7]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 32	TRT#: 1	SEX: Male	DAY ON TEST: 639
	DOSE: CONTROL	DISP: Natural Death	HISTO: 26514

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Leukemia Mononuclear TGLS = 1-11]	Leukemia Mononuclear
* Stomach, Forestomach Note: step sections of forestomach lesion, no change. Apparently an epith inclusion cyst/diverticulum. [Diverticulum TGLS = 5-8]	Diverticulum

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 33

TRT#: 1

SEX: Male

DAY ON TEST: 73

DOSE: CONTROL

DISP: Accidentally Killed

HISTO: 26515

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Bone	Maxilla, Turbinate	Fracture	
	Maxilla, Turbinate	Hemorrhage	Marked
Note: very likely got nose slammed in cage lid when attempting escape; nose readable but fracture evident.			
	[Fracture TGLS = 3-9+10]		
	[Hemorrhage TGLS = 3-9+10]		
* Kidney	Renal Tubule	Mineralization	Mild
* Lung		Hemorrhage	Marked
	[Hemorrhage TGLS = 2-3]		
* Nose		Hemorrhage	Marked
* Thymus		Hemorrhage	Moderate
	[Hemorrhage TGLS = 1-2]		

PRIMARY CAUSE OF DEATH	- Bone Maxilla Turbinate Hemorrhage
CONTRIBUTORY CAUSE OF DEATH	- Bone Maxilla Turbinate Fracture;Nose Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 34

TRT#: 1

SEX: Male

DAY ON TEST: 549

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26516

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Mild
* Lung		Hemorrhage	Minimal
[Hemorrhage TGLS = 3-3]			
Oral Mucosa	Gingival	Cyst	Marked
	Gingival	Foreign Body	
[Cyst TGLS = 7-10]			
[Foreign Body TGLS = 7-10]			
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Fibrosis	Moderate
[Fibrosis TGLS = 5-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 6-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

- Oral Mucosa Gingival Cyst

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 35

TRT#: 1

SEX: Male

DAY ON TEST: 562

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26517

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Brain	Ventricle	Hydrocephalus	Mild
[Hydrocephalus TGLS = 5-1]			
* Kidney		Nephropathy	Chronic, Moderate
* Larynx	Glands	Inflammation	Suppurative, Mild
* Liver		Vacuolization Cytoplasmic	Moderate
[Vacuolization Cytoplasmic TGLS = 4-11]			
* Lung		Hemorrhage	Minimal
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Stomach, Forestomach		Hyperplasia	Marked
		Ulcer	Marked
[Hyperplasia TGLS = 6-8+12]			
[Ulcer TGLS = 6-8+12]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH

- Brain Ventricle Hydrocephalus

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 36

TRT#: 1

SEX: Male

DAY ON TEST: 673

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26518

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Trachea			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Bone Marrow		Histiocytic Sarcoma	
* Intestine Large, Cecum		Histiocytic Sarcoma	
* Intestine Large, Colon		Histiocytic Sarcoma	
* Kidney	Pelvis	Parasite Metazoan	
		Dilatation	Marked
		Histiocytic Sarcoma	
		Nephropathy	Chronic, Mild
[Dilatation TGLS = 14-5]			
[Histiocytic Sarcoma TGLS = 11,12-5]			
* Liver		Degeneration	Cystic, Mild
		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 3-4]			
* Lung		Histiocytic Sarcoma	
Lymph Node	Iliac	Histiocytic Sarcoma	
	Renal	Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 13-12]			
[Histiocytic Sarcoma TGLS = 7-15]			
* Lymph Node, Bronchial		Histiocytic Sarcoma	
* Lymph Node, Mandibular		Histiocytic Sarcoma	
* Lymph Node, Mediastinal		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 2-2]			
* Lymph Node, Mesenteric		Histiocytic Sarcoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 36

TRT#: 1

SEX: Male

DAY ON TEST: 673

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26518

ORGAN AND ACCOUNTABLE SITE STATUS

Mesentery		Histiocytic Sarcoma	
* Pancreas		Histiocytic Sarcoma	
Peritoneum		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 8-14]			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Intermed	Hyperplasia	Marked
* Prostate		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 8-14]			
* Seminal Vesicle		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 8-14]			
* Spleen		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 4,5-11]			
* Stomach, Glandular		Histiocytic Sarcoma	
* Testes	Bilateral, Interstit Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[Adenoma TGLS = 9-7]			
[Atrophy TGLS = 10-7]			
* Thymus		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 2-2]			
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 1-2]			
* Urinary Bladder		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 6-8+13]			

PRIMARY CAUSE OF DEATH - Prostate Histiocytic Sarcoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 37

TRT#: 1

SEX: Male

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26519

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 4-5]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-4]			
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-12]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Inflammation	Granulomatous, Moderate
[Inflammation TGLS = 7-6]			
* Nose		Foreign Body	
	Respirat Epith	Hyperplasia	Minimal
		Inflammation	Suppurative, Mild
Note: hyperplasia, inflam. assoc with fb/			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Fibrosis	Moderate
[Fibrosis TGLS = 3-11]		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 37

TRT#: 1

SEX: Male

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26519

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 2-11]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 38

TRT#: 1

SEX: Male

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26520

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Pancreas	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Testes	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Mandibular	* Preputial Gland
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OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	Multiple
Blood Vessel		Mineralization	Marked
* Bone Marrow		Leukemia Mononuclear	
* Brain		Mineralization	Minimal
* Heart		Mineralization	Moderate
* Kidney	Renal Tubule	Adenoma	
	Pelvis, Transit Epithe	Hyperplasia	Moderate
	Renal Tubule	Mineralization	Marked
		Nephropathy	Chronic, Marked
Note: solid nest includes some basophilic tubular epithelium in focus marked with circle; compare with fig 35 on p. 139 of F344 rat book. Dx adenoma.			
			[Nephropathy TGLS = 4-5+12]
* Liver		Degeneration	Cystic, Mild
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
	Artery	Mineralization	Marked
			[Leukemia Mononuclear TGLS = 6-3]
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Galactocele	Minimal
			[Galactocele TGLS = 2-14]

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 38

TRT#: 1

SEX: Male

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26520

ORGAN AND ACCOUNTABLE SITE STATUS

Mesentery [Necrosis TGLS = 7-15]	Fat	Necrosis	Marked
* Nose		Inflammation	Suppurative, Minimal
* Pituitary Gland [Adenoma TGLS = 1-8]	Pars Distalis	Adenoma	
* Skin		Hyperkeratosis	Marked
		Inflammation	Suppurative, Moderate
		Trichoepithelioma	
		Ulcer	Moderate
[Trichoepithelioma TGLS = 5-13] [Ulcer TGLS = 8-14]			
* Spleen [Leukemia Mononuclear TGLS = 3-11]		Leukemia Mononuclear	
* Stomach, Forestomach		Mineralization	Mild
* Stomach, Glandular		Mineralization	Marked
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 39

TRT#: 1

SEX: Male

DAY ON TEST: 587

DOSE: CONTROL

DISP: Natural Death

HISTO: 26521

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Minimal
* Heart		Cardiomyopathy	Marked
	Atrium	Thrombosis	Marked
Note: leukemia>>endocardial thrombi>>hepatic congestion>>hepatic necrosis. Large bacterial colonies in heart thrombus; significance in PCOD??			
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Leukemia Mononuclear	
	Hepatocyte	Necrosis	Marked
[Leukemia Mononuclear TGLS = 3-4+11+12]			
[Necrosis TGLS = 3,8,9,10-4+11+12]			
* Lung		Hemorrhage	Mild
		Leukemia Mononuclear	
[Hemorrhage TGLS = 2-3]			
[Leukemia Mononuclear TGLS = 2-3]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 39

TRT#: 1

SEX: Male

DAY ON TEST: 587

DOSE: CONTROL

DISP: Natural Death

HISTO: 26521

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 4,5-4]

* Testes

Interstit Cell

Adenoma

[Adenoma TGLS = 6-7]

* Thyroid Gland

Follicular Cel

Adenoma

[Adenoma TGLS = 1-2]

PRIMARY CAUSE OF DEATH

- Heart Atrium Thrombosis

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 40

TRT#: 1

SEX: Male

DAY ON TEST: 723

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26522

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Mammary Gland	* Pancreas
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Hyperplasia	Moderate
		Pheochromocytoma Benign	Multiple
Blood Vessel	Aorta	Mineralization	Marked
* Heart		Mineralization	Marked
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Moderate
	Renal Tubule	Hyperplasia	Marked
	Renal Tubule	Mineralization	Marked
		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 4-5]			
* Larynx	Epithelium	Inflammation	Suppurative, Mild
		Metaplasia	Squamous, Moderate
* Liver		Inflammation	Granulomatous, Mild
[Inflammation TGLS = 3-4]			
* Lung	Alveolar Epith	Infiltration Cellular	Histiocyte, Moderate
	Artery	Mineralization	Marked
[Infiltration Cellular TGLS = 1-3]			
* Lymph Node, Mesenteric		Hemorrhage	Mild
[Hemorrhage TGLS = 5-6]			
* Nose		Inflammation	Suppurative, Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 40

TRT#: 1

SEX: Male

DAY ON TEST: 723

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26522

ORGAN AND ACCOUNTABLE SITE STATUS

* Parathyroid Gland		Hyperplasia	Marked
Peritoneum	Tunica Vaginal	Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 7-7+13]			
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Fibrosis	Moderate
[Fibrosis TGLS = 2-12]			
* Stomach, Forestomach		Mineralization	Marked
* Stomach, Glandular		Mineralization	Marked
* Testes	Germinal Epith	Atrophy	Marked

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

CONTRIBUTORY CAUSE OF DEATH

- Heart Mineralization;Lung Artery Mineralization

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 41

TRT#: 1

SEX: Male

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26523

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Stomach, Forestomach	* Testes	* Thyroid Gland	* Trachea

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Bone Marrow		Leukemia Mononuclear	
* Brain	Ventricle	Hydrocephalus	Moderate
* Islets, Pancreatic		Adenoma	
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
	Renal Tubule	Hyperplasia	Mild
	Renal Tubule	Inflammation	Suppurative, Mild
		Nephropathy	Chronic, Marked

Note: focus of tubular hyperplasia adjacent to arrow.

[Nephropathy TGLS = 11-5]

* Liver		Degeneration	Cystic, Mild
		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	

[Hepatodiaphragmatic Nodule TGLS = 12-12]

* Lung	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
		Leukemia Mononuclear	

Note: rechecked wet tissue and lung block; no nodule or mass found in diaph. or other lobe.

Lymph Node	Iliac	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	

[Leukemia Mononuclear TGLS = 13-13]

[Leukemia Mononuclear TGLS = 14-14]

[Leukemia Mononuclear TGLS = 10-15]

* Lymph Node, Bronchial		Leukemia Mononuclear	
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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 41

TRT#: 1

SEX: Male

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26523

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 4-2]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Galactoceles	Marked
[Galactoceles TGLS = 2-16]			
* Nose		Foreign Body	
* Pancreas		Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-8]			
* Prostate		Inflammation	Suppurative, Marked
* Skin		Inflammation	Suppurative, Marked
[Inflammation TGLS = 7-11]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8,9-17]			
* Stomach, Glandular		Mineralization	Moderate
* Thymus		Leukemia Mononuclear	
* Urinary Bladder	Transit Epithe	Hyperplasia	Moderate
		Inflammation	Suppurative, Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 42

TRT#: 1

SEX: Male

DAY ON TEST: 683

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26524

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Brain	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	

MISSING

* Lymph Node, Mediastinal

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
* Kidney	Pelvis	Dilatation	Marked
	Renal Tubule	Mineralization	Marked
		Nephropathy	Chronic, Marked
Note: focal hyperplasia of tubular epith adjacent to inkspot.			
			[Dilatation TGLS = 10-5]
			[Nephropathy TGLS = 3,4-5]
* Liver		Leukemia Mononuclear	
			[Leukemia Mononuclear TGLS = 2-4]
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose		Inflammation	Suppurative, Mild
	Respirat Epith	Metaplasia	Squamous, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
		Cyst	Marked
			[Adenoma TGLS = 1-8]
* Prostate		Inflammation	Suppurative, Marked
* Seminal Vesicle		Congestion	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 42

TRT#: 1

SEX: Male

DAY ON TEST: 683

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26524

ORGAN AND ACCOUNTABLE SITE STATUS

[Congestion TGLS = 7-8]

* Spleen

Fibrosis

Marked

Leukemia Mononuclear

[Fibrosis TGLS = 6-11]

[Leukemia Mononuclear TGLS = 5-11]

* Testes

Interstit Cell

Hyperplasia

Moderate

* Urinary Bladder

Hemorrhage

Marked

[Hemorrhage TGLS = 8-12]

PRIMARY CAUSE OF DEATH

- Urinary Bladder Hemorrhage

CONTRIBUTORY CAUSE OF DEATH

- Kidney Pelvis Dilatation;Prostate Inflammation;Seminal Vesicle Congestion

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 43

TRT#: 1

SEX: Male

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26525

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Marked
* Lung		Hemorrhage	Minimal
* Mammary Gland		Galactoceles	Marked
[Galactoceles TGLS = 1-12]			
Mesentery	Fat	Hemorrhage	Marked
[Hemorrhage TGLS = 3-14]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Prostate	Epithelium	Hyperplasia	Mild
* Skin		Hyperplasia	Marked
		Inflammation	Suppurative, Marked
		Inflammation	Granulomatous, Moderate
[Hyperplasia TGLS = 5-13]			
[Inflammation TGLS = 5-13]			
[Inflammation TGLS = 6-11]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 4-7]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 43

TRT#: 1

SEX: Male

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26525

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 44

TRT#: 1

SEX: Male

DAY ON TEST: 508

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26526

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Mammary Gland	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Intestine Large, Cecum		Parasite Metazoan	
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Minimal
* Larynx	Glands	Inflammation	Suppurative, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Hemorrhage	Minimal
		Leukemia Mononuclear	
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-12]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Globet Cell, Respirat Epith	Hypertrophy	Minimal
* Pancreas		Atrophy	Mild
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
[Fibrosis TGLS = 1-11]			
[Leukemia Mononuclear TGLS = 2-11]			

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 44

TRT#: 1

SEX: Male

DAY ON TEST: 508

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26526

ORGAN AND ACCOUNTABLE SITE STATUS

CONTRIBUTORY CAUSE OF DEATH

- Liver Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 45

TRT#: 1

SEX: Male

DAY ON TEST: 546

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26527

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	Lymph Node	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Bone Marrow		Hyperplasia	Reticulum Cell, Mild
* Kidney		Nephropathy	Chronic, Mild
* Lung	Mediastinum	Fibrosis	Moderate
Lymph Node			
Note: renal In is normal at micro. Slide 11.			
Pleura		Inflammation	Chronic, Mild
* Preputial Gland		Carcinoma	
[Carcinoma TGLS = 5-12]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-7]			

PRIMARY CAUSE OF DEATH

- Preputial Gland Carcinoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 46

TRT#: 1

SEX: Male

DAY ON TEST: 621

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26528

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Nose	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Marked
* Liver		Leukemia Mononuclear	
	Hepatocyte	Necrosis	Mild
		Vacuolization Cytoplasmic	Moderate
[Leukemia Mononuclear TGLS = 9-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12-3]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 14-15]			
[Leukemia Mononuclear TGLS = 6-13]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-6]			
Mesentery		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-14]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 46

TRT#: 1

SEX: Male

DAY ON TEST: 621

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26528

ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas		Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-8]			
* Preputial Gland		Inflammation	Suppurative, Mild
* Skin		Hyperkeratosis	Marked
		Hyperplasia	Marked
[Hyperkeratosis TGLS = 1-11]			
[Hyperplasia TGLS = 1-11]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7,8-12]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 13-7]			
* Thymus		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-2]			

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 47

TRT#: 1

SEX: Male

DAY ON TEST: 663

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26529

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Epididymis
* Esophagus	* Heart	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Glandular
* Testes	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Mild
[Pheochromocytoma Benign TGLS = 9-5]			
* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Minimal
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Moderate
* Larynx	Epithelium	Hyperplasia	Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 8-13]			
* Pancreas		Atrophy	Mild
Penis		Inflammation	Suppurative, Moderate
[Inflammation TGLS = 1-14]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Marked
* Skin		Inflammation	Suppurative, Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 47

TRT#: 1

SEX: Male

DAY ON TEST: 663

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26529

ORGAN AND ACCOUNTABLE SITE STATUS

[Inflammation TGLS = 6-15]

[Keratoacanthoma TGLS = 5-11]

* Spleen

[Leukemia Mononuclear TGLS = 3-12]

* Stomach, Forestomach

* Urin Bladder

Note: tgl 2 is a solid mass of congealed seminal vesicular fluid.

Keratoacanthoma

Leukemia Mononuclear

Hyperkeratosis

Moderate

Hyperplasia

Moderate

PRIMARY CAUSE OF DEATH

- Skin Keratoacanthoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 48

TRT#: 1

SEX: Male

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26530

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Brain	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Nose	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Marked
		Thrombosis	Moderate
* Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-4]		
* Lung		Hemorrhage	Mild
		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-2]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland	Epithelium	Hyperplasia	Moderate
	[Hyperplasia TGLS = 1-12]		
* Pancreas		Atrophy	Mild
	[Atrophy TGLS = 10-11]		
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 48

TRT#: 1

SEX: Male

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26530

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 3-8]

* Preputial Gland

Adenoma

[Adenoma TGLS = 1-12]

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 6,7,8-11]

* Testes

Interstit Cell

Adenoma

Germinal Epith

Atrophy

Marked

[Adenoma TGLS = 9-7]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 49

TRT#: 1

SEX: Male

DAY ON TEST: 683

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26531

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Marked
* Adrenal Medulla		Hyperplasia	Marked
* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Moderate
[Hemorrhage TGLS = 5-1]			
* Kidney	Renal Tubule	Hyperplasia	Moderate
		Nephropathy	Chronic, Moderate
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
		Hemorrhage	Marked
[Adenoma TGLS = 1-8]			
[Hemorrhage TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 49	TRT#: 1	SEX: Male	DAY ON TEST: 683
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 26531

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 4-7]

PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear
CONTRIBUTORY CAUSE OF DEATH	- Brain Hemorrhage;Pituitary Gland Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 50

TRT#: 1

DOSE: CONTROL

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 554

HISTO: 26532

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Nose	* Pancreas	* Pituitary Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-4]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 7-3]		
Lymph Node	Renal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-12]		
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Preputial Gland		Carcinoma	
	[Carcinoma TGLS = 1-14]		
* Spleen		Accessory Spleen	
		Leukemia Mononuclear	
	[Accessory Spleen TGLS = 3-11]		
	[Leukemia Mononuclear TGLS = 4-13]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 50	TRT#: 1	SEX: Male	DAY ON TEST: 554
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 26532

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes [Adenoma TGLS = 2-7]	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 201

TRT#: 3

SEX: Male

DAY ON TEST: 639

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26783

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Epididymis		Inflammation	Granulomatous, Moderate
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Hepatocellular Adenoma	
[Hepatocellular Adenoma TGLS = 3-13]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Marked
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 1-11+12]			
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild
[Adenoma TGLS = 2-7]			

PRIMARY CAUSE OF DEATH

- Skin Subcut Tiss Fibroma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 202

TRT#: 3

DOSE: 200 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 26784

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Pancreas
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Islets, Pancreatic		Carcinoma	
[Carcinoma TGLS = 9-13]			
* Kidney	Pelvis, Transit Epithe	Cyst	Marked
		Hyperplasia	Mild
		Nephropathy	Chronic, Marked
[Cyst TGLS = 6-11]			
[Nephropathy TGLS = 5-5]			
* Liver		Degeneration	Cystic, Marked
* Lung	Alveolar Epith	Fibrosis	Mild
Lymph Node	Renal	Hemorrhage	Moderate
[Hemorrhage TGLS = 10-14]			
* Lymph Node, Bronchial		Fibrosis	Mild
* Mammary Gland		Galactoceles	Marked
[Galactoceles TGLS = 1-12]			
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Craniophar Dct	Craniopharyngioma	
		Cyst	Marked
Note: large cyst lined by ciliated epithelium; packets of cells in pars nervosa.			
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 3-15+16]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 202	TRT#: 3 DOSE: 200 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 26784
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ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Fibrosis TGLS = 7,8-4]		Fibrosis	Marked
* Testes [Adenoma TGLS = 4-7]	Interstit Cell Artery	Adenoma Inflammation	Moderate
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 203

TRT#: 3

DOSE: 200 PPM

SEX: Male

DISP: Natural Death

DAY ON TEST: 729

HISTO: 26785

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Colon	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

AUTO PRECLUDES DIAG.

* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Angiectasis	Moderate
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-7]			

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 204

TRT#: 3

SEX: Male

DAY ON TEST: 734

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26786

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Brain	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Mild
[Nephropathy TGLS = 7-5]			
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-12]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3,4-7]			
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 1-2]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 204

TRT#: 3

SEX: Male

DAY ON TEST: 734

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26786

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 205

TRT#: 3

SEX: Male

DAY ON TEST: 559

DOSE: 200 PPM

DISP: Accidentally Killed

HISTO: 26787

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lymph Node, Mediastinal	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Bone		Fracture	
[Fracture TGLS = 6-12]			
* Kidney		Nephropathy	Chronic, Minimal
* Lung		Hemorrhage	Minimal
Note: clumps of cells in airways are interpreted as floaters.			
Lymph Node			
Note: tgl 5 on sl 14 is normal skel muscle and peripheral nerve; no lymph node or abnormal tissue present.			
* Lymph Node, Mandibular		Hyperplasia	Lymphoid, Mild
[Hyperplasia TGLS = 1-7]			
* Lymph Node, Mesenteric		Hemorrhage	Mild
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 9-11]			
* Nose	Respirat Epith	Metaplasia	Squamous, Mild
Note: focal mild squamous metaplasia on xs2, left side adjacent to vomeronasal organ. Proably sequel to fb.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Preputial GI			
Note: This is a cystic preputial gland, correctly identified as a gross lesion at necropsy, but marked as NCL because NTP does not want these diagnosed as cystic.(?)			
* Skin	Subcut Tiss	Hemorrhage	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 205

TRT#: 3
DOSE: 200 PPM

SEX: Male
DISP: Accidentally Killed

DAY ON TEST: 559
HISTO: 26787

ORGAN AND ACCOUNTABLE SITE STATUS

[Hemorrhage TGLS = 8-13]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 10-7]			
* Urinary Bladder		Hemorrhage Inflammation	Marked Suppurative, Moderate
[Hemorrhage TGLS = 4-8]			

PRIMARY CAUSE OF DEATH - Bone Fracture

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 206

TRT#: 3

SEX: Male

DAY ON TEST: 660

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26788

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Glandular	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Kidney	Renal Tubule	Hyperplasia	Moderate
		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 1-5]			
* Liver		Leukemia Mononuclear	
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-13]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 3,4-11+12]			
* Spleen		Fibrosis	Marked
[Fibrosis TGLS = 2-4]			
* Stomach, Forestomach		Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 207

TRT#: 3

SEX: Male

DAY ON TEST: 551

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26789

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 9-4]	
* Lung		Leukemia Mononuclear	
Lymph Node	Deep Cervical	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 3-11]	
		[Leukemia Mononuclear TGLS = 6-12]	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 1-7]	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 8-2]	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 7-6]	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 4-8]	
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 207	TRT#: 3	SEX: Male	DAY ON TEST: 551
	DOSE: 200 PPM	DISP: Moribund Sacrifice	HISTO: 26789

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 5-13]	
* Thymus	Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 2-2]	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 208

TRT#: 3

DOSE: 200 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 579

HISTO: 26790

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Marked
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
* Kidney	Pelvis, Transit Epithe Renal Tubule	Hyperplasia Mineralization Nephropathy	Minimal Mild Chronic, Moderate
* Liver	Hepatocyte	Leukemia Mononuclear Necrosis	Moderate
* Lung		Hemorrhage Leukemia Mononuclear	Mild
[Leukemia Mononuclear TGLS = 2-3]			
Lymph Node	Renal Pancreatic Renal	Fibrosis Leukemia Mononuclear Leukemia Mononuclear	Moderate
[Leukemia Mononuclear TGLS = 3-12]			
[Leukemia Mononuclear TGLS = 8-16]			
* Lymph Node, Bronchial		Fibrosis	Moderate
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Mineralization	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 208

TRT#: 3

SEX: Male

DAY ON TEST: 579

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26790

ORGAN AND ACCOUNTABLE SITE STATUS

[Mineralization TGLS = 6-11]			
* Skin	Epidermis	Cyst	Moderate
[Cyst TGLS = 5-13]			
* Spleen		Fibrosis Leukemia Mononuclear	Moderate
[Fibrosis TGLS = 7-14]			
[Leukemia Mononuclear TGLS = 1-14+15]			
* Testes	Germinal Epith Interstit Cell	Atrophy Hyperplasia	Minimal Minimal
Note: re gross description: looks microscopically like the right one was normal, the left atrophied.			
[Atrophy TGLS = 4-7. See note]			
* Thyroid Gland		Ultimobranchial Cyst	Mild

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 209

TRT#: 3

SEX: Male

DAY ON TEST: 639

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26791

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Minimal
		Nephropathy	Chronic, Marked
* Liver		Angiectasis	Mild
[Angiectasis TGLS = 3-4]			
Peritoneum	Tunica Vaginal	Mesothelioma Malignant	
* Pituitary Gland	Pars Distalis	Adenoma	
		Hemorrhage	Marked
[Hemorrhage TGLS = 1-8]			
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 4-12]			
* Stomach, Forestomach		Hyperplasia	Marked
		Ulcer	Mild
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 2-7]			

PRIMARY CAUSE OF DEATH - Pituitary Gland Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 210

TRT#: 3

DOSE: 200 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 701

HISTO: 26792

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Marked
* Brain		Leukemia Mononuclear	
Note: diffuse infiltrate of round cells throughout brain and meninges; unusual pattern for MCL, in my experience.			
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Minimal
		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 5-5]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3,4-4+11]			
* Lung		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Skin	Pinna	Squamous Cell Papilloma	
[Squamous Cell Papilloma TGLS = 1-13]			
* Spleen		Fibrosis	Marked
		Leukemia Mononuclear	
[Fibrosis TGLS = 7-12]			
[Leukemia Mononuclear TGLS = 6-12]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 8-7]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 210

TRT#: 3

SEX: Male

DAY ON TEST: 701

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26792

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 211

TRT#: 3

SEX: Male

DAY ON TEST: 552

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26793

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Brain		Hemorrhage	Marked
* Kidney		Nephropathy	Chronic, Mild
* Lung		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
		Hemorrhage	Marked

[Adenoma TGLS = 1-8]

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH

- Brain Hemorrhage;Pituitary Gland Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 212

TRT#: 3

DOSE: 200 PPM

SEX: Male

DISP: Natural Death

DAY ON TEST: 660

HISTO: 26794

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Brain
- * Islets, Pancreatic
- * Lymph Node, Mediastinal
- * Pancreas
- * Prostate
- * Stomach, Forestomach
- * Urinary Bladder

- Blood Vessel
- * Epididymis
- * Larynx
- * Lymph Node, Mesenteric
- * Parathyroid Gland
- * Salivary Glands
- * Stomach, Glandular

- * Bone
- * Esophagus
- * Lymph Node, Bronchial
- * Mammary Gland
- * Pituitary Gland
- * Seminal Vesicle
- * Thymus

- * Bone Marrow
- * Intestine Large, Rectum
- * Lymph Node, Mandibular
- * Nose
- * Preputial Gland
- * Skin
- * Trachea

AUTO PRECLUDES DIAG.

- * Intestine Large, Cecum
- * Intestine Small, Jejunum

- * Intestine Large, Colon

- * Intestine Small, Duodenum

- * Intestine Small, Ileum

OBSERVATIONS

- * Adrenal Medulla

[Pheochromocytoma Malignant TGLS = 3,4-12+13]

- * Heart
- * Kidney
- * Liver
- * Lung

[Alveolar/Bronchiolar Adenoma TGLS = 1-11]

- * Spleen
- * Testes

[Adenoma TGLS = 2-7]

- * Thyroid Gland

Bilateral, Interstit Cell

C Cell

Pheochromocytoma Malignant

Cardiomyopathy

Nephropathy

Leukemia Mononuclear

Alveolar/Bronchiolar Adenoma

Leukemia Mononuclear

Leukemia Mononuclear

Adenoma

Hyperplasia

Mild

Chronic, Mild

Mild

PRIMARY CAUSE OF DEATH

- Adrenal Medulla Pheochromocytoma Malignant

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 213

TRT#: 3

DOSE: 200 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 607

HISTO: 26795

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Glandular
* Testes	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Marked
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 6-5]			
* Liver		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Marked
		Necrosis	Moderate
Mesentery	Fat		
[Necrosis TGLS = 3-12]			
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Preputial Gland		Cyst	Marked
[Cyst TGLS = 2-7]			
* Spleen		Fibrosis	Moderate
[Fibrosis TGLS = 4,5-4+11]		Leukemia Mononuclear	
* Stomach, Forestomach		Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 214

TRT#: 3

SEX: Male

DAY ON TEST: 551

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26796

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Islets Panc			
Note: islet cell tumor on slide 6 with duodenum			
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 5-5]			
Lymph Node	Pancreatic	Hyperplasia	Histiocytic, Mild
[Hyperplasia TGLS = 3-15]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 2,6-11+13]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 4-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Stomach, Forestomach		Hyperkeratosis	Moderate
		Hyperplasia	Moderate
		Ulcer	Marked
[Ulcer TGLS = 7,8-14]			

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma
 CONTRIBUTORY CAUSE OF DEATH - Stomach;Forestomach Ulcer

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 215

TRT#: 3

DOSE: 200 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 26797

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Hyperplasia	Marked
* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Renal Tubule	Adenoma	
	Pelvis, Transit Epithe	Hyperplasia	Minimal
	Renal Tubule	Hyperplasia	Marked
		Nephropathy	Chronic, Marked
Note: focus of prolif tubular epith adjacent to double ink marks on sl 12 i am calling adenoma; focus above single ink mark i am calling marked hyperplasia.			
		[Nephropathy TGLS = 6-5+12]	
* Liver		Clear Cell Focus	
		Degeneration	Cystic, Moderate
		Leukemia Mononuclear	
		[Clear Cell Focus TGLS = 7-4]	
* Lung	Alveolar Epith	Hyperplasia	Mild
	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
Lymph Node	Renal	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 8-14]	
Mesentery	Fat	Necrosis	Moderate
		[Necrosis TGLS = 4-15]	
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 215	TRT#: 3	SEX: Male	DAY ON TEST: 735
	DOSE: 200 PPM	DISP: Terminal Sacrifice	HISTO: 26797

ORGAN AND ACCOUNTABLE SITE STATUS

[Angiectasis TGLS = 3-8]		Cyst	Marked
[Cyst TGLS = 3-8]			
* Preputial Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 10-7]			
* Spleen		Fibrosis	Marked
		Leukemia Mononuclear	
[Fibrosis TGLS = 9-12]			
[Leukemia Mononuclear TGLS = 5-12]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-13]			
* Thyroid Gland	C Cell	Adenoma	
[Adenoma TGLS = 1-11]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 216

TRT#: 3

SEX: Male

DAY ON TEST: 514

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26798

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Brain		Hemorrhage	Minimal
	Ventricle	Hydrocephalus	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Mild
* Lung		Hemorrhage	Minimal
Lymph Node	Renal	Hyperplasia	Histiocytic, Moderate
[Hyperplasia TGLS = 4-12]			
* Mammary Gland		Galactoceles	Mild
[Galactoceles TGLS = 3-11]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 5-13]			
* Pancreas		Atrophy	Minimal
Peritoneum	Tunica Vaginal	Mesothelioma Benign	
Note: small proliferative focus of mesothelium on epididymis.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 217

TRT#: 3

SEX: Male

DAY ON TEST: 646

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26799

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mandibular	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Liver	Bile Duct	Hyperplasia	Moderate
	[Leukemia Mononuclear TGLS = 5-4]	Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland		Cyst	Moderate
	[Cyst TGLS = 1-8]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-11]		
* Stomach, Forestomach		Ulcer	Moderate
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Moderate
	[Adenoma TGLS = 6-7]		
	[Atrophy TGLS = 4-7]		

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 218

TRT#: 3

DOSE: 200 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 540

HISTO: 26800

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Minimal
* Bone Marrow		Leukemia Mononuclear	
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Marked
[Necrosis TGLS = 5-11]			
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
Tooth		Developmental Malformation	
[Developmental Malformation TGLS = 1-9]			
Zymbal's Gland		Carcinoma	
[Carcinoma TGLS = 2-12]			

PRIMARY CAUSE OF DEATH - Zymbal's Gland Carcinoma
 CONTRIBUTORY CAUSE OF DEATH - Tooth Developmental Malformation

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 219

TRT#: 3

SEX: Male

DAY ON TEST: 439

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26801

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Mild
	[Leukemia Mononuclear TGLS = 6,8-4]	Leukemia Mononuclear	
* Lung		Hemorrhage	Minimal
	[Leukemia Mononuclear TGLS = 2-3]	Leukemia Mononuclear	
Lymph Node	Renal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 9-12]	Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-3]	Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 7-2]	Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Adenoma	
	[Adenoma TGLS = 3-7]	Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-11]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 219	TRT#: 3 DOSE: 200 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 439 HISTO: 26801
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ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Interstit Cell Germinal Epith	Adenoma Atrophy	Marked
[Adenoma TGLS = 11-7] [Atrophy TGLS = 10-7]			
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

Animal Note: tgl 5, on slide 13, is pancreas and distended duodenum, not mesentery. No lesion is present.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 220

TRT#: 3

SEX: Male

DAY ON TEST: 575

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26802

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Bone Marrow		Hyperplasia	Reticulum Cell, Moderate
* Heart		Cardiomyopathy	Mild
* Islets, Pancreatic		Carcinoma	
* Kidney		Nephropathy	Chronic, Mild
* Liver	Serosa	Inflammation	Chronic, Mild
[Inflammation TGLS = 3-4]			
* Lung		Hemorrhage	Minimal
Lymph Node	Renal	Ectasia	Mild
[Ectasia TGLS = 4-15]			
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[Hyperplasia TGLS = 2,5-8]			
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 1-11+12+13+14]			
* Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

- Skin Subcut Tiss Fibroma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 221

TRT#: 3
DOSE: 200 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 624
HISTO: 26803

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

INSUFFICIENT TISSUE

* Pituitary Gland

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	Multiple
* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Renal Tubule	Cyst	Moderate
		Mineralization	Mild
		Nephropathy	Chronic, Mild
			[Cyst TGLS = 6-5]
			[Nephropathy TGLS = 3-5]
* Larynx		Foreign Body	
		Inflammation	Suppurative, Moderate
			Note: inflam in xs3 assoc w/ fb.
* Liver		Leukemia Mononuclear	
			[Leukemia Mononuclear TGLS = 2-4]
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Prostate	Epithelium	Hyperplasia	Mild
* Spleen		Leukemia Mononuclear	
			[Leukemia Mononuclear TGLS = 1-11]
* Testes	Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 221	TRT#: 3	SEX: Male	DAY ON TEST: 624
	DOSE: 200 PPM	DISP: Moribund Sacrifice	HISTO: 26803

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 5-7]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 222

TRT#: 3

SEX: Male

DAY ON TEST: 719

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26804

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	Multiple
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 4-5+12]			
* Liver		Degeneration	Cystic, Marked
[Degeneration TGLS = 5,6-4+11]			
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 3-7]			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 223

TRT#: 3

SEX: Male

DAY ON TEST: 607

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26805

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mediastinal	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Stomach, Glandular	* Testes	* Thymus
* Trachea	* Urinary Bladder		

MISSING

Tooth

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Marked
* Bone Marrow		Leukemia Mononuclear	
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Moderate
* Liver	Bile Duct	Basophilic Focus	
		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Prostate		Inflammation	Suppurative, Moderate
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 4-12]			
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 223	TRT#: 3	SEX: Male	DAY ON TEST: 607
	DOSE: 200 PPM	DISP: Moribund Sacrifice	HISTO: 26805

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 2-11]

* Stomach, Forestomach

Hyperplasia

Mild

* Thyroid Gland

C Cell

Adenoma

Tooth

Note: molar tooth missing in xs3.

PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear
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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 224

TRT#: 3

SEX: Male

DAY ON TEST: 503

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26806

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Bone Marrow	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Adrenal Medulla		Hyperplasia	Minimal
* Brain		Demyelination	Moderate
		Hemorrhage	Moderate
		Hydrocephalus	Marked
* Epididymis	Artery	Inflammation	Suppurative, Minimal
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Mild
* Lung		Hemorrhage	Minimal
* Lymph Node, Mesenteric		Hyperplasia	Lymphoid, Mild
[Hyperplasia TGLS = 3-6]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Preputial Gland		Carcinoma	
[Carcinoma TGLS = 1-7]			
* Prostate		Inflammation	Suppurative, Moderate

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH

- Brain Demyelination;Brain Hemorrhage;Brain Hydrocephalus

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 225

TRT#: 3

SEX: Male

DAY ON TEST: 629

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26807

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	Multiple
* Bone Marrow		Leukemia Mononuclear	
* Heart	Atrium	Thrombosis	Marked
	[Thrombosis TGLS = 3-4]		
* Kidney		Nephropathy	Chronic, Mild
* Larynx	Epithelium	Hyperplasia	Mild
	Note: hyperplasia around ventral pouch and u-shaped cartilage.		
* Liver	Bile Duct	Hyperplasia	Moderate
	[Leukemia Mononuclear TGLS = 7-4]	Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 9-6]		
* Pituitary Gland	Pars Distalis	Adenoma	
* Skin	Subcut Tiss	Fibroma	
		Squamous Cell Papilloma	
		Ulcer	Moderate
	[Fibroma TGLS = 8-13]		
	[Squamous Cell Papilloma TGLS = 2-14]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 225	TRT#: 3	SEX: Male	DAY ON TEST: 629
	DOSE: 200 PPM	DISP: Moribund Sacrifice	HISTO: 26807

ORGAN AND ACCOUNTABLE SITE STATUS

[Ulcer TGLS = 4-11]			
* Spleen		Fibrosis Leukemia Mononuclear	Marked
[Fibrosis TGLS = 6,11-12]			
[Leukemia Mononuclear TGLS = 5-12]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 10-7]			

PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear
CONTRIBUTORY CAUSE OF DEATH	- Heart Atrium Thrombosis

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 226

TRT#: 3

SEX: Male

DAY ON TEST: 540

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26808

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 5-5]			
* Liver		Hepatodiaphragmatic Nodule	
Note: ncl on tgl 4; only liver lesion is HDN on slide 15.			
[Hepatodiaphragmatic Nodule TGLS = 9-15]			
* Lung		Alveolar/Bronchiolar Adenoma	
[Alveolar/Bronchiolar Adenoma TGLS = 1-14]		Hemorrhage	Minimal
* Lym Node Bron			
Note: tbln normal histologically on slide 3; tgl2 ncl.			
Lymph Node	Renal	Ectasia	Moderate
[Ectasia TGLS = 6-11]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 7,8-12+13]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 227

TRT#: 3

SEX: Male

DAY ON TEST: 653

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26809

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Larynx		Foreign Body	
	Epithelium	Hyperplasia	Mild
	Glands	Inflammation	Suppurative, Moderate
Note: lesions in vp and ventral portion of most caudal section; fb in caudal section.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
Pleura		Inflammation	Chronic, Mild
* Preputial Gland		Cyst	Moderate
[Cyst TGLS = 3-7]			
* Spleen		Fibrosis	Marked
[Fibrosis TGLS = 2-11]			
* Testes	Interstitial Cell	Adenoma	
Tooth		Inflammation	Suppurative, Marked
[Inflammation TGLS = 4-10]			

PRIMARY CAUSE OF DEATH

- Tooth Inflammation

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 228

TRT#: 3

SEX: Male

DAY ON TEST: 630

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26810

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Nose	* Pancreas
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Hyperplasia	Marked
* Bone Marrow		Leukemia Mononuclear	
* Heart	Atrium	Thrombosis	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Degeneration	Cystic, Marked
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-4]			
* Lung	Alveolar Epith	Fibrosis	Moderate
	Alveolar Epith	Hyperplasia	Moderate
	Alveolar Epith	Infiltration Cellular	Histiocyte, Moderate
		Leukemia Mononuclear	
	Bronchiole	Metaplasia	Squamous, Moderate
		Squamous Cell Carcinoma	
[Fibrosis TGLS = 5-3+11]			
[Infiltration Cellular TGLS = 5-3+11]			
[Leukemia Mononuclear TGLS = 5,6-3+11]			
[Squamous Cell Carcinoma TGLS = 4-11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Hemorrhage	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 228

TRT#: 3

SEX: Male

DAY ON TEST: 630

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26810

ORGAN AND ACCOUNTABLE SITE STATUS

		Leukemia Mononuclear	
[Hemorrhage TGLS = 1-7]			
[Leukemia Mononuclear TGLS = 1-7]			
* Lymph Node, Mediastinal		Angiectasis	Marked
		Leukemia Mononuclear	
[Angiectasis TGLS = 3-2]			
[Leukemia Mononuclear TGLS = 3-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 13-6]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 10,11-12+13]			
* Pituitary Gland	Pars Distalis	Adenoma	
		Cyst	Moderate
[Adenoma TGLS = 7-8]			
[Cyst TGLS = 7-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-11]			
* Stomach, Forestomach		Hyperplasia	Moderate
		Ulcer	Moderate
* Stomach, Glandular		Ulcer	Moderate
[Ulcer TGLS = 14-8]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 12-7]			

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 229

TRT#: 3

SEX: Male

DAY ON TEST: 691

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26811

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Mammary Gland	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	Multiple
Blood Vessel		Thrombosis	Marked
Note: large thrombus in vessel in mediastinum on slide 2.			
[Thrombosis TGLS = 1-2]			
* Bone Marrow		Leukemia Mononuclear	
* Heart	Atrium	Thrombosis	Moderate
[Thrombosis TGLS = 10-14]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-4]			
* Lung	Alveolar Epith	Hyperplasia	Mild
	Alveolar Epith	Infiltration Cellular	Histiocyte, Moderate
		Leukemia Mononuclear	
* Lymph Node, Bronchial		Fibrosis	Moderate
		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Inflammation	Granulomatous, Moderate
[Inflammation TGLS = 6-13]			
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
		Cyst	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 229	TRT#: 3	SEX: Male	DAY ON TEST: 691
	DOSE: 200 PPM	DISP: Moribund Sacrifice	HISTO: 26811

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 2-8] [Cyst TGLS = 2-8] * Spleen		Fibrosis Leukemia Mononuclear	Marked
[Fibrosis TGLS = 4-11] [Leukemia Mononuclear TGLS = 3,5-12] * Testes	Bilateral, Interstit Cell Germinal Epith	Adenoma Atrophy	Moderate
[Adenoma TGLS = 7-7] [Atrophy TGLS = 8-7]			

PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear
CONTRIBUTORY CAUSE OF DEATH	- Blood Vessel Thrombosis

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 230

TRT#: 3

SEX: Male

DAY ON TEST: 614

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26812

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Glandular	* Testes
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Brain	Ventricle	Hydrocephalus	Mild
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 3-5]			
* Liver	Serosa	Fibrosis	Moderate
[Fibrosis TGLS = 4,5-4+11]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 2-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Stomach, Forestomach		Hyperplasia	Moderate
		Ulcer	Marked

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 231

TRT#: 3

SEX: Male

DAY ON TEST: 519

DOSE: 200 PPM

DISP: Natural Death

HISTO: 26813

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic
* Liver	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Urinary Bladder

MISSING

* Lymph Node, Bronchial

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Nose	* Trachea	

OBSERVATIONS

* Kidney	Pelvis Pelvis, Transit Epithe	Dilatation Hyperplasia Nephropathy	Moderate Mild Chronic, Marked
[Dilatation TGLS = 8-5] [Nephropathy TGLS = 4-5]			
* Lung		Hemorrhage	Mild
[Hemorrhage TGLS = 1-3]			
* Lymph Node, Mediastinal		Hemorrhage	Mild
[Hemorrhage TGLS = 2-2]			
* Pancreas	Artery	Inflammation	Granulomatous, Marked
[Inflammation TGLS = 7-11]			
* Stomach, Forestomach		Hyperkeratosis Hyperplasia	Marked Moderate
[Hyperkeratosis TGLS = 9-8+12] [Hyperplasia TGLS = 9-8+12]			
* Testes	Bilateral, Interstit Cell Germinal Epith	Adenoma Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 231

TRT#: 3

SEX: Male

DAY ON TEST: 519

DOSE: 200 PPM

DISP: Natural Death

HISTO: 26813

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 6-7]

[Atrophy TGLS = 5-7]

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 232

TRT#: 3

SEX: Male

DAY ON TEST: 626

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26814

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Moderate
	[Leukemia Mononuclear TGLS = 7-5]		
* Liver		Angiectasis	Mild
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-4]		
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-11]		
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-2]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 5-8]		
Skeletal Muscle		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2,3-12+13]		
* Spleen		Leukemia Mononuclear	
		Necrosis	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 232	TRT#: 3	SEX: Male	DAY ON TEST: 626
	DOSE: 200 PPM	DISP: Moribund Sacrifice	HISTO: 26814

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 8-11]		
[Necrosis TGLS = 9-11]		
* Testes	Interstit Cell	Adenoma
[Adenoma TGLS = 12-7]		
* Thymus		Leukemia Mononuclear

PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma
CONTRIBUTORY CAUSE OF DEATH	- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 233

TRT#: 3

DOSE: 200 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 672

HISTO: 26815

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-4]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
	[Necrosis TGLS = 3-13]		
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-11]		
* Stomach, Forestomach		Hyperplasia	Moderate
		Ulcer	Marked
	[Ulcer TGLS = 5-8]		
* Testes	Interstit Cell	Adenoma	
	[Adenoma TGLS = 2,6-12]		

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 233

TRT#: 3

SEX: Male

DAY ON TEST: 672

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26815

ORGAN AND ACCOUNTABLE SITE STATUS

CONTRIBUTORY CAUSE OF DEATH

- Stomach;Forestomach Ulcer

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 234

TRT#: 3

SEX: Male

DAY ON TEST: 735

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26816

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Brain	Ventricle	Hydrocephalus	Moderate
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 4-5]			
Mesentery	Fat	Necrosis	Minimal
[Necrosis TGLS = 3-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Testes	Interstitial Cell	Adenoma	
	Artery	Inflammation	Moderate
[Adenoma TGLS = 2-7]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 235

TRT#: 3

SEX: Male

DAY ON TEST: 735

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26817

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose		Foreign Body	
* Pituitary Gland	Pars Distalis	Adenoma	
		Cyst	Mild
[Adenoma TGLS = 3-8]			
* Skin	Epidermis	Cyst	Marked
	Subcut Tiss	Fibroma	
[Cyst TGLS = 1-12]			
[Fibroma TGLS = 2-13]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 235	TRT#: 3	SEX: Male	DAY ON TEST: 735
	DOSE: 200 PPM	DISP: Terminal Sacrifice	HISTO: 26817

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 6-7]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 236

TRT#: 3

SEX: Male

DAY ON TEST: 733

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26818

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Nose	* Pancreas	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Kidney	Pelvis, Transit Epithe Renal Tubule	Hyperplasia Hyperplasia Nephropathy	Minimal Marked Chronic, Marked
	[Nephropathy TGLS = 4-5]		
* Liver		Angiectasis Leukemia Mononuclear	Marked
	[Angiectasis TGLS = 2-4]		
	[Leukemia Mononuclear TGLS = 3-4]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-11]		
* Stomach, Forestomach		Hyperplasia Ulcer	Marked Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 236	TRT#: 3	SEX: Male	DAY ON TEST: 733
	DOSE: 200 PPM	DISP: Terminal Sacrifice	HISTO: 26818

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes [Adenoma TGLS = 5-7]	Bilateral, Interstit Cell	Adenoma
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PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 237

TRT#: 3

SEX: Male

DAY ON TEST: 719

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26819

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Marked
* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Pelvis, Transit Epithe Renal Tubule	Hyperplasia Hyperplasia Nephropathy	Mild Moderate Chronic, Marked
	[Nephropathy TGLS = 5-5]		
* Liver		Degeneration	Cystic, Moderate
	[Degeneration TGLS = 4-4+12]		
* Lung		Osteosarcoma	Metastatic (Uncertain Primary Site)
	Note: focus of bone, cells in lung; could be osteosarcoma. Requested recuts of slides 3 and 11 and search of wet tissue for tgl 8 12/23/92.		
	Note: 1/7/92: No tumor in wet tissues or in recuts of vertebra, tumor in lung gets smaller in step sections.		
Lymph Node	Renal Renal	Ectasia Hemorrhage	Moderate Mild
	[Ectasia TGLS = 6-14]		
* Nose	Respirat Epith	Foreign Body Hyperplasia Inflammation	Mild Suppurative, Moderate
	Note: lesions in xs2 in assoc with fb.		
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 237	TRT#: 3	SEX: Male	DAY ON TEST: 719
	DOSE: 200 PPM	DISP: Moribund Sacrifice	HISTO: 26819

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 3-8]			
* Skin		Keratoacanthoma	Multiple
[Keratoacanthoma TGLS = 2,7-13+15]			
* Testes	Interstit Cell	Adenoma	
	Germinal Epith	Atrophy	Moderate
[Adenoma TGLS = 9-7]			

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 238

TRT#: 3

DOSE: 200 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 575

HISTO: 26820

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Thyroid Gland	* Trachea

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	Multiple
* Bone Marrow		Leukemia Mononuclear	
* Islets, Pancreatic		Adenoma	
Note: small adenoma on slide 17.			
* Kidney		Nephropathy	Chronic, Marked
* Liver	Bile Duct	Hyperplasia	Marked
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
		Leukemia Mononuclear	
Lymph Node	Iliac	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-14]			
[Leukemia Mononuclear TGLS = 8-11+12]			
[Leukemia Mononuclear TGLS = 10-13]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-18]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-15]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 238	TRT#: 3	SEX: Male	DAY ON TEST: 575
	DOSE: 200 PPM	DISP: Moribund Sacrifice	HISTO: 26820

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 3-19]			
* Mammary Gland		Galactocele	Mild
	Epithelium	Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[Fibrosis TGLS = 6-16]			
[Leukemia Mononuclear TGLS = 5-17]			
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 239

TRT#: 3

DOSE: 200 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 715

HISTO: 26821

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Marked
* Bone Marrow		Leukemia Mononuclear	
* Heart	Atrium	Thrombosis	Moderate
	[Thrombosis TGLS = 3-4]		
* Kidney		Nephropathy	Chronic, Mild
* Liver		Degeneration	Cystic, Moderate
	Bile Duct	Hyperplasia	Moderate
	[Leukemia Mononuclear TGLS = 5-4]	Leukemia Mononuclear	
* Lung		Alveolar/Bronchiolar Adenoma	
		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-7]		
* Lymph Node, Mediastinal		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-2]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6,7-11]		
* Stomach, Glandular		Ulcer	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 239

TRT#: 3
DOSE: 200 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 715
HISTO: 26821

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 4-7]

* Thymus

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 240

TRT#: 3

SEX: Male

DAY ON TEST: 729

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26822

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Mediastinal	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	Multiple
* Bone Marrow		Leukemia Mononuclear	
* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Renal Tubule	Hyperplasia	Marked
		Nephropathy	Chronic, Marked
Note: compare with lesion in rat 616; both are very large but not solid. [Nephropathy TGLS = 6-5]			
* Liver		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
[Hepatodiaphragmatic Nodule TGLS = 8-14] [Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-13]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 7-11+12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 240

TRT#: 3
DOSE: 200 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 729
HISTO: 26822

ORGAN AND ACCOUNTABLE SITE STATUS

* Prostate	Inflammation	Suppurative, Moderate
* Spleen [Leukemia Mononuclear TGLS = 3-4]	Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 241

TRT#: 3

SEX: Male

DAY ON TEST: 719

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26823

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Moderate
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 2-5]			
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Stomach, Forestomach		Ulcer	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3,4-7]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 242

TRT#: 3

SEX: Male

DAY ON TEST: 677

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26824

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Chronic, Marked
	[Nephropathy TGLS = 6-5]		
* Larynx		Foreign Body	
* Liver		Angiectasis	Minimal
		Clear Cell Focus	
	[Angiectasis TGLS = 5-4]		
* Lung	Alveolar Epith	Hyperplasia	Mild
	Alveolar Epith	Infiltration Cellular	Histiocyte, Moderate
	[Hyperplasia TGLS = 1-11]		
	[Infiltration Cellular TGLS = 1-11]		
* Nose		Foreign Body	
		Inflammation	Suppurative, Mild
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 2-8]		
* Spleen		Fibrosis	Moderate
	[Fibrosis TGLS = 4-4]		
* Stomach, Forestomach		Hyperplasia	Mild
* Stomach, Glandular		Mineralization	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 242	TRT#: 3	SEX: Male	DAY ON TEST: 677
	DOSE: 200 PPM	DISP: Moribund Sacrifice	HISTO: 26824

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Interstit Cell	Adenoma
[Adenoma TGLS = 3-7]		

PRIMARY CAUSE OF DEATH	- Kidney Nephropathy
CONTRIBUTORY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 243

TRT#: 3

SEX: Male

DAY ON TEST: 523

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26825

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Nose	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-4]			
* Lung		Hemorrhage	Mild
[Hemorrhage TGLS = 1,2,3-3]		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1,2,3-3]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
Note: tgl 8 on slide 11 is pancreatic ln, not renal ln.			
[Leukemia Mononuclear TGLS = 8-11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-6]			
* Pancreas		Atrophy	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-12]			
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 243

TRT#: 3
DOSE: 200 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 523
HISTO: 26825

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 5,9-7]

* Thymus

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 244

TRT#: 3

SEX: Male

DAY ON TEST: 528

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26826

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Bronchial	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Epididymis		Hyperplasia Spermatocele	Tubular, Moderate Marked
[Hyperplasia TGLS = 6-12]			
[Spermatocele TGLS = 6-12]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Mild
* Larynx		Foreign Body	
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung	Alveolar Epith	Infiltration Cellular Leukemia Mononuclear	Histiocyte, Moderate
[Infiltration Cellular TGLS = 1-3]			
[Leukemia Mononuclear TGLS = 1-3]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 7-13]			
* Nose	Glands	Dilatation	Focal, Marked
Note: single dilated submucosal gland on left nasal turbinate in xs2.			
* Pancreas		Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 244	TRT#: 3	SEX: Male	DAY ON TEST: 528
	DOSE: 200 PPM	DISP: Moribund Sacrifice	HISTO: 26826

ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland [Adenoma TGLS = 3-8]	Pars Distalis	Adenoma
* Spleen [Leukemia Mononuclear TGLS = 4-11]		Leukemia Mononuclear

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 245

TRT#: 3

SEX: Male

DAY ON TEST: 643

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26827

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-4]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-3]		
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Skin		Keratoacanthoma	
	[Keratoacanthoma TGLS = 3-12]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-4]		
* Testes	Interstitial Cell	Adenoma	
	[Adenoma TGLS = 4-7]		

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 246

TRT#: 3

SEX: Male

DAY ON TEST: 551

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26828

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Glandular	* Testes
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Brain [Hydrocephalus TGLS = 5-1]	Ventricle	Hydrocephalus	Moderate
* Kidney [Nephropathy TGLS = 3-5]	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Marked
* Liver Note: early mcl in liver and spleen.		Leukemia Mononuclear Vacuolization Cytoplasmic	Mild
Mesentery [Necrosis TGLS = 2,6-11+14]	Fat	Necrosis	Moderate
* Pituitary Gland [Adenoma TGLS = 4-8]	Pars Distalis	Adenoma	
* Spleen [Fibrosis TGLS = 1-12]		Fibrosis Leukemia Mononuclear	Moderate
* Stomach, Forestomach [Ulcer TGLS = 7-15]		Hyperplasia Ulcer	Moderate Marked

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 247

TRT#: 3

SEX: Male

DAY ON TEST: 707

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26829

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Pheochromocytoma Benign	Multiple
* Bone Marrow		Leukemia Mononuclear	
* Brain	Ventricle	Hydrocephalus	Moderate
* Kidney	Pelvis, Transit Epithe	Cyst	Marked
		Hyperplasia	Mild
		Nephropathy	Chronic, Marked
[Cyst TGLS = 14-5]			
[Nephropathy TGLS = 7-5+11]			
* Liver		Angiectasis	Marked
		Leukemia Mononuclear	
[Angiectasis TGLS = 13-11]			
[Leukemia Mononuclear TGLS = 8-4]			
* Lung	Alveolar Epith	Infiltration Cellular	Histiocyte, Moderate
		Leukemia Mononuclear	
		Leukemia Mononuclear	
Lymph Node	Iliac		
[Leukemia Mononuclear TGLS = 9-13]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 10-8]			
* Preputial Gland		Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 247	TRT#: 3	SEX: Male	DAY ON TEST: 707
	DOSE: 200 PPM	DISP: Moribund Sacrifice	HISTO: 26829

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 1,2-12]			
* Prostate		Inflammation	Suppurative, Moderate
* Skin	Epidermis	Cyst	Marked
[Cyst TGLS = 4-13]			
* Spleen		Fibrosis	Marked
		Leukemia Mononuclear	
[Fibrosis TGLS = 6-4]			
[Leukemia Mononuclear TGLS = 5-4]			
* Stomach, Forestomach		Hyperplasia	Marked
		Ulcer	Marked
[Hyperplasia TGLS = 15-8]			
[Ulcer TGLS = 15-8]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-7]			
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 12-2]			

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 248

TRT#: 3

SEX: Male

DAY ON TEST: 635

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26830

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Thyroid Gland	Tissue NOS	* Trachea

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Marked
* Brain	Ventricle	Hydrocephalus	Moderate
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Marked
	Pelvis, Transit Epithe	Inflammation	Suppurative, Mild
		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 3-4]			
* Liver	Hepatocyte	Necrosis	Marked
[Necrosis TGLS = 2-4]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 4-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Prostate		Inflammation	Suppurative, Mild
* Urinary Bladder	Transit Epithe	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 249

TRT#: 3

SEX: Male

DAY ON TEST: 502

DOSE: 200 PPM

DISP: Natural Death

HISTO: 26831

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Bone Marrow | * Epididymis | * Esophagus | * Intestine Large, Colon |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Islets, Pancreatic |
| * Larynx | * Liver | * Lymph Node, Bronchial | * Lymph Node, Mandibular |
| * Lymph Node, Mediastinal | * Lymph Node, Mesenteric | * Mammary Gland | * Nose |
| * Pancreas | * Parathyroid Gland | * Preputial Gland | * Prostate |
| * Salivary Glands | * Seminal Vesicle | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Testes | * Thymus |
| * Thyroid Gland | * Urinary Bladder | | |

AUTO PRECLUDES DIAG.

- * Intestine Small, Jejunum

OBSERVATIONS

- | | | |
|---------------------------|-------------------|-------------------|
| * Brain | Hemorrhage | Marked |
| * Heart | Cardiomyopathy | Minimal |
| * Intestine Large, Cecum | Parasite Metazoan | |
| * Kidney | Nephropathy | Chronic, Mild |
| * Lung | Hemorrhage | Moderate |
| * Pituitary Gland | Cyst | Marked |
| | Hemorrhage | Marked |
| [Hemorrhage TGLS = 2-8] | | |
| * Trachea | Inflammation | Suppurative, Mild |

PRIMARY CAUSE OF DEATH

- Pituitary Gland Cyst

CONTRIBUTORY CAUSE OF DEATH

- Brain Hemorrhage; Pituitary Gland Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 250

TRT#: 3

DOSE: 200 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 514

HISTO: 26832

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Spleen
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial	* Thymus
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OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Brain		Hemorrhage	Minimal
* Kidney	Ventricle	Hydrocephalus	Moderate
[Nephropathy TGLS = 6-5]		Nephropathy	Chronic, Marked
* Larynx		Foreign Body	
* Liver		Vacuolization Cytoplasmic	Marked
* Lung		Hemorrhage	Minimal
* Nose		Hemorrhage	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Preputial Gland		Inflammation	Suppurative, Marked
[Inflammation TGLS = 1-7+11]			
* Skin		Inflammation	Suppurative, Marked
[Inflammation TGLS = 1-7+11]			
* Stomach, Forestomach		Hyperplasia	Moderate
		Inflammation	Suppurative, Moderate
* Testes	Germinal Epith	Atrophy	Marked
[Atrophy TGLS = 4-12]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 250

TRT#: 3

SEX: Male

DAY ON TEST: 514

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26832

ORGAN AND ACCOUNTABLE SITE STATUS

CONTRIBUTORY CAUSE OF DEATH

- Brain Hemorrhage;Brain Ventricle Hydrocephalus

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 401

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 711

HISTO: 26683

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Moderate
Blood Vessel		Mineralization	Marked
* Heart		Cardiomyopathy Mineralization	Mild Moderate
* Kidney	Pelvis, Transit Epithe Renal Tubule Renal Tubule	Cyst Hyperplasia Hyperplasia Mineralization Nephropathy	Marked Mild Mild Marked Chronic, Marked
Note: focus of marked tubular hyperplasia adjacent to cyst, see marked spot. [Cyst TGLS = 7-5] [Nephropathy TGLS = 6-5]			
* Larynx	Epithelium Glands Epithelium	Hyperplasia Inflammation Metaplasia	Mild Suppurative, Moderate Squamous, Mild
Note: laryngeal lesions in ventral pouch and adjacent surface epith.			
* Liver		Degeneration Leukemia Mononuclear	Cystic, Marked
[Degeneration TGLS = 5,8-4+12] [Leukemia Mononuclear TGLS = 4-12]			
* Lung		Hemorrhage	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 401

TRT#: 5

SEX: Male

DAY ON TEST: 711

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26683

ORGAN AND ACCOUNTABLE SITE STATUS

[Hemorrhage TGLS = 1-11]	Alveolar Epith	Mineralization	Moderate
* Nose	Goblet Cell, Respirat Epith	Foreign Body Hypertrophy Inflammation	Mild Suppurative, Mild
Note: lesions unilateral in xs 1 and 2, on same side as fb's.			
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	
* Stomach, Forestomach		Mineralization	Marked
* Stomach, Glandular		Mineralization	Marked
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-7]			

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

CONTRIBUTORY CAUSE OF DEATH

- Heart Mineralization

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 402

TRT#: 5

SEX: Male

DAY ON TEST: 719

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26684

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	Multiple
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 10-5]			
* Liver		Degeneration	Cystic, Marked
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
[Degeneration TGLS = 9-11]			
[Leukemia Mononuclear TGLS = 7,8,9-4+11]			
* Lung		Hemorrhage	Moderate
		Leukemia Mononuclear	
[Hemorrhage TGLS = 3-3]			
[Leukemia Mononuclear TGLS = 3-3]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12-14]			
[Leukemia Mononuclear TGLS = 11-13]			
* Lymph Node, Bronchial		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Marked
		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Hemorrhage	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 402

TRT#: 5
DOSE: 600 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 719
HISTO: 26684

ORGAN AND ACCOUNTABLE SITE STATUS

		Leukemia Mononuclear	
[Hemorrhage TGLS = 14-6]			
[Leukemia Mononuclear TGLS = 14-6]			
* Nose		Inflammation	Suppurative, Moderate
Note: rhinitis unilateral in xs 2 and 3. No fb visible.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 13-8]			
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-12]			
* Testes	Interstit Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[Adenoma TGLS = 5-7]			
[Atrophy TGLS = 4-7]			

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear
 CONTRIBUTORY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 403

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 714

HISTO: 26685

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Bone	Rib	Osteosarcoma	
	[Osteosarcoma TGLS = 1,15-11+12+13+14]		
* Bone Marrow		Leukemia Mononuclear	
* Heart		Osteosarcoma	Metastatic (Bone)
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Minimal
	[Nephropathy TGLS = 10-5]	Nephropathy	Chronic, Marked
* Liver		Leukemia Mononuclear	
	[Osteosarcoma TGLS = 7,8,9-4+17]	Osteosarcoma	Metastatic (Bone)
* Lung		Osteosarcoma	Metastatic (Bone)
	[Osteosarcoma TGLS = 5-3+15+16+17]		
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Bronchial		Osteosarcoma	Metastatic (Bone)
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Osteosarcoma	Metastatic (Bone)
	[Osteosarcoma TGLS = 3-2]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
* Skin	Subcut Tiss	Fibroma	
	[Fibroma TGLS = 2-19]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 403	TRT#: 5 DOSE: 600 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 714 HISTO: 26685
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ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen		Fibrosis Leukemia Mononuclear	Moderate
[Fibrosis TGLS = 12-18]			
[Leukemia Mononuclear TGLS = 11,12-18]			
* Testes	Bilateral, Interstit Cell Germinal Epith	Adenoma Atrophy	Moderate
[Adenoma TGLS = 14-7]			
[Atrophy TGLS = 13-7]			
* Thymus		Osteosarcoma	Metastatic (Bone)
[Osteosarcoma TGLS = 3-2]			
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 4-2]			

PRIMARY CAUSE OF DEATH - Bone Rib Osteosarcoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 404

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 26686

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Minimal
		Nephropathy	Chronic, Moderate
* Liver		Clear Cell Focus	
[Clear Cell Focus TGLS = 6-12]			
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Skin	Epidermis	Cyst	Moderate
[Cyst TGLS = 1-11]			
* Spleen		Fibrosis	Moderate
[Fibrosis TGLS = 4-12]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-13]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 405

TRT#: 5

SEX: Male

DAY ON TEST: 629

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26687

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Glandular	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Mediastinal

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Kidney	Pelvis, Transit Epithe	Hyperplasia Nephropathy	Mild Chronic, Marked
[Nephropathy TGLS = 3-5]			
* Liver		Vacuolization Cytoplasmic	Marked
* Lung		Hemorrhage	Minimal
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Inflammation	Suppurative, Marked
[Inflammation TGLS = 1-7]			
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 4-11+12]			
* Spleen		Fibrosis	Moderate
[Fibrosis TGLS = 2-4]			
* Stomach, Forestomach		Inflammation	Suppurative, Marked

PRIMARY CAUSE OF DEATH - Skin Subcut Tiss Fibroma

CONTRIBUTORY CAUSE OF DEATH - Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 406

TRT#: 5

SEX: Male

DAY ON TEST: 622

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26688

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Glandular	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Brain	Ventricle	Hydrocephalus	Marked
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 3-5]			
* Lung		Alveolar/Bronchiolar Carcinoma	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Fibrosis	Marked
[Fibrosis TGLS = 2-11]			
* Stomach, Forestomach		Hyperkeratosis	Marked
		Inflammation	Suppurative, Moderate

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 407

TRT#: 5

SEX: Male

DAY ON TEST: 551

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26689

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Parathyroid Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Lung		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11]			
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Preputial Gland		Inflammation	Suppurative, Marked
[Inflammation TGLS = 2-12]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 408

TRT#: 5

SEX: Male

DAY ON TEST: 531

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26690

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Brain		Hemorrhage	Mild
	Ventricle	Hydrocephalus	Marked
	[Hydrocephalus TGLS = 3-1]		
* Kidney		Nephropathy	Chronic, Marked
	[Nephropathy TGLS = 2-5]		
* Liver		Vacuolization Cytoplasmic	Mild
* Lung		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 1-8]		

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH - Brain Ventricle Hydrocephalus

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 409

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 673

HISTO: 26691

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Stomach, Forestomach	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Thymus
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OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	Multiple
Blood Vessel		Mineralization	Marked
[Mineralization TGLS = 1-2+4]			
* Bone		Fibrosis	Moderate
* Heart		Cardiomyopathy	Moderate
		Mineralization	Marked
* Kidney	Renal Tubule	Adenoma	
		Cyst	Marked
		Nephropathy	Chronic, Marked
[Cyst TGLS = 8-5]			
[Nephropathy TGLS = 7-5]			
* Liver		Degeneration	Cystic, Moderate
		Leukemia Mononuclear	
[Degeneration TGLS = 6-4]			
[Leukemia Mononuclear TGLS = 5-4]			
* Lung	Alveolar Epith	Infiltration Cellular	Histiocyte, Moderate
	Artery	Mineralization	Marked
Mesentery	Fat	Mineralization	Moderate
[Mineralization TGLS = 9-11]			
* Nose	Respirat Epith	Hyperplasia	Mild
* Parathyroid Gland		Hyperplasia	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 409

TRT#: 5

SEX: Male

DAY ON TEST: 673

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26691

ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland	Pars Distalis	Adenoma	
* Prostate		Inflammation	Suppurative, Moderate
* Skin		Inflammation	Suppurative, Moderate
[Inflammation TGLS = 2-11]			
* Spleen		Fibrosis	Moderate
[Fibrosis TGLS = 4-4]			
* Stomach, Glandular		Mineralization	Marked
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 3-7]			

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

CONTRIBUTORY CAUSE OF DEATH

- Blood Vessel Mineralization;Heart Mineralization

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 410

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 26692

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Marked
* Bone Marrow		Leukemia Mononuclear	
		Myelofibrosis	Moderate
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Minimal
	Renal Tubule	Hyperplasia	Minimal
		Nephropathy	Chronic, Moderate
	[Nephropathy TGLS = 3-5]		
* Liver		Degeneration	Cystic, Marked
		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-4]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
Mesentery		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 7-11]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 1-8]		
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
	[Fibrosis TGLS = 6-11]		
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 410

TRT#: 5
DOSE: 600 PPM

SEX: Male
DISP: Terminal Sacrifice

DAY ON TEST: 735
HISTO: 26692

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 4,5-7]

* Thymus

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 411

TRT#: 5

SEX: Male

DAY ON TEST: 544

DOSE: 600 PPM

DISP: Natural Death

HISTO: 26693

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Epididymis
* Esophagus	* Heart	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Thyroid Gland	* Trachea	

MISSING

* Pituitary Gland

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Marked
[Hemorrhage TGLS = 3-1]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 5-13]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4,6-11+12]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 411

TRT#: 5

SEX: Male

DAY ON TEST: 544

DOSE: 600 PPM

DISP: Natural Death

HISTO: 26693

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

- Brain Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 412

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: 26694

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Mandibular	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Thymus
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OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Pheochromocytoma Malignant	
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Chronic, Marked
	[Nephropathy TGLS = 5-5]		
* Liver		Degeneration	Cystic, Marked
		Leukemia Mononuclear	
	[Degeneration TGLS = 6-4]		
Lymph Node	Iliac	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 7-12]		
	[Leukemia Mononuclear TGLS = 8-13]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Marked
	[Necrosis TGLS = 2-12]		
* Nose		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Skin		Fibroma	Multiple
	[Fibroma TGLS = 9,10,11-12+13+14]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 412	TRT#: 5	SEX: Male	DAY ON TEST: 734
	DOSE: 600 PPM	DISP: Terminal Sacrifice	HISTO: 26694

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen		Fibrosis Leukemia Mononuclear	Marked
[Fibrosis TGLS = 4-11]			
[Leukemia Mononuclear TGLS = 3-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-7]			
* Urin Bladder			
Note: Mass in u bladder is seminal vesicular fluid.			

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 413

TRT#: 5

SEX: Male

DAY ON TEST: 591

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26695

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Glandular	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Brain		Astrocytoma Malignant	
		Hemorrhage	Mild
	Ventricle	Hydrocephalus	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 4-5]			
* Liver	Hepatocyte	Necrosis	Minimal
		Vacuolization Cytoplasmic	Mild
* Lung		Hemorrhage	Mild
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 3-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Stomach, Forestomach		Hyperkeratosis	Mild
		Ulcer	Marked

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH

- Brain Astrocytoma Malignant;Brain Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 414

TRT#: 5

SEX: Male

DAY ON TEST: 673

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26696

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Nose	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Pituitary Gland

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney	Renal Tubule	Adenoma	
		Nephropathy	Chronic, Minimal
Note: adenoma encircled by ink mark.			
* Liver		Angiectasis	Moderate
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 4-12]			
* Pancreas		Atrophy	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-11]			
* Testes	Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 414

TRT#: 5
DOSE: 600 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 673
HISTO: 26696

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 1-7]

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 415

TRT#: 5

SEX: Male

DAY ON TEST: 723

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26697

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla [Pheochromocytoma Malignant TGLS = 9-11+12]		Pheochromocytoma Malignant	
* Bone Marrow		Leukemia Mononuclear	
* Heart	Atrium	Thrombosis	Moderate
* Islets, Pancreatic		Hyperplasia	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver [Leukemia Mononuclear TGLS = 8-4]		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
		Pheochromocytoma Malignant	Metastatic (Adrenal Medulla)
* Lymph Node, Mandibular [Leukemia Mononuclear TGLS = 1-7]		Leukemia Mononuclear	
* Lymph Node, Mediastinal [Leukemia Mononuclear TGLS = 3-2]		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland [Adenoma TGLS = 5-8]	Pars Distalis	Adenoma	
* Preputial Gland [Inflammation TGLS = 6-13]		Inflammation	Suppurative, Moderate
* Prostate		Inflammation	Suppurative, Moderate
* Spleen		Leukemia Mononuclear	
* Stomach, Glandular		Mineralization	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 415	TRT#: 5	SEX: Male	DAY ON TEST: 723
	DOSE: 600 PPM	DISP: Moribund Sacrifice	HISTO: 26697

ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Interstit Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[Adenoma TGLS = 7-7]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH - Adrenal Medulla Pheochromocytoma Malignant

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 416

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 517

HISTO: 26698

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Brain	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Pheochromocytoma Benign	Multiple
* Bone Marrow		Leukemia Mononuclear	
Eye	Cornea	Inflammation	Chronic, Moderate
	Cornea	Mineralization	Minimal
[Inflammation TGLS = 1-11]			
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 5-5]			
* Larynx	Glands	Inflammation	Suppurative, Mild
* Liver		Angiectasis	Moderate
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-6]			
Mesentery	Fat	Inflammation	Granulomatous, Marked
[Inflammation TGLS = 7-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 416	TRT#: 5 DOSE: 600 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 517 HISTO: 26698
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ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Preputial Gland [Inflammation TGLS = 8-7]		Inflammation	Suppurative, Moderate
* Spleen [Fibrosis TGLS = 6-12] [Leukemia Mononuclear TGLS = 3-12+14]		Fibrosis Leukemia Mononuclear	Moderate
* Thymus		Hemorrhage Leukemia Mononuclear	Moderate

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 417

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 646

HISTO: 26699

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Hyperplasia	Marked
* Bone		Histiocytic Sarcoma	Metastatic (Skeletal Muscle)
[Histiocytic Sarcoma TGLS = 5-12]			
* Intestine Small, Jejunum		Leiomyosarcoma	
[Leiomyosarcoma TGLS = 10-16]			
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 6-5+13]			
* Liver		Vacuolization Cytoplasmic	Mild
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Mild
[Hemorrhage TGLS = 4-3]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 11-16]			
* Nose		Foreign Body	
		Inflammation	Suppurative, Mild
Note: inflam assoc with fb in xs1.			
* Pituitary Gland	Pars Distalis	Adenoma	
Pleura		Histiocytic Sarcoma	Metastatic (Skeletal Muscle)
[Histiocytic Sarcoma TGLS = 5-11+12]			
Skeletal Muscle		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 5-11+12]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 417	TRT#: 5 DOSE: 600 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 646 HISTO: 26699
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ORGAN AND ACCOUNTABLE SITE STATUS

* Skin	Subcut Tiss	Fibroma Ulcer	Moderate
[Fibroma TGLS = 9-15] [Ulcer TGLS = 2-14]			
* Spleen		Fibrosis	Moderate
[Fibrosis TGLS = 7-4]			
* Stomach, Forestomach		Hyperplasia	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 8-7]			
* Thyroid Gland	Follicular Cel	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH - Skeletal Muscle Histiocytic Sarcoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 418

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 677

HISTO: 26700

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Marked
* Heart	Atrium	Thrombosis	Marked
* Kidney		Nephropathy	Chronic, Moderate
	[Nephropathy TGLS = 6-5]		
* Liver		Clear Cell Focus	
	[Clear Cell Focus TGLS = 4,5-12]	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-4+12]		
* Lung	Alveolar Epith	Infiltration Cellular	Histiocyte, Moderate
	[Infiltration Cellular TGLS = 14-11]	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 13,14-3+11]		
Lymph Node	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 7-14]		
	[Leukemia Mononuclear TGLS = 12-15]		
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-7]		
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 418	TRT#: 5 DOSE: 600 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 677 HISTO: 26700
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ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Spleen [Leukemia Mononuclear TGLS = 8-13] [Necrosis TGLS = 9,10-13]		Leukemia Mononuclear Necrosis	Marked
* Testes [Adenoma TGLS = 11-7]	Interstit Cell	Adenoma	
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear
CONTRIBUTORY CAUSE OF DEATH	- Spleen	Necrosis

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 419

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 635

HISTO: 26701

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Marked
[Hyperplasia TGLS = 10-5]			
[Pheochromocytoma Benign TGLS = 10-5]			
Blood Vessel		Mineralization	Marked
[Mineralization TGLS = 6-14]			
* Bone		Fibrosis	Moderate
Eye	Cornea	Mineralization	Marked
[Mineralization TGLS = 1-13]			
* Kidney	Pelvis, Transit Epithe	Hyperplasia Nephropathy	Mild Chronic, Marked
[Nephropathy TGLS = 9-5+11]			
* Larynx		Foreign Body	
* Lung	Alveolar Epith	Mineralization	Marked
Lymph Node	Deep Cervical, Renal	Angiectasis	Marked
[Angiectasis TGLS = 2,11-11+12]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 4-14]			
* Nose	Respirat Epith	Foreign Body Hyperplasia Inflammation	Marked Suppurative, Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 419	TRT#: 5	SEX: Male	DAY ON TEST: 635
	DOSE: 600 PPM	DISP: Moribund Sacrifice	HISTO: 26701

ORGAN AND ACCOUNTABLE SITE STATUS

Note: nasal lesions assoc with fb.

* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Preputial Gland		Hyperplasia	Marked
		Inflammation	Suppurative, Marked
[Hyperplasia TGLS = 12-12]			
[Inflammation TGLS = 12-12]			
* Stomach, Glandular		Mineralization	Moderate
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 5-7]			

PRIMARY CAUSE OF DEATH - Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 420

TRT#: 5

SEX: Male

DAY ON TEST: 275

DOSE: 600 PPM

DISP: Natural Death

HISTO: 26702

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Mediastinal

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Minimal
* Larynx		Foreign Body	
		Inflammation	Suppurative, Moderate
	Epithelium	Metaplasia	Squamous, Minimal
* Lung		Hemorrhage	Mild
* Nose		Hemorrhage	Moderate
* Thymus		Hemorrhage	Minimal
Tooth		Developmental Malformation	

PRIMARY CAUSE OF DEATH

- Tooth Developmental Malformation

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 421

TRT#: 5

SEX: Male

DAY ON TEST: 639

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26703

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Marked
* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Pelvis, Transit Epithe	Hyperplasia Nephropathy	Mild Chronic, Marked
[Nephropathy TGLS = 3-4]			
* Mammary Gland		Galactocele	Moderate
[Galactocele TGLS = 1-11]			
* Nose		Foreign Body	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

Animal Note: tgl 4 was pan creatic lymph node.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 422

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 621

HISTO: 26704

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Nose
* Pancreas	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Mesenteric	* Parathyroid Gland
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OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 3-5]			
* Liver		Degeneration	Cystic, Moderate
	Bile Duct	Hyperplasia	Marked
	Hepatocyte	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-4]		Necrosis	Moderate
* Lung		Alveolar/Bronchiolar Adenoma	
[Alveolar/Bronchiolar Adenoma TGLS = 6-11]		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Preputial Gland		Inflammation	Suppurative, Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 422	TRT#: 5 DOSE: 600 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 621 HISTO: 26704
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ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Leukemia Mononuclear TGLS = 4-12]		Leukemia Mononuclear
* Testes [Adenoma TGLS = 5,7-7]	Bilateral, Interstit Cell	Adenoma
* Thyroid Gland [Carcinoma TGLS = 1-2]	Follicular Cel	Carcinoma

PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear
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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 423

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 591

HISTO: 26705

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Kidney	Renal Tubule	Hyperplasia	Minimal
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 8-4]		
* Lung		Hemorrhage	Mild
		Leukemia Mononuclear	
Lymph Node	Iliac	Inflammation	Suppurative, Marked
	[Inflammation TGLS = 9-13]		
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-2]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild
* Pituitary Gland		Cyst	Marked
		Hemorrhage	Marked
	[Cyst TGLS = 4-8]		
	[Hemorrhage TGLS = 4-8]		
* Prostate		Inflammation	Suppurative, Marked
* Skin		Necrosis	Marked
		Ulcer	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 423

TRT#: 5

SEX: Male

DAY ON TEST: 591

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26705

ORGAN AND ACCOUNTABLE SITE STATUS

Note: lesion on slide 12 is apparently necrotic/sloughed skin and connective tissue, origin unknown.

[Ulcer TGLS = 12-12]

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 6,7-11]

* Stomach, Forestomach

Hyperplasia

Moderate

[Hyperplasia TGLS = 10-8]

* Testes

Interstit Cell

Adenoma

[Adenoma TGLS = 5-7]

* Thyroid Gland

Follicular Cel

Adenoma

[Adenoma TGLS = 11-2]

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

CONTRIBUTORY CAUSE OF DEATH

- Pituitary Gland Hemorrhage;Prostate Inflammation

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 424

TRT#: 5

SEX: Male

DAY ON TEST: 614

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26706

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Intestine Large, Cecum		Parasite Metazoan	
* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Cortex	Necrosis	Marked
		Nephropathy	Chronic, Mild
		Thrombosis	Moderate
[Necrosis TGLS = 7-5]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-3]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-14]			
[Leukemia Mononuclear TGLS = 4-13]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 424

TRT#: 5
DOSE: 600 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 614
HISTO: 26706

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 5,6-11]

* Testes

Bilateral, Interstit Cell

Adenoma

[Adenoma TGLS = 3-7]

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 425

TRT#: 5

SEX: Male

DAY ON TEST: 561

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26707

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	Spinal Cord	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Brain		Hemorrhage	Minimal
* Intestine Small, Ileum	Peyers Patch	Hyperplasia	Mild
[Hyperplasia TGLS = 6-6]			
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 7-5]			
* Liver		Vacuolization Cytoplasmic	Moderate
* Lung	Alveolar Epith	Hemorrhage	Minimal
		Infiltration Cellular	Histiocyte, Minimal
* Lymph Node, Mediastinal		Hemorrhage	Mild
[Hemorrhage TGLS = 2-2]			
* Lymph Node, Mesenteric		Hyperplasia	Lymphoid, Minimal
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Spleen		Accessory Spleen	
[Accessory Spleen TGLS = 5-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3,4-7]			
* Urin Bladder			

Note: expansion of submucosa considered to be artifactual from injection of nbf.

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 426

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Natural Death

DAY ON TEST: 561

HISTO: 26708

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Heart		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 3-4+13]			
* Kidney		Nephropathy	Chronic, Marked
* Lung		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 5-3+15]			
* Lymph Node, Bronchial		Mesothelioma Malignant	
* Lymph Node, Mediastinal		Mesothelioma Malignant	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
Pleura		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 2,3,5-2+3+11+12+14+15]			
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild
* Thymus		Mesothelioma Malignant	

PRIMARY CAUSE OF DEATH - Pleura Mesothelioma Malignant

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 427

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 707

HISTO: 26709

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex [Adenoma TGLS = 10-5]		Adenoma	
* Adrenal Medulla [Pheochromocytoma Benign TGLS = 10-5]		Leukemia Mononuclear Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart [Leukemia Mononuclear TGLS = 6-12]		Leukemia Mononuclear	
* Islets, Pancreatic		Carcinoma	
* Kidney [Nephropathy TGLS = 9-5]		Nephropathy	Chronic, Marked
* Liver [Leukemia Mononuclear TGLS = 8-4]		Leukemia Mononuclear	
* Lung Alveolar Epith Alveolar Epith [Hyperplasia TGLS = 5-11] [Infiltration Cellular TGLS = 5-11] [Leukemia Mononuclear TGLS = 4,5,14-3+11]		Hyperplasia Infiltration Cellular Leukemia Mononuclear	Mild Histiocyte, Moderate
Lymph Node [Leukemia Mononuclear TGLS = 12-13]	Renal	Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 427	TRT#: 5	SEX: Male	DAY ON TEST: 707
	DOSE: 600 PPM	DISP: Moribund Sacrifice	HISTO: 26709

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 1-13]		
* Lymph Node, Mediastinal		Leukemia Mononuclear
* Lymph Node, Mesenteric		Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 13-12]		
* Pituitary Gland		Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 7-8]		
* Seminal Vesicle		Leukemia Mononuclear
* Spleen		Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 11-11]		
* Thymus		Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 3-2]		
* Thyroid Gland	C Cell	Carcinoma
[Carcinoma TGLS = 2-2]		

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 428

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 645

HISTO: 26710

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 6-5]			
* Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung	Alveolar Epith	Fibrosis	Moderate
	Alveolar Epith	Hyperplasia	Mild
	Alveolar Epith	Infiltration Cellular	Histiocyte, Moderate
		Leukemia Mononuclear	
[Fibrosis TGLS = 3-3]			
[Hyperplasia TGLS = 3-3]			
[Infiltration Cellular TGLS = 3-3]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 8-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 428

TRT#: 5

SEX: Male

DAY ON TEST: 645

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26710

ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland [Adenoma TGLS = 4-8]	Pars Distalis	Adenoma	
* Preputial Gland		Cyst	Moderate
* Skin [Ulcer TGLS = 1-12]		Ulcer	Moderate
* Spleen [Leukemia Mononuclear TGLS = 7-11]		Leukemia Mononuclear	
* Testes [Adenoma TGLS = 9-7]	Bilateral, Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 429

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 597

HISTO: 26711

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Minimal
		Nephropathy	Chronic, Moderate
* Liver	Bile Duct	Basophilic Focus	
		Hyperplasia	Moderate
		Leukemia Mononuclear	
[Basophilic Focus TGLS = 3-4]			
[Leukemia Mononuclear TGLS = 2-4]			
* Lung	Alveolar Epith	Hemorrhage	Moderate
		Infiltration Cellular	Histiocyte, Mild
		Leukemia Mononuclear	
[Hemorrhage TGLS = 6-11+3]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 429

TRT#: 5

SEX: Male

DAY ON TEST: 597

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26711

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 4-12]

* Stomach, Forestomach

Hyperplasia

Marked

* Testes

Bilateral, Interstit Cell

Adenoma

[Adenoma TGLS = 5-7]

* Thymus

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 430

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Natural Death

DAY ON TEST: 545

HISTO: 26712

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Epididymis	* Esophagus	* Heart
* Intestine Small, Duodenum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Pancreas	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Nose		

OBSERVATIONS

* Brain		Hemorrhage	Moderate
* Kidney		Nephropathy	Chronic, Moderate
* Lung		Hemorrhage	Mild
[Hemorrhage TGLS = 4-3]			
* Mammary Gland		Galactocele	Moderate
[Galactocele TGLS = 2,3-11+12]			
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-8]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH

- Brain Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 431

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: 26713

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Marked
Eye		Cataract	Moderate
[Cataract TGLS = 1-12]			
* Islets, Pancreatic		Carcinoma	
[Carcinoma TGLS = 5-4+11]			
* Kidney	Renal Tubule	Hyperplasia	Marked
Note: solid lesion within ink circle.		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 3-5+11]			
* Lung		Hemorrhage	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Testes	Interstitial Cell	Adenoma	
[Adenoma TGLS = 4-7]			
* Thymus		Hyperplasia	Lymphoid, Marked
* Urinary Bladder	Transit Epithe	Carcinoma	
Note: 3 recuts of bladder; mass disappears.			
[Carcinoma TGLS = 6-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 432

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 663

HISTO: 26714

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Marked
* Bone		Fibrosis	Moderate
* Kidney	Renal Tubule Renal Tubule	Adenoma Hyperplasia Nephropathy	Marked Chronic, Marked
Note: lesion in outer cortex marked with line i am calling adenoma; lesion near hilus marked with arrow i am calling marked tubular hyperplasia. [Nephropathy TGLS = 4-5]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 6-11]			
* Nose		Foreign Body	
* Parathyroid Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 2-2]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Skin	Epidermis	Cyst	Marked
[Cyst TGLS = 1-12]			
* Spleen		Fibrosis	Marked
[Fibrosis TGLS = 5-11]			
* Stomach, Forestomach		Hyperplasia	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 432

TRT#: 5

SEX: Male

DAY ON TEST: 663

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26714

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 7,8-7]

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 433

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 626

HISTO: 26715

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Epididymis	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Bone	Femur	Hyperplasia	Moderate
	Humerus	Osteosarcoma	
	[Osteosarcoma TGLS = 7-11]		
* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Marked
	Note: secondary to MCL.		
	[Hemorrhage TGLS = 6-1]		
* Esophagus		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-18]		
* Heart		Cardiomyopathy	Moderate
	Endocardium	Hyperplasia	Moderate
	Atrium	Thrombosis	Moderate
* Intestine Large, Cecum		Necrosis	Marked
	[Necrosis TGLS = 18-21]	Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
	[Osteosarcoma TGLS = 15-4+14+15]	Osteosarcoma	Metastatic (Bone)
* Lung	Alveolar Epith	Hyperplasia	Moderate
	Alveolar Epith	Infiltration Cellular	Histiocyte, Moderate
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 433

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 626

HISTO: 26715

ORGAN AND ACCOUNTABLE SITE STATUS

[Osteosarcoma TGLS = 2,3-3+12]		Osteosarcoma	Metastatic (Bone)
Lymph Node	Iliac	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 16-20]			
[Leukemia Mononuclear TGLS = 14-19]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 17-6]			
Mesentery		Osteosarcoma	Metastatic (Bone)
[Osteosarcoma TGLS = 11-16]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-8]			
* Preputial Gland		Hyperplasia	Marked
[Hyperplasia TGLS = 8-17]			
* Skin		Ulcer	Marked
[Ulcer TGLS = 8-17]			
* Spleen		Fibrosis	Marked
		Leukemia Mononuclear	
		Osteosarcoma	Metastatic (Bone)
[Fibrosis TGLS = 13-13]			
[Osteosarcoma TGLS = 12-13]			
* Testes	Interstit Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[Adenoma TGLS = 10-7]			
[Atrophy TGLS = 9-7]			

PRIMARY CAUSE OF DEATH - Bone Humerus Osteosarcoma

CONTRIBUTORY CAUSE OF DEATH - Brain Hemorrhage;Intestine Large;Cecum Necrosis

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 434

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 639

HISTO: 26716

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Rectum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Intestine Large, Cecum	Artery	Inflammation Parasite Metazoan	Granulomatous, Marked
[Inflammation TGLS = 6-6]			
* Intestine Large, Colon		Parasite Metazoan	
* Intestine Small, Duodenum		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-6]			
* Intestine Small, Ileum		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-6]			
* Intestine Small, Jejunum		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-6]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Hepatocellular Adenoma Leukemia Mononuclear	
[Hepatocellular Adenoma TGLS = 3-11]			
* Lung		Leukemia Mononuclear	
Note: lungs, tbn, and mediastinal nodes contain histiocytic appearing cells and regular MCL infiltrate.			
* Lymph Node, Bronchial		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-3]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-6]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 434

TRT#: 5

SEX: Male

DAY ON TEST: 639

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26716

ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland

Pars Distalis

Adenoma

Cyst

Marked

[Adenoma TGLS = 2-8]

[Cyst TGLS = 2-8]

* Spleen

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

- Pituitary Gland Cyst

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 435

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 639

HISTO: 26717

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Brain	Ventricle	Hydrocephalus	Marked
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Mild
[Nephropathy TGLS = 2-5]			
* Larynx		Foreign Body	
		Inflammation	Suppurative, Mild
Note: inflam assoc with fb in vp.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 436

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 590

HISTO: 26718

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Malignant	
[Pheochromocytoma Malignant TGLS = 8-5]			
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Mild
* Liver	Periportal	Fibrosis	Mild
[Leukemia Mononuclear TGLS = 3-4]		Leukemia Mononuclear	
* Lung		Hemorrhage	Mild
[Leukemia Mononuclear TGLS = 4-3]		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-12]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 436

TRT#: 5
DOSE: 600 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 590
HISTO: 26718

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 6,11-7]

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 437

TRT#: 5

SEX: Male

DAY ON TEST: 735

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26719

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Nose	* Pancreas	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Marked
Note: tubular proliferative lesion 4-5 cells thick with central lumen, surrounded by fibrous capsule, near inkspot on slide 13. Diff dx marked hyperplasia. [Nephropathy TGLS = 9-5+13]			
* Liver		Angiectasis	Marked
		Degeneration	Cystic, Moderate
		Leukemia Mononuclear	
[Angiectasis TGLS = 14-11] [Degeneration TGLS = 14-4] [Leukemia Mononuclear TGLS = 13,14-12+4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Iliac	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-16] [Leukemia Mononuclear TGLS = 10-13]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 15-18]			
* Parathyroid Gland		Hyperplasia	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 437	TRT#: 5 DOSE: 600 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 26719
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ORGAN AND ACCOUNTABLE SITE STATUS

[Hyperplasia TGLS = 1-2] * Pituitary Gland [Adenoma TGLS = 2-8] * Preputial Gland [Inflammation TGLS = 3-14] * Skin [Keratoacanthoma TGLS = 4-15] [Mineralization TGLS = 12-17] * Spleen [Fibrosis TGLS = 8-12] [Leukemia Mononuclear TGLS = 7-12] * Testes [Adenoma TGLS = 5,6-7] * Thymus * Thyroid Gland [Carcinoma TGLS = 1-2]	Pars Distalis Subcut Tiss Bilateral, Interstit Cell C Cell	Adenoma Inflammation Keratoacanthoma Mineralization Fibrosis Leukemia Mononuclear Adenoma Leukemia Mononuclear Carcinoma	Suppurative, Marked Moderate Marked
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PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 438

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Natural Death

DAY ON TEST: 699

HISTO: 26720

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Spleen
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Marked
Blood Vessel		Mineralization	Marked
[Mineralization TGLS = 5-4]			
* Bone		Fibrosis	Moderate
* Heart		Mineralization	Marked
[Mineralization TGLS = 11-12]			
* Intestine Large, Colon	Muscularis	Mineralization	Moderate
[Mineralization TGLS = 12-13+6]			
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
[Nephropathy TGLS = 9-5]		Nephropathy	Chronic, Marked
* Larynx	Epithelium	Metaplasia	Squamous, Mild
Note: lesion dorsal to vp in middle section.			
* Lung	Alveolar Epith	Mineralization	Marked
* Parathyroid Gland		Hyperplasia	Marked
[Hyperplasia TGLS = 4-2]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 7-8]		Cyst	Moderate
[Cyst TGLS = 7-8]			
* Skin		Inflammation	Suppurative, Marked
[Inflammation TGLS = 3-11]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 438	TRT#: 5 DOSE: 600 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 699 HISTO: 26720
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ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Forestomach [Mineralization TGLS = 8-8]		Mineralization	Marked
* Stomach, Glandular		Mineralization	Marked
* Testes [Adenoma TGLS = 10-7]	Bilateral, Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH	- Kidney Nephropathy
CONTRIBUTORY CAUSE OF DEATH	- Blood Vessel Mineralization;Heart Mineralization;Lung Alveolar Epith Mineralization

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 439

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 547

HISTO: 26721

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Testes	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Brain	Ventricle	Hydrocephalus	Moderate
[Hydrocephalus TGLS = 4-1]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Lung	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
Lymph Node	Renal	Hyperplasia	Histiocytic, Minimal
[Hyperplasia TGLS = 3-11]			
* Lymph Node, Mesenteric		Hyperplasia	Lymphoid, Mild
[Hyperplasia TGLS = 7-6]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Preputial Gland		Inflammation	Suppurative, Marked
[Inflammation TGLS = 2-12]			
* Stomach, Forestomach		Necrosis	Moderate
[Necrosis TGLS = 5-13]			
		Ulcer	Moderate
[Ulcer TGLS = 5-13]			
* Stomach, Glandular		Edema	Moderate
		Metaplasia	Squamous, Mild

Note: could be normal squamous/glandular jct; but this is present on sl 8.

[Metaplasia TGLS = 6-14]

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 439	TRT#: 5	SEX: Male	DAY ON TEST: 547
	DOSE: 600 PPM	DISP: Moribund Sacrifice	HISTO: 26721

ORGAN AND ACCOUNTABLE SITE STATUS

* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 440

TRT#: 5

SEX: Male

DAY ON TEST: 639

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26722

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mediastinal
* Nose	* Pancreas	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Marked
* Bone Marrow		Leukemia Mononuclear	
* Kidney	Pelvis, Transit Epithe	Hyperplasia Nephropathy	Moderate Chronic, Marked
	[Nephropathy TGLS = 3-5+13]		
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
	[Fibroadenoma TGLS = 1-14]		
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Hyperplasia	Moderate
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-11]		
* Stomach, Forestomach		Hyperplasia	Marked
* Testes	Interstit Cell	Adenoma	
Tongue		Squamous Cell Papilloma	
	[Squamous Cell Papilloma TGLS = 4-12]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 440

TRT#: 5
DOSE: 600 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 639
HISTO: 26722

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 441

TRT#: 5

SEX: Male

DAY ON TEST: 673

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26723

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Liver	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
[Pheochromocytoma Benign TGLS = 1-5]			
* Bone		Fibrosis	Moderate
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 2-5+11]			
* Pancreas		Atrophy	Moderate
	Artery	Inflammation	Chronic, Marked
[Inflammation TGLS = 5-12]			
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Fibrosis	Moderate
* Stomach, Glandular		Mineralization	Moderate
* Testes	Interstitial Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[Adenoma TGLS = 4-7]			
[Atrophy TGLS = 3-7]			

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 442

TRT#: 5

SEX: Male

DAY ON TEST: 592

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26724

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	Lacrimal Gland	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Brain	Ventricle	Hydrocephalus	Moderate
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
	[Nephropathy TGLS = 1-5]	Nephropathy	Chronic, Marked
* Liver		Degeneration	Cystic, Mild
		Eosinophilic Focus	
* Lung		Hemorrhage	Minimal
* Nose	Nasolacrim Dct	Inflammation	Suppurative, Moderate
		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 2-8]		
* Testes	Interstit Cell	Adenoma	
	Artery	Inflammation	Moderate

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 443

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 575

HISTO: 26725

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Hemorrhage	Minimal
		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
Note: slide 12 is pancreatic LN, not renal LN.			
[Leukemia Mononuclear TGLS = 4-12]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 6-13]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-11]			
* Stom Gland			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 443	TRT#: 5	SEX: Male	DAY ON TEST: 575
	DOSE: 600 PPM	DISP: Moribund Sacrifice	HISTO: 26725

ORGAN AND ACCOUNTABLE SITE STATUS

Note: small focus of basal cells at near BM at jct with forestomach is interpreted as tangential cut thru jct.

* Testes	Interstit Cell	Hyperplasia	Moderate
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 444

TRT#: 5

DOSE: 600 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 631

HISTO: 26726

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Gliosis	Moderate
		Hemorrhage	Moderate
* Intestine Small, Ileum		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 15-6]			
* Kidney	Renal Tubule	Adenoma	
		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
[Adenoma TGLS = 5-12]			
[Leukemia Mononuclear TGLS = 6,7-5]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-3]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-11]			
[Leukemia Mononuclear TGLS = 14-15]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 16-7]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:41

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 444

TRT#: 5

SEX: Male

DAY ON TEST: 631

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26726

ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mediastinal [Leukemia Mononuclear TGLS = 3-2]		Leukemia Mononuclear	
* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 13-13]		Leukemia Mononuclear	
Mesentery [Necrosis TGLS = 11-14]	Fat	Necrosis	Moderate
* Spleen [Leukemia Mononuclear TGLS = 9,10-11+12]		Leukemia Mononuclear	
* Stomach, Forestomach		Hyperkeratosis Hyperplasia	Moderate Marked
* Testes [Adenoma TGLS = 12-7]	Bilateral, Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

CONTRIBUTORY CAUSE OF DEATH - Brain Gliosis;Brain Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:41
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 445

TRT#: 5
DOSE: 600 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 680
HISTO: 26727

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Hyperplasia	Marked
* Bone Marrow		Leukemia Mononuclear	
* Brain	Ventricle	Hydrocephalus	Marked
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Chronic, Marked
* Liver		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Respirat Epith	Hyperplasia	Mild
		Inflammation	Suppurative, Moderate
Note: inflam and hyperplasia in xs 2, right ventral/lateral area only.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Prostate		Inflammation	Suppurative, Moderate
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
[Fibrosis TGLS = 2-11]			

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 445

TRT#: 5

SEX: Male

DAY ON TEST: 680

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26727

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 446

TRT#: 5

SEX: Male

DAY ON TEST: 677

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26728

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mandibular	* Nose	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Moderate
[Leukemia Mononuclear TGLS = 7-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-3]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-15]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
		Galactocele	Marked
[Fibroadenoma TGLS = 12-18]			
[Galactocele TGLS = 12-18]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 10,13-16+17]			
* Pancreas		Atrophy	Mild
* Skin	Subcut Tiss	Hemorrhage	Moderate
[Hemorrhage TGLS = 2-14]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 446	TRT#: 5 DOSE: 600 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 677 HISTO: 26728
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ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Leukemia Mononuclear TGLS = 9-12]		Leukemia Mononuclear	
* Testes [Inflammation TGLS = 11-7] [Inflammation TGLS = 11-7]	Artery	Inflammation Inflammation	Marked Granulomatous, Moderate
* Thyroid Gland Tongue [Squamous Cell Papilloma TGLS = 4-11]	C Cell	Hyperplasia Squamous Cell Papilloma	Mild

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 447

TRT#: 5

SEX: Male

DAY ON TEST: 642

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26729

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Skin	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Bone Marrow		Leukemia Mononuclear	
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Minimal
		Leukemia Mononuclear	Chronic, Mild
		Nephropathy	
[Leukemia Mononuclear TGLS = 6-12]			
* Larynx	Glands	Inflammation	Suppurative, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-14]			
[Leukemia Mononuclear TGLS = 2-13]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-3]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-6]			
Mesentery		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-15]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 447	TRT#: 5 DOSE: 600 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 642 HISTO: 26729
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ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland	Pars Distalis	Adenoma Cyst	Moderate
[Adenoma TGLS = 3-8] [Cyst TGLS = 3-8]			
* Prostate		Inflammation	Suppurative, Marked
* Seminal Vesicle		Inflammation	Suppurative, Marked
[Inflammation TGLS = 11-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-11]			
* Stomach, Forestomach		Hyperplasia	Mild
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 10-7]			
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 448

TRT#: 5
DOSE: 600 PPM

SEX: Male
DISP: Moribund Sacrifice

DAY ON TEST: 401
HISTO: 26730

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Brain	Ventricle	Hydrocephalus	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Lung		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Mild
[Hemorrhage TGLS = 3-2]			
Mesentery	Fat	Inflammation	Granulomatous, Moderate
	Fat	Mineralization	Moderate
[Mineralization TGLS = 2-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Preputial Gland		Inflammation	Suppurative, Moderate
[Inflammation TGLS = 5-7]			
* Spleen		Accessory Spleen	
[Accessory Spleen TGLS = 4-11]			

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma
CONTRIBUTORY CAUSE OF DEATH - Brain Ventricle Hydrocephalus

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 449

TRT#: 5

SEX: Male

DAY ON TEST: 558

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26731

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Skin
* Spleen	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Brain [Hydrocephalus TGLS = 8-1]	Ventricle	Hydrocephalus	Moderate
* Kidney [Nephropathy TGLS = 7-5]		Nephropathy	Chronic, Marked
* Liver [Regeneration TGLS = 6-4] [Vacuolization Cytoplasmic TGLS = 6-4]	Hepatocyte	Regeneration Vacuolization Cytoplasmic	Moderate Moderate
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Preputial GI Note: cystic preputial gland; ncl.			
* Seminal Vesicle Note: tissue on sl 11 has skeletal mm. adjacent to abscessed glandular tissue; this may be abscess in bulbourethral gland rather than seminal vesicle.		Inflammation	Suppurative, Marked
* Spleen Note: spleen within normal limits. ncl.			
* Stomach, Forestomach		Inflammation Ulcer	Suppurative, Minimal Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 449	TRT#: 5 DOSE: 600 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 558 HISTO: 26731
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ORGAN AND ACCOUNTABLE SITE STATUS

* Testes	Interstit Cell	Hyperplasia	Minimal
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PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma
CONTRIBUTORY CAUSE OF DEATH	- Brain Ventricle Hydrocephalus

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 450

TRT#: 5

SEX: Male

DAY ON TEST: 715

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26732

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Kidney	Pelvis, Transit Epithe Renal Tubule	Hyperplasia Hyperplasia Nephropathy	Mild Moderate Chronic, Marked
Note: focus of marked tubular hyperplasia at arrow. [Nephropathy TGLS = 4-5+12]			
* Liver		Degeneration	Cystic, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Fibrosis	Marked
[Fibrosis TGLS = 3-11]			
* Stomach, Forestomach		Hyperplasia	Moderate
* Stomach, Glandular		Mineralization	Moderate
* Testes	Interstitial Cell	Adenoma Hemorrhage	Moderate
[Adenoma TGLS = 5-7] [Hemorrhage TGLS = 1-7]			

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

CONTRIBUTORY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 601

TRT#: 7

SEX: Male

DAY ON TEST: 730

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26583

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Thymus	* Thyroid Gland
* Trachea			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Moderate
Blood Vessel	Aorta	Mineralization	Marked
* Bone		Fibrosis	Moderate
* Heart		Mineralization	Moderate
* Kidney	Pelvis, Transit Epithe	Cyst	Marked
		Hyperplasia	Mild
		Metaplasia	Osseous
	Renal Tubule	Mineralization	Marked
		Nephropathy	Chronic, Marked
[Cyst TGLS = 5-11]			
[Mineralization TGLS = 7-11]			
[Nephropathy TGLS = 6-5+11]			
* Larynx		Foreign Body	
* Liver		Degeneration	Cystic, Marked
[Degeneration TGLS = 3,4-4]			
* Lung	Alveolar Epith	Hemorrhage	Mild
		Infiltration Cellular	Histiocyte, Mild
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
		Cyst	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 601	TRT#: 7	SEX: Male	DAY ON TEST: 730
	DOSE: 1800 PPM	DISP: Moribund Sacrifice	HISTO: 26583

ORGAN AND ACCOUNTABLE SITE STATUS

[Cyst TGLS = 8-8]			
* Stomach, Glandular		Mineralization	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-7]			
* Urinary Bladder		Hemorrhage	Moderate
[Hemorrhage TGLS = 1-8]			

PRIMARY CAUSE OF DEATH - Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 602

TRT#: 7

SEX: Male

DAY ON TEST: 516

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26584

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Intestine Large, Cecum		Parasite Metazoan	
* Intestine Large, Colon		Parasite Metazoan	
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Mild
* Lung		Hemorrhage	Minimal
* Lym Node Bron			
Note: TBLN not on slide 2 or 3. Recuts of these slides and recheck of wet tissue, still no TBLN.			
* Pituitary Gland		Cyst	Marked
[Cyst TGLS = 3-8]			
* Prostate		Inflammation	Suppurative, Minimal
* Skin	Subcut Tiss	Fibrosarcoma	
Note: Dx based on birefringent intercellular material in tumor near surface of skin.			
[Fibrosarcoma TGLS = 1-11+12]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 4-7]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Cyst

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 603

TRT#: 7

SEX: Male

DAY ON TEST: 733

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26585

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	Eye	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Hyperplasia	Marked
* Kidney	Pelvis, Transit Epithe	Pheochromocytoma Benign	
		Hyperplasia	Moderate
		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 6-5]			
* Liver	Periportal	Fibrosis	Marked
		Leukemia Mononuclear	
[Fibrosis TGLS = 7-12]			
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-13]			
* Parathyroid Gland		Hyperplasia	Marked
[Hyperplasia TGLS = 10-2]			
* Pituitary Gland	Pars Distalis	Adenoma	
* Prostate	Epithelium	Hyperplasia	Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-11]			
* Stomach, Forestomach		Hyperkeratosis	Mild
		Hyperplasia	Mild
		Ulcer	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 603

TRT#: 7

SEX: Male

DAY ON TEST: 733

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26585

ORGAN AND ACCOUNTABLE SITE STATUS

[Ulcer TGLS = 8-8]

* Testes

Bilateral, Interstit Cell

Adenoma

[Adenoma TGLS = 3,4-7]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 604

TRT#: 7

SEX: Male

DAY ON TEST: 562

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26586

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Marked
* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Marked
[Hemorrhage TGLS = 1-1]			
* Kidney	Cortex	Necrosis Nephropathy	Moderate Chronic, Mild
[Necrosis TGLS = 6-16]			
* Liver	Bile Duct	Hyperplasia Leukemia Mononuclear	Moderate
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Hemorrhage Leukemia Mononuclear	Minimal
[Hemorrhage TGLS = 2-3]			
[Leukemia Mononuclear TGLS = 2-3]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-13]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 604	TRT#: 7	SEX: Male	DAY ON TEST: 562
	DOSE: 1800 PPM	DISP: Moribund Sacrifice	HISTO: 26586

ORGAN AND ACCOUNTABLE SITE STATUS

Spinal Cord		Hemorrhage	Marked
* Spleen		Leukemia Mononuclear	
		Necrosis	Marked
	[Leukemia Mononuclear TGLS = 4-12]		
	[Necrosis TGLS = 5-14]		
* Stomach, Forestomach		Diverticulum	
	[Diverticulum TGLS = 8-8]		
* Testes	Interstit Cell	Adenoma	
	Interstit Cell	Hyperplasia	Mild
	[Adenoma TGLS = 7-7]		
* Urinary Bladder		Hemorrhage	Mild
	[Hemorrhage TGLS = 10-15]		

PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear
CONTRIBUTORY CAUSE OF DEATH	- Brain	Hemorrhage;Spinal Cord Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 605

TRT#: 7

SEX: Male

DAY ON TEST: 735

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26587

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Mammary Gland	* Nose
* Parathyroid Gland	Penis	* Pituitary Gland	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Kidney	Pelvis, Transit Epithe	Carcinoma	
		Nephropathy	Chronic, Moderate
* Liver		Degeneration	Cystic, Mild
		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
		[Hepatodiaphragmatic Nodule TGLS = 5-12]	
		[Leukemia Mononuclear TGLS = 6-4+12]	
* Lung		Hemorrhage	Moderate
	Alveolar Epith	Hyperplasia	Moderate
	Alveolar Epith	Infiltration Cellular	Histiocyte, Moderate
		Leukemia Mononuclear	
	Artery	Mineralization	Mild
		[Hemorrhage TGLS = 1-3]	
		[Leukemia Mononuclear TGLS = 1-3]	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 7-6]	
Mesentery	Fat	Hemorrhage	Moderate
	Fat	Necrosis	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 605	TRT#: 7	SEX: Male	DAY ON TEST: 735
	DOSE: 1800 PPM	DISP: Terminal Sacrifice	HISTO: 26587

ORGAN AND ACCOUNTABLE SITE STATUS

[Hemorrhage TGLS = 3-13]			
[Necrosis TGLS = 3-13]			
* Pancreas		Atrophy	Mild
* Prostate	Epithelium	Hyperplasia	Mild
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
[Fibrosis TGLS = 4-11]			
[Leukemia Mononuclear TGLS = 4-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-7]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 606

TRT#: 7

SEX: Male

DAY ON TEST: 548

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26588

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Hemorrhage	Minimal
[Hemorrhage TGLS = 2-3]		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-11]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-12]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
Note: step sections of lung->mcl.			
[Leukemia Mononuclear TGLS = 1-3]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-13]			

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 607

TRT#: 7

SEX: Male

DAY ON TEST: 667

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26589

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Heart	Atrium	Thrombosis	Mild
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Moderate
* Liver	Bile Duct	Degeneration	Cystic, Moderate
		Hyperplasia	Marked
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-4]			
* Lung	Alveolar Epith	Hyperplasia	Mild
	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-3]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland		Cyst	Moderate
[Cyst TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3,4-7]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 608

TRT#: 7

SEX: Male

DAY ON TEST: 656

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26590

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	Multiple
* Brain		Hemorrhage	Mild
* Heart	Myocardium	Inflammation	Suppurative, Marked
Note: septic emboli in heart, thyroid, brain, kidney contributed to moribund condition. Primary site of bacterial infection not clear, could be kidney.			
* Islets, Pancreatic		Carcinoma	
[Carcinoma TGLS = 8-11]			
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Moderate
		Inflammation	Suppurative, Marked
		Nephropathy	Chronic, Marked
		Thrombosis	Moderate
[Nephropathy TGLS = 10-5]			
* Liver	Hepatocyte	Leukemia Mononuclear	
		Necrosis	Mild
[Leukemia Mononuclear TGLS = 9-4]			
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Preputial Gland		Hyperplasia	Marked
[Hyperplasia TGLS = 3-12]			
* Spleen		Fibrosis	Marked
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 608	TRT#: 7	SEX: Male	DAY ON TEST: 656
	DOSE: 1800 PPM	DISP: Moribund Sacrifice	HISTO: 26590

ORGAN AND ACCOUNTABLE SITE STATUS

[Fibrosis TGLS = 7-11]

[Leukemia Mononuclear TGLS = 6-11]

* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4,5-7+13]			
* Thyroid Gland		Inflammation	Suppurative, Mild

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma
CONTRIBUTORY CAUSE OF DEATH - Heart Myocardium Inflammation;Kidney Inflammation

Animal Note: bacterial colonies in lumen of left ventricle; emboli visible in vessels of brain, thyroid,kidneys.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 609

TRT#: 7

SEX: Male

DAY ON TEST: 596

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26591

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Bone		Hemorrhage	Mild
[Hemorrhage TGLS = 2-11]			
* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Moderate
[Hemorrhage TGLS = 7-1]			
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Respirat Epith	Hyperplasia	Mild
Note: on med septum in xs2, left side only.			
* Pituitary Gland		Cyst	Mild
[Cyst TGLS = 3-8]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 609

TRT#: 7

SEX: Male

DAY ON TEST: 596

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26591

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen

Leukemia Mononuclear

Necrosis

Marked

[Leukemia Mononuclear TGLS = 5-12]

[Necrosis TGLS = 6-12]

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

CONTRIBUTORY CAUSE OF DEATH - Brain Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 610

TRT#: 7

SEX: Male

DAY ON TEST: 734

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26592

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
Zymbal's Gland			

OBSERVATIONS

* Brain		Glioma Benign	
Note: Step sections,PAS stain of brain lesion: Dx glioma			
* Intestine Large, Colon		Parasite Metazoan	
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Chronic, Moderate
* Liver		Clear Cell Focus	
Note: recut of liver: clear cell focus.			
[Clear Cell Focus TGLS = 5-4]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Preputial Gland		Carcinoma	
[Carcinoma TGLS = 2-11]			
* Spleen		Leukemia Mononuclear	
Note: early MCL in liver and spleen.			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3,4-7]			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 611

TRT#: 7

SEX: Male

DAY ON TEST: 734

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26593

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Mediastinal

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Marked
* Heart		Cardiomyopathy	Mild
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Cyst	Marked
	Renal Tubule	Hyperplasia	Moderate
		Nephropathy	Chronic, Marked
[Cyst TGLS = 4-5]			
* Larynx		Foreign Body	
	Epithelium	Hyperplasia	Mild
Note: hyperplasia assoc with fb in vp.			
* Liver		Degeneration	Cystic, Mild
* Lung		Hemorrhage	Minimal
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 6-12]			
* Pancreas		Atrophy	Mild
* Pituitary Gland		Cyst	Moderate
* Prostate	Epithelium	Hyperplasia	Mild
* Skin	Subcut Tiss	Fibroma	
		Ulcer	Marked
[Fibroma TGLS = 5-13+14]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 611	TRT#: 7	SEX: Male	DAY ON TEST: 734
	DOSE: 1800 PPM	DISP: Terminal Sacrifice	HISTO: 26593

ORGAN AND ACCOUNTABLE SITE STATUS

[Ulcer TGLS = 1-11]			
* Spleen		Fibrosis	Marked
[Fibrosis TGLS = 3-4]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-7]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 612

TRT#: 7

SEX: Male

DAY ON TEST: 686

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26594

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Larynx	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Moderate
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Minimal
		Nephropathy	Chronic, Marked
			[Nephropathy TGLS = 4-5]
* Liver	Bile Duct	Hepatodiaphragmatic Nodule	
		Hyperplasia	Moderate
		Leukemia Mononuclear	
			[Hepatodiaphragmatic Nodule TGLS = 3-4]
			[Leukemia Mononuclear TGLS = 6-4]
* Lung		Leukemia Mononuclear	
			[Leukemia Mononuclear TGLS = 1-3]
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
			[Hyperplasia TGLS = 2-8]
* Spleen		Fibrosis	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 612	TRT#: 7	SEX: Male	DAY ON TEST: 686
	DOSE: 1800 PPM	DISP: Natural Death	HISTO: 26594

ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Forestomach		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Mineralization	Moderate
[Adenoma TGLS = 5-7]		Adenoma	
* Thymus		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		
CONTRIBUTORY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Hyperplasia;Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 613

TRT#: 7

SEX: Male

DAY ON TEST: 607

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26595

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Liver		Degeneration	Cystic, Mild
		Leukemia Mononuclear	
* Lung		Hemorrhage	Mild
* Lymph Node, Mandibular		Hyperplasia	Lymphoid, Marked
[Hyperplasia TGLS = 1-7]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-11]			
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Carcinoma	
[Carcinoma TGLS = 3-12]			
* Prostate	Epithelium	Hyperplasia	Mild
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
[Fibrosis TGLS = 4-4]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 5-7]			
* Thyroid Gland	C Cell	Adenoma	
Tooth		Inflammation	Suppurative, Moderate

PRIMARY CAUSE OF DEATH

- Preputial Gland Carcinoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 614

TRT#: 7

SEX: Male

DAY ON TEST: 583

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26596

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Pancreas	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Brain		Hemorrhage	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Minimal
* Liver	Hepatocyte	Necrosis	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Adenoma	
[Adenoma TGLS = 1-12]			
* Skin	Subcut Tiss	Histiocytic Sarcoma	
Note: slide 11 is sq mass, mamm gland contains fibroadenoma, mammary gland and surrounding conn tissue contain dense infilt of mononuclear cells, tol blue (-).			
[Histiocytic Sarcoma TGLS = 2-11]			
* Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH - Skin Subcut Tiss Histiocytic Sarcoma
CONTRIBUTORY CAUSE OF DEATH - Preputial Gland Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 615

TRT#: 7

SEX: Male

DAY ON TEST: 546

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26597

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------|-------------------|-------------------|----------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Epididymis | * Esophagus | * Heart | * Islets, Pancreatic |
| * Larynx | * Mammary Gland | * Nose | * Pancreas |
| * Parathyroid Gland | * Preputial Gland | * Salivary Glands | * Seminal Vesicle |
| * Stomach, Glandular | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

AUTO PRECLUDES DIAG.

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | | |

OBSERVATIONS

- | | | | |
|---|------------|----------------------|---------------|
| * Bone Marrow | | Leukemia Mononuclear | |
| * Brain | | Hemorrhage | Moderate |
| * Kidney | | Nephropathy | Chronic, Mild |
| | | Thrombosis | Moderate |
| [Thrombosis TGLS = 7-16] | | | |
| * Liver | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 6-4] | | | |
| * Lung | | Hemorrhage | Moderate |
| | | Leukemia Mononuclear | |
| [Hemorrhage TGLS = 3-3+11+12] | | | |
| [Leukemia Mononuclear TGLS = 14,15-11+12] | | | |
| Lymph Node | Pancreatic | Leukemia Mononuclear | |
| | Renal | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 9-13] | | | |
| [Leukemia Mononuclear TGLS = 13-15] | | | |
| * Lymph Node, Bronchial | | Leukemia Mononuclear | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 2-7] | | | |
| * Lymph Node, Mediastinal | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 4-2] | | | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 615	TRT#: 7	SEX: Male	DAY ON TEST: 546
	DOSE: 1800 PPM	DISP: Natural Death	HISTO: 26597

ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland		Hemorrhage	Mild
[Hemorrhage TGLS = 17-8]			
* Prostate		Inflammation	Suppurative, Moderate
* Skin	Epidermis	Cyst	Mild
[Cyst TGLS = 1-20]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10,11-13+14]			
* Stomach, Forestomach		Hyperkeratosis	Mild
		Hyperplasia	Minimal
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 16-7]			

PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear
CONTRIBUTORY CAUSE OF DEATH	- Brain Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 616

TRT#: 7

SEX: Male

DAY ON TEST: 727

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26598

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Thymus	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial	* Lymph Node, Mandibular
-------------------------	--------------------------

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Malignant	Moderate
Note: very pretty xs of ganglioneuroma portion of tumor penetrating capsule of adrenal. [Pheochromocytoma Malignant TGLS = 4-13]			
Blood Vessel		Mineralization	Marked
Eye	Antr Chamber Cornea	Inflammation Mineralization	Suppurative, Moderate Marked
Note: only 1 eye has corneal lesion; inadequate tissue available for micro exam on other eye. [Inflammation TGLS = 9-14] [Mineralization TGLS = 9-14]			
* Heart	Atrium	Mineralization Thrombosis	Marked Moderate
[Mineralization TGLS = 5-4]			
* Kidney	Pelvis, Transit Epithe Renal Tubule	Hyperplasia Hyperplasia Nephropathy	Moderate Marked Chronic, Marked
[Nephropathy TGLS = 3-5]			
* Larynx		Inflammation	Suppurative, Mild
* Liver	Epithelium	Metaplasia Basophilic Focus	Squamous, Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 616 **TRT#:** 7 **SEX:** Male **DAY ON TEST:** 727
DOSE: 1800 PPM **DISP:** Moribund Sacrifice **HISTO:** 26598

ORGAN AND ACCOUNTABLE SITE STATUS

		Degeneration	Cystic, Marked
[Degeneration TGLS = 1-4+12]			
* Lung	Alveolar Epith	Hemorrhage	Mild
	Artery	Infiltration Cellular	Histiocyte, Moderate
		Mineralization	Mild
[Hemorrhage TGLS = 10-11]			
[Mineralization TGLS = 10-11]			
* Nose	Respirat Epith	Inflammation	Suppurative, Moderate
		Metaplasia	Squamous, Mild
Note: bilateral rhinitis, squamous metaplasia in xs1, most severe at tips of turbs and lateral wall.			
* Parathyroid Gland		Hyperplasia	Marked
[Hyperplasia TGLS = 8-2]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Preputial Gland		Hyperplasia	Moderate
		Inflammation	Suppurative, Moderate
* Stomach, Forestomach		Mineralization	Marked
* Stomach, Glandular		Mineralization	Marked
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 6,7-7]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 617

TRT#: 7

SEX: Male

DAY ON TEST: 417

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26599

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Brain		Hemorrhage	Minimal
	Ventricle	Hydrocephalus	Marked
* Kidney		Nephropathy	Chronic, Mild
* Lung		Hemorrhage	Mild
* Lymph Node, Bronchial		Hemorrhage	Moderate
* Lymph Node, Mediastinal		Hemorrhage	Mild
[Hemorrhage TGLS = 1-2]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH

- Brain Hemorrhage;Brain Ventricle Hydrocephalus

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 618

TRT#: 7

SEX: Male

DAY ON TEST: 447

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26600

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Mild
[Pheochromocytoma Benign TGLS = 7,13-5]			
* Bone		Degeneration Fracture Hyperostosis	Marked Marked
Note: looks like healed fracture on sl 13. Bone lesions not clear to me; looks like long bones are hyperostotic microscopically.			
[Fracture TGLS = 9-13]			
[Hyperostosis TGLS = 8,9,12-11+12+13+14+16+22]			
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
* Lung		Hemorrhage	Moderate
	Alveolar Epith	Hyperplasia	Mild
	Alveolar Epith	Infiltration Cellular	Histiocyte, Moderate
		Leukemia Mononuclear	
[Hemorrhage TGLS = 3-3]			
[Leukemia Mononuclear TGLS = 3-3+20]			
Lymph Node	Deep Cervical	Leukemia Mononuclear	
	Iliac	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
Note: tgl 10 is pancreatic, not mesenteric ln.			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 618

TRT#: 7

SEX: Male

DAY ON TEST: 447

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26600

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 4-15]

[Leukemia Mononuclear TGLS = 10-18]

[Leukemia Mononuclear TGLS = 5-17]

* Lymph Node, Bronchial

Leukemia Mononuclear

* Lymph Node, Mandibular

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 1-21]

* Lymph Node, Mediastinal

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 11-2]

* Lymph Node, Mesenteric

Leukemia Mononuclear

* Nose

Foreign Body

* Pituitary Gland

Pars Distalis

Adenoma

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 6-19]

* Testes

Interstit Cell

Hyperplasia

Moderate

* Thymus

Leukemia Mononuclear

Tooth

Inflammation

Suppurative, Marked

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

CONTRIBUTORY CAUSE OF DEATH

- Bone Degeneration;Liver Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 619

TRT#: 7

SEX: Male

DAY ON TEST: 431

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26601

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Mammary Gland
* Nose	* Parathyroid Gland	* Pituitary Gland	* Prostate
* Salivary Glands	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Marked
[Hemorrhage TGLS = 9,10,11,17-1+10+11]			
* Islets, Pancreatic		Hyperplasia	Marked
* Kidney		Nephropathy	Chronic, Moderate
* Larynx	Epithelium	Hyperplasia	Minimal
		Inflammation	Suppurative, Mild
Note: lost surface epith of epiglottis considered to be artefactual; no fibrin, inflam, or other evidence of		ulceration antemortem.	
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6,7-4+12]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-3]			
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 14-15]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 13-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-6+18]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 619

TRT#: 7

SEX: Male

DAY ON TEST: 431

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26601

ORGAN AND ACCOUNTABLE SITE STATUS

Mesentery [Necrosis TGLS = 16-17]	Fat	Necrosis	Moderate
* Pancreas		Atrophy	Mild
* Preputial Gland		Inflammation	Chronic, Moderate
* Seminal Vesicle [Cyst TGLS = 15-8]		Cyst	Moderate
* Skin [Ulcer TGLS = 2-16]	Prepuce	Ulcer	Moderate
* Spleen [Fibrosis TGLS = 5-14] [Leukemia Mononuclear TGLS = 4-13+14]		Fibrosis Leukemia Mononuclear	Moderate
* Stomach, Forestomach		Hyperplasia	Mild
* Testes	Interstit Cell	Hyperplasia	Moderate
* Thymus		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Brain Hemorrhage		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 620

TRT#: 7

SEX: Male

DAY ON TEST: 714

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26602

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Mammary Gland
* Pituitary Gland	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
		Pheochromocytoma Benign	
Blood Vessel	Aorta	Mineralization	Marked
* Heart		Mineralization	Marked
	Atrium	Thrombosis	Moderate
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney	Renal Tubule	Carcinoma	
	Renal Tubule	Mineralization	Marked
		Nephropathy	Chronic, Marked
		[Carcinoma TGLS = 10-5]	
		[Nephropathy TGLS = 8-5]	
* Larynx		Foreign Body	
* Liver		Basophilic Focus	
		Degeneration	Cystic, Marked
		Vacuolization Cytoplasmic	Marked
		[Degeneration TGLS = 6,9-4]	
* Lung	Alveolar Epith	Fibrosis	Minimal
		Hemorrhage	Moderate
	Alveolar Epith	Hyperplasia	Mild
	Alveolar Epith	Infiltration Cellular	Histiocyte, Marked
	Artery	Mineralization	Moderate
		[Hemorrhage TGLS = 1-3]	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 620

TRT#: 7

SEX: Male

DAY ON TEST: 714

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26602

ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mesenteric [Hemorrhage TGLS = 7-6]		Hemorrhage	Moderate
Mesentery [Necrosis TGLS = 5-12]	Fat	Necrosis	Moderate
* Nose Note: bilateral rhinitis, xs1, most severe at tips of turbs.	Respirat Epith	Inflammation Metaplasia	Suppurative, Moderate Squamous, Mild
* Pancreas		Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Marked
* Prostate	Epithelium	Hyperplasia	Minimal
* Spleen [Fibrosis TGLS = 4-4]		Fibrosis	Moderate
* Stomach, Glandular		Mineralization	Marked
* Testes [Adenoma TGLS = 3-7] [Atrophy TGLS = 2-7]	Interstit Cell Germinal Epith	Adenoma Atrophy	Marked

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 621

TRT#: 7

SEX: Male

DAY ON TEST: 597

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26603

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Kidney	Cortex	Necrosis	Marked
		Nephropathy	Chronic, Mild
		Thrombosis	Moderate
[Necrosis TGLS = 10-5]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-3]			
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-12]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland		Cyst	Moderate
[Cyst TGLS = 2-8]			
* Preputial Gland		Hyperplasia	Moderate
		Inflammation	Suppurative, Moderate
[Hyperplasia TGLS = 1-7]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 621	TRT#: 7	SEX: Male	DAY ON TEST: 597
	DOSE: 1800 PPM	DISP: Moribund Sacrifice	HISTO: 26603

ORGAN AND ACCOUNTABLE SITE STATUS

[Inflammation TGLS = 1-7]			
* Skin		Ulcer	Moderate
[Ulcer TGLS = 1-7]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-11]			
* Testes	Interstit Cell	Adenoma	
	Germinal Epith	Atrophy	Marked
[Adenoma TGLS = 8-7]			
[Atrophy TGLS = 5-7]			

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 622

TRT#: 7

SEX: Male

DAY ON TEST: 597

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26604

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular
* Mammary Gland	* Nose	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Moderate
		Nephropathy	Chronic, Mild
Note: 3 step sections of kidney for renal pelvis lesion: no change in DX.			
* Liver		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
	[Hepatodiaphragmatic Nodule TGLS = 2-4]		
	[Leukemia Mononuclear TGLS = 3-4]		
* Lung	Alveolar Epith	Fibrosis	Mild
		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-11]		
* Testes	Germinal Epith	Atrophy	Moderate
* Thymus		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 622

TRT#: 7

SEX: Male

DAY ON TEST: 597

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26604

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 623

TRT#: 7

SEX: Male

DAY ON TEST: 511

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26605

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Kidney		Nephropathy	Chronic, Moderate
* Lung		Histiocytic Sarcoma	Metastatic (Thymus)
* Lymph Node, Bronchial		Histiocytic Sarcoma	Metastatic (Thymus)
* Lymph Node, Mandibular		Hemorrhage	Moderate
[Hemorrhage TGLS = 2-7]			
* Lymph Node, Mediastinal		Histiocytic Sarcoma	Metastatic (Thymus)
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thymus		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 4-11+12+13]			

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH - Thymus Histiocytic Sarcoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 624

TRT#: 7

SEX: Male

DAY ON TEST: 668

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26606

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Marked
* Kidney	Renal Tubule	Adenoma	
	Renal Tubule	Hyperplasia	Marked
		Nephropathy	Chronic, Marked
Note: foci at arrow and dot on slide 14 are interpreted as marked hyperplasia; diff dx adenoma. Lesion at arrow on slide 5 is interpreted as adenoma.			
[Nephropathy TGLS = 3-5+14]			
* Larynx	Epithelium	Hyperplasia	Moderate
* Liver		Angiectasis	Marked
		Leukemia Mononuclear	
[Angiectasis TGLS = 7-11]			
[Leukemia Mononuclear TGLS = 2-4+11]			
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-15]			
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 624

TRT#: 7

SEX: Male

DAY ON TEST: 668

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26606

ORGAN AND ACCOUNTABLE SITE STATUS

[Fibrosis TGLS = 5-13]

[Leukemia Mononuclear TGLS = 4,5-12+13]

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

CONTRIBUTORY CAUSE OF DEATH - Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 625

TRT#: 7

SEX: Male

DAY ON TEST: 572

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26607

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Small, Duodenum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Ileum
* Intestine Small, Jejunum			

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
Mesentery	Fat	Necrosis	Minimal
[Necrosis TGLS = 3-11]			
* Nose		Foreign Body	
	Respirat Epith	Hyperplasia	Minimal
Note: hyperplasia in ventral meatus, assoc with FB.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 626

TRT#: 7

SEX: Male

DAY ON TEST: 651

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26608

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Epididymis
* Esophagus	* Heart	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Nose	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Brain	Ventricle	Hydrocephalus	Marked
* Intestine Large, Cecum		Parasite Metazoan	
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 7-5]			
* Liver		Angiectasis	Moderate
		Degeneration	Cystic, Marked
		Leukemia Mononuclear	
[Angiectasis TGLS = 6-12]			
[Degeneration TGLS = 6-12]			
[Leukemia Mononuclear TGLS = 5-4+12]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 2-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 626	TRT#: 7	SEX: Male	DAY ON TEST: 651
	DOSE: 1800 PPM	DISP: Moribund Sacrifice	HISTO: 26608

ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas		Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
		Necrosis	Moderate
[Fibrosis TGLS = 4-11]			
[Leukemia Mononuclear TGLS = 3-11]			
[Necrosis TGLS = 4-11]			

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 627

TRT#: 7

SEX: Male

DAY ON TEST: 594

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26609

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Epididymis	* Esophagus	* Heart	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland
* Pancreas	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Glandular	* Trachea
* Urinary Bladder			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Moderate
[Hemorrhage TGLS = 5-1]			
* Intestine Large, Cecum		Parasite Metazoan	
* Intestine Large, Colon		Parasite Metazoan	
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Chronic, Mild
* Larynx		Foreign Body	
	Glands	Inflammation	Suppurative, Moderate
	Epithelium	Metaplasia	Squamous, Mild
Note: inflam, squamous metaplasia in vp assoc with FB.			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11,12-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
Note: slide 14 contains pancreas and pancreatic LN, not renal LN as indicated by trimmer on IANR.			
[Leukemia Mononuclear TGLS = 13-14]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-7]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 627

TRT#: 7

DOSE: 1800 PPM

SEX: Male

DISP: Natural Death

DAY ON TEST: 594

HISTO: 26609

ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mediastinal [Leukemia Mononuclear TGLS = 4-2]		Leukemia Mononuclear	
* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 15-6]		Leukemia Mononuclear	
* Nose Note: focal hyperplasia on one side of median septum in xs 1 and 2.	Respirat Epith	Hyperplasia	Mild
* Skin [Keratoacanthoma TGLS = 1-13]		Keratoacanthoma	
* Spleen [Leukemia Mononuclear TGLS = 9,10-4]		Leukemia Mononuclear	
* Stomach, Forestomach [Ulcer TGLS = 14,16-8+12]		Hyperplasia Ulcer	Mild Marked
* Testes [Adenoma TGLS = 6-7] [Atrophy TGLS = 7-7]	Interstit Cell Germinal Epith	Adenoma Atrophy	Marked
* Thymus		Leukemia Mononuclear	
* Thyroid Gland [Carcinoma TGLS = 3-11a+11b]	Follicular Cel	Carcinoma	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

CONTRIBUTORY CAUSE OF DEATH - Brain Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 628

TRT#: 7

SEX: Male

DAY ON TEST: 719

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26610

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Mesenteric	* Pancreas
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	Multiple
* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Moderate
[Hemorrhage TGLS = 7,8-1]			
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Moderate
		Nephropathy	Chronic, Marked
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-12]			
* Nose	Goblet Cell, Respirat Epith	Foreign Body	
		Hypertrophy	Moderate
		Inflammation	Suppurative, Mild
Note: lesions in xs2, related to fb.			
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Inflammation	Suppurative, Moderate
[Inflammation TGLS = 1-7]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 628	TRT#: 7	SEX: Male	DAY ON TEST: 719
	DOSE: 1800 PPM	DISP: Moribund Sacrifice	HISTO: 26610

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
	[Fibrosis TGLS = 5-11]		
	[Leukemia Mononuclear TGLS = 4-11]		
* Stomach, Forestomach		Hyperkeratosis	Moderate
		Hyperplasia	Mild
		Ulcer	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 6-7]		

PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear
CONTRIBUTORY CAUSE OF DEATH	- Brain Hemorrhage;Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 629

TRT#: 7

SEX: Male

DAY ON TEST: 710

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26611

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Rectum	* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Urinary Bladder	

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Trachea	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
		Pheochromocytoma Benign	
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 2-5]			
* Liver		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Pancreas		Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
		Necrosis	Marked
[Fibrosis TGLS = 3-11]			
[Leukemia Mononuclear TGLS = 4-11]			
[Necrosis TGLS = 3-11]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 5-7]			

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 630

TRT#: 7

SEX: Male

DAY ON TEST: 566

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26612

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------|---------------------------|-----------------------------|----------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Epididymis | * Esophagus |
| * Heart | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Islets, Pancreatic |
| * Larynx | * Mammary Gland | * Nose | * Pancreas |
| * Parathyroid Gland | * Preputial Gland | * Prostate | * Salivary Glands |
| * Seminal Vesicle | * Skin | * Stomach, Forestomach | * Stomach, Glandular |
| * Thyroid Gland | * Trachea | * Urinary Bladder | |

AUTO PRECLUDES DIAG.

- | | | |
|--------------------------|--------------------------|----------------------------|
| * Intestine Large, Colon | * Intestine Small, Ileum | * Intestine Small, Jejunum |
|--------------------------|--------------------------|----------------------------|

OBSERVATIONS

- | | | | |
|--|---------------------------|----------------------------|-------------------|
| * Intestine Large, Cecum | | Parasite Metazoan | |
| * Kidney | | Nephropathy | Chronic, Moderate |
| * Liver | Bile Duct | Hepatodiaphragmatic Nodule | |
| | | Hyperplasia | Moderate |
| | | Leukemia Mononuclear | |
| [Hepatodiaphragmatic Nodule TGLS = 2-11] | | | |
| [Leukemia Mononuclear TGLS = 1-4+11] | | | |
| * Lung | | Leukemia Mononuclear | |
| * Lymph Node, Bronchial | | Leukemia Mononuclear | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |
| * Lymph Node, Mediastinal | | Leukemia Mononuclear | |
| * Lymph Node, Mesenteric | | Leukemia Mononuclear | |
| * Pituitary Gland | Pars Distalis | Hyperplasia | Moderate |
| * Spleen | | Leukemia Mononuclear | |
| * Testes | Bilateral, Interstit Cell | Adenoma | |
| [Adenoma TGLS = 3,4-7] | | | |
| * Thymus | | Leukemia Mononuclear | |

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 631

TRT#: 7

SEX: Male

DAY ON TEST: 719

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26613

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Pancreas	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Hyperplasia	Reticulum Cell, Moderate
* Brain	Ventricle	Hydrocephalus	Marked
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
	Renal Tubule	Hyperplasia	Moderate
	Pelvis, Transit Epithe	Inflammation	Suppurative, Mild
		Nephropathy	Chronic, Marked
<p>Note: focal tubular hyperplasia between inkspots. [Nephropathy TGLS = 4-5]</p>			
* Liver		Hyperplasia	Reticulum Cell, Moderate
<p>Note: No reason seen at micro for pale liver. Mixed cell infiltrate in sinusoids, but not MCL, doesnt look severe enough to cause diffuse pale liver.</p>			
* Mammary Gland		Fibroadenoma	
<p>[Fibroadenoma TGLS = 1-13]</p>			
* Pituitary Gland	Pars Distalis	Adenoma	
<p>[Adenoma TGLS = 2-8]</p>			
* Preputial Gland		Carcinoma	
<p>[Carcinoma TGLS = 3,6-11+12]</p>			
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Stomach, Forestomach		Hyperkeratosis	Mild
		Hyperplasia	Mild
		Necrosis	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 631	TRT#: 7 DOSE: 1800 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 719 HISTO: 26613
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ORGAN AND ACCOUNTABLE SITE STATUS

* Testes [Adenoma TGLS = 7-7]	Interstit Cell	Ulcer Adenoma	Marked
* Urinary Bladder	Transit Epithe	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 632	TRT#: 7	SEX: Male	DAY ON TEST: 505
	DOSE: 1800 PPM	DISP: Moribund Sacrifice	HISTO: 26614

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Nose
* Preputial Gland	* Prostate	* Seminal Vesicle	* Skin
* Thyroid Gland	* Trachea		

MISSING

* Parathyroid Gland

INSUFFICIENT TISSUE

* Adrenal Medulla

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-12]			
* Kidney		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-13]		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-14]			
[Leukemia Mononuclear TGLS = 13-4]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12-15]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 632

TRT#: 7

SEX: Male

DAY ON TEST: 505

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26614

ORGAN AND ACCOUNTABLE SITE STATUS

Oral Mucosa [Squamous Cell Papilloma TGLS = 1-11]		Squamous Cell Papilloma	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland [Adenoma TGLS = 4-8]	Pars Distalis	Adenoma	
* Salivary Glands		Leukemia Mononuclear	
* Spleen [Leukemia Mononuclear TGLS = 7,8-4]		Leukemia Mononuclear	
* Stomach, Forestomach		Hyperplasia	Marked
		Leukemia Mononuclear	
* Stomach, Glandular [Leukemia Mononuclear TGLS = 14-16]		Leukemia Mononuclear	
* Testes [Adenoma TGLS = 6-7]	Interstit Cell	Adenoma	
* Thymus [Leukemia Mononuclear TGLS = 2-2]		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

CONTRIBUTORY CAUSE OF DEATH - Thymus Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 633

TRT#: 7

DOSE: 1800 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 635

HISTO: 26615

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Mandibular	* Mammary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Complex	Marked
[Pheochromocytoma Complex TGLS = 7-5]			
* Bone Marrow		Leukemia Mononuclear	
* Intestine Large, Cecum		Parasite Metazoan	
* Islets, Pancreatic		Carcinoma	
Note: Carcinoma is on slide 6 with duodenum.			
* Kidney	Pelvis, Transit Epithe Renal Tubule	Cyst Hyperplasia Hyperplasia Nephropathy	Marked Minimal Marked Chronic, Marked
[Cyst TGLS = 12-12]			
[Nephropathy TGLS = 6-5]			
* Liver	Bile Duct	Hyperplasia Leukemia Mononuclear	Marked
[Leukemia Mononuclear TGLS = 9-4]			
* Lung	Renal Pancreatic	Leukemia Mononuclear Ectasia Leukemia Mononuclear	Marked
Lymph Node			
[Ectasia TGLS = 8-14]			
[Leukemia Mononuclear TGLS = 11-15]			
* Lymph Node, Bronchial		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 633

TRT#: 7

SEX: Male

DAY ON TEST: 635

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26615

ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mediastinal [Leukemia Mononuclear TGLS = 1-2]		Leukemia Mononuclear	
* Lymph Node, Mesenteric Mesentery [Necrosis TGLS = 4-13]	Fat	Leukemia Mononuclear Necrosis	Marked
* Nose		Foreign Body	
* Pancreas		Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen [Fibrosis TGLS = 5-11] [Leukemia Mononuclear TGLS = 10-11]		Fibrosis Leukemia Mononuclear	Marked
* Testes [Adenoma TGLS = 2-7] [Atrophy TGLS = 3-7]	Bilateral, Interstit Cell Germinal Epith	Adenoma Atrophy	Moderate
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 634

TRT#: 7

SEX: Male

DAY ON TEST: 551

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26616

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Kidney	Pelvis, Transit Epithe	Hyperplasia Nephropathy	Mild Chronic, Marked
[Nephropathy TGLS = 4-5]			
* Larynx	Glands	Foreign Body Inflammation	Suppurative, Mild
* Liver	Hepatocyte	Hepatodiaphragmatic Nodule Leukemia Mononuclear Necrosis Vacuolization Cytoplasmic	Mild Mild
[Hepatodiaphragmatic Nodule TGLS = 3-11]			
[Leukemia Mononuclear TGLS = 2-4]			
* Lung	Alveolar Epith	Infiltration Cellular Leukemia Mononuclear	Histiocyte, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
* Stomach, Forestomach		Hyperplasia Inflammation	Moderate Suppurative, Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 634

TRT#: 7

SEX: Male

DAY ON TEST: 551

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26616

ORGAN AND ACCOUNTABLE SITE STATUS

[Ulcer TGLS = 5-12]

Ulcer

Marked

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH

- Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 635

TRT#: 7

SEX: Male

DAY ON TEST: 677

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26617

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Nose	* Pancreas	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Moderate
* Kidney	Pelvis, Transit Epithe	Hyperplasia Nephropathy	Mild Chronic, Marked
[Nephropathy TGLS = 6-5]			
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis Pars Intermed	Adenoma Hyperplasia	Mild
* Preputial Gland		Inflammation	Suppurative, Moderate
* Spleen		Fibrosis Leukemia Mononuclear	Marked
[Fibrosis TGLS = 5-11]			
[Leukemia Mononuclear TGLS = 4-11]			
* Stomach, Glandular		Mineralization	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-7]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 635

TRT#: 7

SEX: Male

DAY ON TEST: 677

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26617

ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus

Leukemia Mononuclear

Tongue

Squamous Cell Papilloma

[Squamous Cell Papilloma TGLS = 1-11]

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

CONTRIBUTORY CAUSE OF DEATH

- Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 636

TRT#: 7

DOSE: 1800 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 645

HISTO: 26618

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Epididymis
* Esophagus	* Heart	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Nose	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Moderate
[Hemorrhage TGLS = 13-1]			
* Intestine Large, Cecum		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-15]			
* Intestine Large, Colon		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-6]			
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Minimal
	Renal Tubule	Hyperplasia	Moderate
		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
	Hepatocyte	Necrosis	Mild
[Leukemia Mononuclear TGLS = 7-4]			
* Lung	Alveolar Epith	Fibrosis	Mild
		Hemorrhage	Mild
	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
		Leukemia Mononuclear	
[Infiltration Cellular TGLS = 3-3]			
[Leukemia Mononuclear TGLS = 3-3]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 636

TRT#: 7

DOSE: 1800 PPM

SEX: Male

DISP: Moribund Sacrifice

DAY ON TEST: 645

HISTO: 26618

ORGAN AND ACCOUNTABLE SITE STATUS

Lymph Node [Leukemia Mononuclear TGLS = 16-11]	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Bronchial [Leukemia Mononuclear TGLS = 2-2]		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 8-6]		Leukemia Mononuclear	
Mesentery [Necrosis TGLS = 6-14]	Fat	Necrosis	Marked
* Pancreas		Atrophy	Moderate
* Pituitary Gland [Cyst TGLS = 12-8]	Pars Distalis	Cyst Hyperplasia	Moderate Moderate
* Preputial Gland [Carcinoma TGLS = 1-12]		Carcinoma	
* Spleen [Leukemia Mononuclear TGLS = 5-11]		Leukemia Mononuclear	
* Stom Forestom Note: no nodule on forestomach in slide 8; recheck block and wet tissue, no abnormalities found. Large folds in glandular stomach,conclude these were described.			
* Testes [Adenoma TGLS = 14-7]	Bilateral, Interstit Cell Germinal Epith	Adenoma Atrophy Inflammation	Marked Granulomatous, Moderate
Zymbal's Gland [Carcinoma TGLS = 4-13]		Carcinoma	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 637

TRT#: 7

SEX: Male

DAY ON TEST: 635

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26619

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Glandular
* Thyroid Gland	* Trachea		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Islets, Pancreatic		Hyperplasia	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Degeneration	Cystic, Moderate
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 1-12]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-11]			
* Stomach, Forestomach		Hyperkeratosis	Moderate
		Hyperplasia	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-7]			
* Thymus		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 637

TRT#: 7

SEX: Male

DAY ON TEST: 635

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26619

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 2-2]

* Urinary Bladder

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 6-8]

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 638

TRT#: 7

SEX: Male

DAY ON TEST: 463

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26620

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Mesenteric

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Kidney	Renal Tubule Cortex	Mineralization Necrosis Nephropathy Pigmentation	Moderate Mild Chronic, Mild Hemosiderin, Marked
* Liver	Renal Tubule	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung	Alveolar Epith	Infiltration Cellular Leukemia Mononuclear	Histiocyte, Mild
[Infiltration Cellular TGLS = 1-3]			
[Leukemia Mononuclear TGLS = 1-3]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-2]			
* Nose		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 2-8]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 638

TRT#: 7

SEX: Male

DAY ON TEST: 463

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26620

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 2-8]

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 3-11]

* Thymus

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH

- Pituitary Gland Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 639

TRT#: 7

SEX: Male

DAY ON TEST: 644

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26621

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Epididymis		Mesothelioma Malignant	
* Esophagus		Mesothelioma Malignant	
* Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	Moderate
[Thrombosis TGLS = 9-4]			
* Intestine Large, Cecum		Mesothelioma Malignant	
* Kidney		Nephropathy	Chronic, Mild
* Liver		Mesothelioma Malignant	
	Hepatocyte	Necrosis	Moderate
		Vacuolization Cytoplasmic	Marked
[Mesothelioma Malignant TGLS = 7-11]			
[Necrosis TGLS = 7-11]			
[Vacuolization Cytoplasmic TGLS = 8-4]			
Mesentery		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 3,4-12+13]			
* Pancreas		Mesothelioma Malignant	
Peritoneum		Mesothelioma Malignant	
[Mesothelioma Malignant TGLS = 3,5-7+12]			
* Pituitary Gland		Cyst	Mild
* Spleen		Mesothelioma Malignant	
* Stomach, Glandular		Mesothelioma Malignant	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 639	TRT#: 7	SEX: Male	DAY ON TEST: 644
	DOSE: 1800 PPM	DISP: Natural Death	HISTO: 26621

ORGAN AND ACCOUNTABLE SITE STATUS

[Ulcer TGLS = 10-14]		Ulcer	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
PRIMARY CAUSE OF DEATH	- Peritoneum Mesothelioma Malignant		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 640

TRT#: 7

SEX: Male

DAY ON TEST: 680

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26622

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Heart		Cardiomyopathy	Moderate
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Mild
		Nephropathy	Chronic, Marked
	[Nephropathy TGLS = 6-5]		
* Liver		Angiectasis	Marked
		Degeneration	Cystic, Moderate
	[Angiectasis TGLS = 5-12]		
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Marked
	Renal	Ectasia	Moderate
	[Ectasia TGLS = 7-13]		
* Pancreas		Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
	[Adenoma TGLS = 3-8]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 4-7]		

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 641

TRT#: 7

SEX: Male

DAY ON TEST: 488

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26623

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Brain		Hemorrhage	Mild
	Ventricle	Hydrocephalus	Mild
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Lung		Hemorrhage	Minimal
[Hemorrhage TGLS = 1-3]			
* Nose		Foreign Body	
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Fibrosis	Mild
		Hemorrhage	Minimal
[Fibrosis TGLS = 3-4+11]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH

- Brain Hemorrhage;Brain Ventricle Hydrocephalus

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 642

TRT#: 7

SEX: Male

DAY ON TEST: 678

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26624

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Larynx		Foreign Body	
* Liver		Angiectasis	Moderate
	[Leukemia Mononuclear TGLS = 4-4]	Leukemia Mononuclear	
* Lung		Hemorrhage	Mild
		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Inflammation	Suppurative, Marked
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-11]		
* Testes	Bilateral, Interstit Cell	Adenoma	
	[Adenoma TGLS = 1,2-7]		

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 643

TRT#: 7

SEX: Male

DAY ON TEST: 704

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26625

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Pituitary Gland	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Marked
Blood Vessel		Mineralization	Marked
* Kidney	Renal Tubule	Adenoma	
	Pelvis, Transit Epithe	Hyperplasia	Moderate
	Renal Tubule	Hyperplasia	Mild
		Nephropathy	Chronic, Marked
<p>Note: There is a solid mass of prolif tubules adjacent to cyst on sl 5, smaller than mass on sl 13 but still classifiable as tubular adenoma. [Adenoma TGLS = 7-13] [Nephropathy TGLS = 3-5]</p>			
* Larynx		Foreign Body	
* Liver		Degeneration	Cystic, Marked
			[Degeneration TGLS = 6-11]
* Parathyroid Gland		Hyperplasia	Marked
* Prostate		Inflammation	Suppurative, Moderate
* Skin	Subcut Tiss	Fibroma	
		Trichoepithelioma	
			[Fibroma TGLS = 2-15] [Trichoepithelioma TGLS = 1-14]
* Spleen		Fibrosis	Moderate
* Stomach, Glandular		Mineralization	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 643

TRT#: 7

SEX: Male

DAY ON TEST: 704

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26625

ORGAN AND ACCOUNTABLE SITE STATUS

Germinal Epith

Atrophy

Marked

[Adenoma TGLS = 4-7]

[Atrophy TGLS = 5-7]

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 644

TRT#: 7

SEX: Male

DAY ON TEST: 597

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26626

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Glandular	* Thyroid Gland
* Trachea			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Minimal
		Nephropathy	Chronic, Moderate
* Larynx	Epithelium	Metaplasia	Squamous, Mild
Note: sq metapl. in xs3 ventrally; no fb visible.			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 6-12]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
		Leukemia Mononuclear	
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[Fibrosis TGLS = 3-11]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 644	TRT#: 7	SEX: Male	DAY ON TEST: 597
	DOSE: 1800 PPM	DISP: Moribund Sacrifice	HISTO: 26626

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 2-11]			
* Stomach, Forestomach		Hyperplasia Ulcer	Mild Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-7]			
* Thymus		Thymoma Malignant	
[Thymoma Malignant TGLS = 5-2]			
* Urinary Bladder	Transit Epithe	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 645

TRT#: 7

SEX: Male

DAY ON TEST: 689

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26627

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla [Pheochromocytoma Benign TGLS = 3-5]		Pheochromocytoma Benign	Multiple
* Bone Marrow		Leukemia Mononuclear	
* Islets, Pancreatic		Adenoma	
* Kidney [Nephropathy TGLS = 5-5]		Nephropathy	Chronic, Moderate
* Liver [Leukemia Mononuclear TGLS = 4-4]		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Pituitary Gland [Adenoma TGLS = 1-8]	Pars Distalis	Adenoma	
* Spleen [Leukemia Mononuclear TGLS = 2,6-11]		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	
	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 646

TRT#: 7

SEX: Male

DAY ON TEST: 734

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26628

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Kidney		Nephropathy	Chronic, Marked
[Nephropathy TGLS = 3-5]			
* Liver		Degeneration	Cystic, Mild
* Lung		Hemorrhage	Minimal
Lymph Node	Renal	Ectasia	Marked
[Ectasia TGLS = 4-11]			
* Mammary Gland	Epithelium	Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Skin		Inflammation	Granulomatous, Mild
* Testes	Artery	Inflammation	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 647

TRT#: 7

SEX: Male

DAY ON TEST: 699

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26629

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign Carcinoma	Moderate
* Islets, Pancreatic		Adenoma	Multiple
* Kidney	Renal Tubule	Cyst	Moderate
	Pelvis, Transit Epithe	Hyperplasia Nephropathy	Mild Chronic, Marked
Note: 2 solid foci in circled area on slide 5. [Cyst TGLS = 6-5] [Nephropathy TGLS = 5-5]			
* Lung		Hemorrhage	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
		Adenoma	
* Preputial Gland		Inflammation	Suppurative, Marked
* Skin		Inflammation	Suppurative, Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 647	TRT#: 7	SEX: Male	DAY ON TEST: 699
	DOSE: 1800 PPM	DISP: Moribund Sacrifice	HISTO: 26629

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen		Fibrosis	Mild
* Stomach, Forestomach		Hyperplasia	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4-7]			

PRIMARY CAUSE OF DEATH - Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 648

TRT#: 7

SEX: Male

DAY ON TEST: 660

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26630

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Kidney		Cyst	Marked
		Nephropathy	Chronic, Marked
	[Cyst TGLS = 5-12]		
	[Nephropathy TGLS = 4-5+12]		
* Larynx	Epiglottis, Respirat Epith	Hyperplasia	Minimal
	Epithelium	Hyperplasia	Mild
	Epithelium	Metaplasia	Squamous, Mild
	Note: minimal hyperplasia at base of epiglottis, mild hyperplasia and sq metapl in ventral half of most caudal section.		
* Liver		Degeneration	Cystic, Marked
	[Degeneration TGLS = 3-4]		
* Lung	Alveolar Epith	Fibrosis	Mild
	Alveolar Epith	Hyperplasia	Mild
	Bronchiole	Hyperplasia	Mild
	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
	Alveolar Epith	Inflammation	Suppurative, Moderate
	[Inflammation TGLS = 6-3]		
* Nose		Inflammation	Suppurative, Moderate
	Note: Unilateral rhinitis in xs 2, near median septum.		
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	Multiple

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 648	TRT#: 7	SEX: Male	DAY ON TEST: 660
	DOSE: 1800 PPM	DISP: Moribund Sacrifice	HISTO: 26630

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 7-8]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-7]			
* Thyroid Gland	C Cell	Carcinoma	
	C Cell	Hyperplasia	Mild
[Carcinoma TGLS = 1-11]			
* Trachea	Epithelium	Hyperplasia	Mild
* Urinary Bladder	Transit Epithe	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH - Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 649

TRT#: 7

SEX: Male

DAY ON TEST: 735

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26631

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Pituitary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney	Renal Tubule Pelvis, Transit Epithe	Carcinoma Hyperplasia Nephropathy	Mild Chronic, Marked
Note: lesion is smaller than that in #622 but similar morphology; loss of normal cellular architecture, many vacuolated cells in sheets, some karyomegaly and atypia. [Nephropathy TGLS = 2-5]			
* Larynx	Epiglottis Epithelium	Foreign Body Inflammation Metaplasia Metaplasia	Suppurative, Moderate Squamous, Minimal Squamous, Mild
Note: mild focal squamous metaplasia just above vp, related to fb.			
* Nose		Foreign Body Inflammation	Suppurative, Mild
Note: focal inflam assoc with fb in nasopharyngeal duct.			
* Pancreas	Artery	Atrophy Inflammation	Mild Chronic, Marked
[Inflammation TGLS = 4-12]			
* Skin		Squamous Cell Carcinoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 649	TRT#: 7	SEX: Male	DAY ON TEST: 735
	DOSE: 1800 PPM	DISP: Terminal Sacrifice	HISTO: 26631

ORGAN AND ACCOUNTABLE SITE STATUS

[Squamous Cell Carcinoma TGLS = 5-13]		
* Testes	Bilateral, Interstit Cell	Adenoma
[Adenoma TGLS = 3,6-7+11]		

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 650

TRT#: 7

SEX: Male

DAY ON TEST: 657

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26632

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Leukemia Mononuclear	
* Heart	Atrium	Thrombosis	Moderate
* Kidney	Pelvis, Transit Epithe	Hyperplasia	Minimal
	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-4]		
* Lung		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 1-8]		
* Preputial Gland		Cyst	Moderate
	[Cyst TGLS = 2-7]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3,5-11+12]		
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 101

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 26533

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Bone [Osteosarcoma TGLS = 5-11]	Rib	Osteosarcoma	
* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver Note: diff dx early MCL.		Hyperplasia	Reticulum Cell, Marked
* Lung		Hemorrhage	Minimal
* Mammary Gland Note: mammary mass also on slide 7; presume from size described at necropsy that mass on sl 7 and 12 are the same one. [Carcinoma TGLS = 2-12]		Adenoma	
		Carcinoma	
* Pituitary Gland [Adenoma TGLS = 1-8]	Pars Distalis	Adenoma	
* Skin [Keratoacanthoma TGLS = 4-14]		Keratoacanthoma	
* Spleen Note: diff dx early MCL.		Hematopoietic Cell Proliferation	Marked
* Uterus		Polyp Stromal	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 101

TRT#: 2

SEX: Female

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26533

ORGAN AND ACCOUNTABLE SITE STATUS

[Polyp Stromal TGLS = 3-13]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 102

TRT#: 2

SEX: Female

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26534

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Heart | * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic |
| * Larynx | * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular |
| * Lymph Node, Mediastinal | * Lymph Node, Mesenteric | * Nose | * Ovary |
| * Pancreas | * Parathyroid Gland | * Salivary Glands | * Skin |
| * Stomach, Glandular | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | * Uterus | | |

OBSERVATIONS

- | | | | |
|---|---------------|--------------------------------------|-----------------------------|
| * Kidney | Renal Tubule | Mineralization
Nephropathy | Minimal
Chronic, Minimal |
| Note: 3 step sections of kidney, no lesion corresponding to tgl 3 is present. | | | |
| * Liver | | Leukemia Mononuclear
Fibroadenoma | |
| * Mammary Gland | | | |
| [Fibroadenoma TGLS = 1-11] | | | |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 2-8] | | | |
| * Spleen | | Leukemia Mononuclear | |
| Note: early mcl spleen and liver only. | | | |
| * Stomach, Forestomach | | Hyperplasia | Mild |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 103

TRT#: 2

SEX: Female

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26535

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|---------------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Esophagus | * Heart |
| * Intestine Large, Cecum | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic | * Larynx | * Liver |
| * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Mammary Gland | * Nose | * Ovary |
| * Pancreas | * Parathyroid Gland | * Salivary Glands | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | * Uterus | |

MISSING

- * Clitoral Gland

OBSERVATIONS

- | | | | |
|---|---------------|-------------------------|------------------|
| * Intestine Large, Colon
[Polyp Adenomatous TGLS = 2-11] | | Polyp Adenomatous | |
| * Kidney | Renal Tubule | Mineralization | Mild |
| * Pituitary Gland | Pars Distalis | Nephropathy | Chronic, Minimal |
| * Skin
[Squamous Cell Papilloma TGLS = 1-12] | | Hyperplasia | Moderate |
| | | Squamous Cell Papilloma | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 104

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 26536

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Intestine Large, Rectum		Parasite Metazoan	
* Kidney	Renal Tubule Renal Tubule	Carcinoma Mineralization Nephropathy	Mild Chronic, Minimal
[Carcinoma TGLS = 9-5]			
* Liver		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 5-4]			
* Lung	Alveolar Epith	Alveolar/Bronchiolar Adenoma Infiltration Cellular	Histiocyte, Marked
[Alveolar/Bronchiolar Adenoma TGLS = 8-12]			
[Infiltration Cellular TGLS = 8-12]			
* Mammary Gland		Fibroadenoma	Multiple
Note: Wet tissues rechecked, additional sections of tgl 4 prepared(slides 18 and 19).			
[Fibroadenoma TGLS = 1,3,4,10-13+14+15+16+18+19]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 6-17]			
* Pituitary Gland		Cyst	Mild
[Cyst TGLS = 2-8]			
* Skin	Epidermis	Cyst	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 104

TRT#: 2

SEX: Female

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26536

ORGAN AND ACCOUNTABLE SITE STATUS

[Cyst TGLS = 7-11]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 105

TRT#: 2

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26537

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Parathyroid Gland
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	Vagina

MISSING

* Lymph Node, Mediastinal

OBSERVATIONS

* Bone Marrow		Hyperplasia	Reticulum Cell, Moderate
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Ovary		Cyst	Mild
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Skin		Hyperkeratosis	Moderate
		[Hyperkeratosis TGLS = 1-11]	
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Uterus		Polyp Stromal	
		[Polyp Stromal TGLS = 2,3-8+12]	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 106

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: 26538

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
	[Nephropathy TGLS = 2-5]		
* Larynx		Foreign Body	
		Inflammation	Suppurative, Marked
* Liver	Hepatocyte	Necrosis	Mild
		Note: numerous small foci of clear spaces in parenchyma, contain long slender crystalline structures. Looks like artifact; seen in many rats, more severe in this one.	
* Lymph Node, Mesenteric		Hemorrhage	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 1-8]		
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 107

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 634

HISTO: 26539

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Heart	Atrium	Thrombosis	Mild
[Thrombosis TGLS = 3-4]			
* Islets, Pancreatic		Adenoma	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-4]		Vacuolization Cytoplasmic	Marked
[Vacuolization Cytoplasmic TGLS = 7-4]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-2]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-12+14]			
* Skin		Hyperkeratosis	Moderate
[Hyperkeratosis TGLS = 8-11]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-13]			
* Thymus		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 107

TRT#: 2
DOSE: CONTROL

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 634
HISTO: 26539

ORGAN AND ACCOUNTABLE SITE STATUS

* Uterus
[Polyp Stromal TGLS = 6-8]

Polyp Stromal

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 108

TRT#: 2

SEX: Female

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26540

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy Basophilic Focus Clear Cell Focus	Mild Chronic, Mild
* Liver			
[Clear Cell Focus TGLS = 5,6-11+12]			
* Lung		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-13+14]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3,4-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 109

TRT#: 2

SEX: Female

DAY ON TEST: 714

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26541

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Nose	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Hyperplasia	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Kidney	Renal Tubule	Mineralization	Moderate
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Marked
		[Leukemia Mononuclear TGLS = 6-4]	
* Lung		Leukemia Mononuclear	
Lymph Node	Renal	Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 7-13]	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 2-7]	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 9-2]	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 8-12]	
* Mammary Gland		Galactocele	Mild
		Note: 2nd mass on tgl 3 is normal clitoral gland.	
		[Galactocele TGLS = 3-14]	
* Ovary		Cyst	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 109

TRT#: 2
DOSE: CONTROL

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 714
HISTO: 26541

ORGAN AND ACCOUNTABLE SITE STATUS

[Cyst TGLS = 4-7]

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 5-11]

* Thymus

Leukemia Mononuclear

* Urinary Bladder

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 110

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 705

HISTO: 26542

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Intestine Large, Rectum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
* Lung		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-11+12]			
* Pituitary Gland	Pars Distalis	Adenoma	Multiple
* Spleen		Leukemia Mononuclear	
Note: early MCL.			

PRIMARY CAUSE OF DEATH

- Mammary Gland Fibroadenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 111

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 701

HISTO: 26543

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Hemorrhage	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-13]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-11]			
* Thymus		Leukemia Mononuclear	
* Uterus		Sarcoma Stromal	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 111

TRT#: 2

SEX: Female

DAY ON TEST: 701

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26543

ORGAN AND ACCOUNTABLE SITE STATUS

[Sarcoma Stromal TGLS = 7-13]

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 112

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: 26544

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Mandibular	* Parathyroid Gland
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OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Marked
* Brain	Ventricle	Hydrocephalus	Moderate
* Clitoral Gland		Inflammation	Chronic, Moderate
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
* Larynx		Foreign Body	
* Liver			
Note: Numerous small foci of basophilic crystalline structures; interpreted as artifact; seen in other rats but much more frequent in this animal.			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 3-12]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 4-13]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Skin	Epidermis	Cyst	Moderate
[Cyst TGLS = 1-11]			
* Thyroid Gland	C Cell	Carcinoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 113

TRT#: 2
DOSE: CONTROL

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 547
HISTO: 26545

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12-11]			
* Brain		Hemorrhage	Moderate
[Hemorrhage TGLS = 9-1]			
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-4]		Vacuolization Cytoplasmic	Marked
[Vacuolization Cytoplasmic TGLS = 8-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-3]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Inflammation	Granulomatous, Mild
[Inflammation TGLS = 4-16]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Hemorrhage	Marked
[Hemorrhage TGLS = 6,7-14+15]		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 113	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 547 HISTO: 26545
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ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 5,6-4+14+15]		
* Stomach, Forestomach [Hyperplasia TGLS = 11-13]	Hyperplasia	Marked
* Stomach, Glandular [Necrosis TGLS = 10-12]	Necrosis	Marked
* Thymus	Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH	- Spleen Hemorrhage
CONTRIBUTORY CAUSE OF DEATH	- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 114

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 672

HISTO: 26546

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Nose	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

Blood Vessel	Aorta	Thrombosis	Marked
* Bone Marrow		Leukemia Mononuclear	
		Myelofibrosis	Moderate
* Heart	Atrium	Thrombosis	Moderate
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Degeneration	Cystic, Marked
	Serosa	Fibrosis	Marked
		Leukemia Mononuclear	
Note: This "adhesion" has a few hepatocytes in it, and lots of pigment, could be the remnant of a lobe torsion or HDN.			
		[Degeneration TGLS = 4,5-4+12]	
		[Fibrosis TGLS = 6-11]	
		[Leukemia Mononuclear TGLS = 4,5-4+12]	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Infiltration Cellular	Histiocyte, Marked
* Lymph Node, Mediastinal		Inflammation	Suppurative, Marked
		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
		[Fibroadenoma TGLS = 1-15]	
* Ovary		Cyst	Marked
		[Cyst TGLS = 3-7]	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 114

TRT#: 2

SEX: Female

DAY ON TEST: 672

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26546

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen		Leukemia Mononuclear	
* Stomach, Glandular		Ulcer	Marked
[Ulcer TGLS = 7-13]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

- Liver Leukemia Mononuclear

CONTRIBUTORY CAUSE OF DEATH

- Blood Vessel Aorta Thrombosis

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 115

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Natural Death

DAY ON TEST: 467

HISTO: 26547

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Esophagus	* Heart	* Intestine Large, Rectum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	Urethra	* Urinary Bladder
* Uterus			

MISSING

* Clitoral Gland	* Lymph Node, Mesenteric
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AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Pancreas	* Thyroid Gland

OBSERVATIONS

* Brain		Hemorrhage	Mild
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Hemorrhage	Minimal
[Leukemia Mononuclear TGLS = 2-3]		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
* Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

Animal Note: severe autolysis

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 116

TRT#: 2

SEX: Female

DAY ON TEST: 563

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26548

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Minimal
* Larynx	Epithelium	Hyperplasia	Mild
Note: focal hyperplasia in vp over cystic gland			
* Liver		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 5-13]			
* Lung		Hemorrhage	Minimal
Lymph Node	Iliac	Hyperplasia	Histiocytic, Mild
	Iliac	Pigmentation	Minimal
	Lumbar	Pigmentation	Minimal
Note: lumbar LN has gold(not black) pigment; does not look enlarged on section. iliac LN has black pigment.			
[Hyperplasia TGLS = 6-11]			
* Lymph Node, Mediastinal		Hyperplasia Pigmentation	Lymphoid, Mild Mild
[Hyperplasia TGLS = 3-2]			
[Pigmentation TGLS = 3-2]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 9-14]			
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 116

TRT#: 2
DOSE: CONTROL

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 563
HISTO: 26548

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 4-8]

* Thyroid Gland

C Cell

Hyperplasia

Mild

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 117

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Natural Death

DAY ON TEST: 642

HISTO: 26549

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

AUTO PRECLUDES DIAG.

* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Malignant	
[Pheochromocytoma Malignant TGLS = 4-11]			
* Brain		Hemorrhage	Mild
	Ventricle	Hydrocephalus	Mild
* Kidney	Renal Tubule	Mineralization	Moderate
		Nephropathy	Chronic, Moderate
* Liver		Clear Cell Focus	
Note: larger focus on slide 4.			
[Clear Cell Focus TGLS = 3-11]			
* Mammary Gland		Carcinoma	
[Carcinoma TGLS = 1-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
		Cyst	Marked
		Hemorrhage	Marked
[Cyst TGLS = 2-8]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Cyst

CONTRIBUTORY CAUSE OF DEATH

- Brain Hemorrhage; Pituitary Gland Pars Distalis Adenoma; Pituitary Gland Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 118

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 523

HISTO: 26550

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Moderate
[Hemorrhage TGLS = 5-1]			
* Kidney	Renal Tubule	Mineralization	Mild
* Liver		Degeneration	Cystic, Marked
		Leukemia Mononuclear	
Note: hepatocyte hyperplasia secondary to MCL and cystic degeneration.			
[Degeneration TGLS = 3-4]			
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-6]			
* Ovary		Cyst	Mild
[Cyst TGLS = 2-7]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-11]			
* Stomach, Forestomach		Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 118	TRT#: 2	SEX: Female	DAY ON TEST: 523
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 26550

ORGAN AND ACCOUNTABLE SITE STATUS

	Inflammation	Suppurative, Marked
	Ulcer	Marked
[Inflammation TGLS = 6-13]		
[Ulcer TGLS = 6-13]		
* Stomach, Glandular	Ulcer	Moderate
[Ulcer TGLS = 7-12]		

PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear
CONTRIBUTORY CAUSE OF DEATH	- Brain Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 119

TRT#: 2
DOSE: CONTROL

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 733
HISTO: 26551

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Intestine Large, Cecum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Mild
* Mammary Gland		Fibroadenoma	Multiple
		Galactocele	Moderate
[Fibroadenoma TGLS = 1,2-11+12]			
[Galactocele TGLS = 1-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 120

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 667

HISTO: 26552

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Mandibular	* Parathyroid Gland
--------------------------	---------------------

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Liver		Angiectasis	Marked
		Basophilic Focus	
[Angiectasis TGLS = 3-12]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
		Cyst	Marked
[Adenoma TGLS = 2-8]			
[Cyst TGLS = 2-8]			

PRIMARY CAUSE OF DEATH - Mammary Gland Fibroadenoma

CONTRIBUTORY CAUSE OF DEATH - Pituitary Gland Cyst

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 121

TRT#: 2

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26553

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy Leukemia Mononuclear	Mild Chronic, Minimal
* Liver [Leukemia Mononuclear TGLS = 4-4]			
* Lung	Alveolar Epith Alveolar Epith	Fibrosis Infiltration Cellular Leukemia Mononuclear Leukemia Mononuclear Fibroadenoma	Minimal Histiocyte, Mild
* Lymph Node, Bronchial			
* Mammary Gland [Fibroadenoma TGLS = 3-12]			
* Pituitary Gland [Cyst TGLS = 1-8]		Cyst	Moderate
* Spleen [Leukemia Mononuclear TGLS = 2-11]		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 122

TRT#: 2

SEX: Female

DAY ON TEST: 140

DOSE: CONTROL

DISP: Natural Death

HISTO: 26554

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Brain
- * Liver
- * Lymph Node, Mediastinal
- * Salivary Glands
- * Uterus

- * Adrenal Medulla
- * Clitoral Gland
- * Lung
- * Mammary Gland
- * Skin

- Blood Vessel
- * Esophagus
- * Lymph Node, Bronchial
- * Ovary
- * Spleen

- * Bone
- * Heart
- * Lymph Node, Mandibular
- * Parathyroid Gland
- * Thymus

AUTO PRECLUDES DIAG.

- * Bone Marrow
- * Intestine Small, Duodenum
- * Lymph Node, Mesenteric
- * Stomach, Forestomach
- * Urinary Bladder

- * Intestine Large, Cecum
- * Intestine Small, Ileum
- * Nose
- * Stomach, Glandular

- * Intestine Large, Colon
- * Intestine Small, Jejunum
- * Pancreas
- * Thyroid Gland

- * Intestine Large, Rectum
- * Islets, Pancreatic
- * Pituitary Gland
- * Trachea

OBSERVATIONS

- | | | | |
|----------|--------------|----------------|---------------------|
| * Kidney | Renal Tubule | Mineralization | Moderate |
| * Larynx | | Foreign Body | |
| | Glands | Inflammation | Suppurative, Marked |
| * Lung | | | |

Note: no masses, foreign bodies in lung section; autolysis prevents interpretation of mucosa of airways.

PRIMARY CAUSE OF DEATH

- UNCERTAIN

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 123

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 520

HISTO: 26555

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Parathyroid Gland

OBSERVATIONS

* Brain	Ventricle	Hydrocephalus	Moderate
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Larynx	Glands	Inflammation	Suppurative, Mild
* Liver		Vacuolization Cytoplasmic	Moderate
	[Vacuolization Cytoplasmic TGLS = 3,4-12+13]		
* Lung		Hemorrhage	Minimal
	[Hemorrhage TGLS = 1-3]		
Mesentery	Fat	Necrosis	Moderate
	[Necrosis TGLS = 5-11]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 2-8]		

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 124

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 26556

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

Eye		Atrophy	Moderate
[Atrophy TGLS = 2-11]			
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	
[Clear Cell Focus TGLS = 5-4]		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 4-4]			
* Pituitary Gland		Cyst	Mild
[Cyst TGLS = 3-8]			
* Thyroid Gland	C Cell	Adenoma	
[Adenoma TGLS = 1-2]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 125

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: 26557

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Intestine Large, Rectum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Larynx	Epithelium	Foreign Body	
		Hyperplasia	Mild
	Epithelium	Inflammation	Suppurative, Moderate
		Metaplasia	Squamous, Mild
* Liver		Hepatodiaphragmatic Nodule	
	[Hepatodiaphragmatic Nodule TGLS = 3-11]		
* Mammary Gland		Fibroadenoma	Multiple
	[Fibroadenoma TGLS = 1,2-12+13]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 126

TRT#: 2

SEX: Female

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26558

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Mild
* Lung		Hemorrhage	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 127

TRT#: 2

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26559

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy	Moderate Chronic, Mild
* Larynx		Foreign Body	
* Liver		Clear Cell Focus	
[Clear Cell Focus TGLS = 6-4]			
* Lung	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 2,7-11+12+13]			
* Ovary		Cyst	Mild
[Cyst TGLS = 4-7]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 5-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 128

TRT#: 2

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26560

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
Oviduct	* Pancreas	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Parathyroid Gland

OBSERVATIONS

Eye		Cataract	Mild
[Cataract TGLS = 1-11]			
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
* Ovary		Cyst	Mild
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 129

TRT#: 2

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26561

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Clitoral Gland		Inflammation	Chronic, Moderate
* Islets, Pancreatic		Carcinoma	
[Carcinoma TGLS = 3-12]			
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Angiectasis	Mild
		Basophilic Focus	
* Lymph Node, Mesenteric		Necrosis	Mild
Mesentery	Fat	Inflammation	Granulomatous, Moderate
[Inflammation TGLS = 2-13]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Skin		Inflammation	Suppurative, Mild
[Inflammation TGLS = 4-11]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 130

TRT#: 2

SEX: Female

DAY ON TEST: 537

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26562

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Liver	Hepatocyte	Necrosis	Mild
Lymph Node	Iliac	Hyperplasia	Lymphoid, Marked
	Renal	Hyperplasia	Lymphoid, Mild
[Hyperplasia TGLS = 3-14]			
[Hyperplasia TGLS = 4-15]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
[Hyperplasia TGLS = 1-8]			
* Skin	Subcut Tiss	Liposarcoma	
[Liposarcoma TGLS = 2-11+12+13]			

PRIMARY CAUSE OF DEATH - Skin Subcut Tiss Liposarcoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 131

TRT#: 2
DOSE: CONTROL

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 643
HISTO: 26563

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mediastinal	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Brain		Hemorrhage	Marked
[Hemorrhage TGLS = 6-1]			
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]		Vacuolization Cytoplasmic	Marked
[Vacuolization Cytoplasmic TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-11]			
* Stomach, Forestomach		Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear
CONTRIBUTORY CAUSE OF DEATH - Brain Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 132

TRT#: 2

SEX: Female

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26564

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Bone Marrow		Hyperplasia	Reticulum Cell, Moderate
Note: BM lesion resembles myelostromal proliferation, as described on p. 400 of F344 rat book. Coded as hyperplasia, RE cell, for consistency.			
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 4-7]			
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	
* Lung	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
	Alveolar Epith	Pigmentation	Mild
[Infiltration Cellular TGLS = 5-11]			
[Pigmentation TGLS = 5-11]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 133

TRT#: 2

SEX: Female

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26565

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Kidney	Renal Tubule	Lipoma Mineralization Nephropathy	Mild Chronic, Mild
[Lipoma TGLS = 2-5]			
* Liver	Goblet Cell, Respirat Epith	Basophilic Focus Hypertrophy Inflammation	Moderate Suppurative, Moderate
* Nose			
Note: lesion in xs2, unilateral.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 134

TRT#: 2

SEX: Female

DAY ON TEST: 735

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26566

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Clitoral Gland		Hyperplasia	Moderate
		Inflammation	Suppurative, Moderate
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Mammary Gland		Carcinoma	
		Fibroadenoma	
[Carcinoma TGLS = 1-7]			
[Fibroadenoma TGLS = 2-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 135

TRT#: 2

SEX: Female

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26567

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Bone	Cartilage, Sternum	Degeneration	Mucoid, Moderate
Note: Similar (?) to lesion described as mucinous degeneration on p. 221 of F344 rat book. We see the gross lesion occasionally in controls and exposed rats. [Degeneration TGLS = 2-12]			
* Clitoral Gland		Inflammation	Suppurative, Mild
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Larynx	Epithelium	Metaplasia	Squamous, Mild
Note: squamous metaplasia in dorsal aspect of most caudal section.			
* Liver		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Carcinoma	
Note: this tumor has cellular and stromal characteristics of both follicular and C-cell neoplasms. [Carcinoma TGLS = 3-2]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 136

TRT#: 2

SEX: Female

DAY ON TEST: 734

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26568

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Kidney		Nephropathy	Chronic, Mild
* Liver		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 1-11]			
* Nose		Inflammation	Suppurative, Minimal
* Ovary		Cyst	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Date Report Requested: 10/20/2014

Test Type: CHRONIC

Test Compound: Tetrahydrofuran

Time Report Requested: 06:03:42

Route: RESPIRATORY EXPOSURE WHOLE BODY

CAS Number: 109-99-9

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BNW

ANIMAL ID: 137

TRT#: 2

SEX: Female

DAY ON TEST: 710

DOSE: CONTROL

DISP: Natural Death

HISTO: 26569

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Islets, Pancreatic	* Liver	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

AUTO PRECLUDES DIAG.

* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Larynx	Epiglottitis	Metaplasia	Squamous, Mild
* Mammary Gland		Fibroadenoma	Multiple
	Duct	Metaplasia	Squamous, Mild
Note: fibroadenoma on slide 13 had squamous metaplasia of epith lining large duct. [Fibroadenoma TGLS = 1,2-12+13]			
* Ovary		Cyst	Marked
[Cyst TGLS = 4-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 138

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Natural Death

DAY ON TEST: 4

HISTO: 26570

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Uterus		

OBSERVATIONS

* Kidney	Pelvis	Dilatation	Marked
	Renal Tubule	Mineralization	Mild
	Papilla	Necrosis	Marked
		Nephropathy	Chronic, Mild
[Dilatation TGLS = 7-5]			
Lymph Node	Iliac	Hyperplasia	Lymphoid, Marked
	Renal	Hyperplasia	Lymphoid, Marked
[Hyperplasia TGLS = 6-12]			
[Hyperplasia TGLS = 5-11]			
* Urinary Bladder		Hemorrhage	Marked
		Inflammation	Suppurative, Marked
		Ulcer	Marked
[Hemorrhage TGLS = 3-8]			
[Inflammation TGLS = 3-8]			
[Ulcer TGLS = 3-8]			

PRIMARY CAUSE OF DEATH

- Kidney Papilla Necrosis

CONTRIBUTORY CAUSE OF DEATH

- Urinary Bladder Inflammation;Urinary Bladder Ulcer

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 139

TRT#: 2
DOSE: CONTROL

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 705
HISTO: 26571

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Medulla [Pheochromocytoma Malignant TGLS = 8-5]		Pheochromocytoma Malignant	
* Brain	Ventricle	Hydrocephalus	Moderate
* Clitoral Gland Note: from slides 7 and 12, it appears that there is a cystic clitoral gland with surrounding granulomatous inflam, ulceration. [Inflammation TGLS = 1,9-7+12]		Inflammation	Granulomatous, Marked
* Kidney [Nephropathy TGLS = 2-5]	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Mild
* Liver [Hepatodiaphragmatic Nodule TGLS = 4-11]		Hepatodiaphragmatic Nodule	
* Mammary Gland [Carcinoma TGLS = 6-13]		Carcinoma	
* Pituitary Gland [Adenoma TGLS = 5-8]	Pars Distalis	Adenoma	

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 140

TRT#: 2

SEX: Female

DAY ON TEST: 597

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26572

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Kidney	Renal Tubule	Mineralization	Moderate
		Nephropathy	Chronic, Moderate
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Lung	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Nose		Foreign Body	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-11]			
* Stomach, Glandular		Mineralization	Mild
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 141

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: 26573

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization	Moderate
		Nephropathy	Chronic, Moderate
* Larynx		Foreign Body	
* Liver		Basophilic Focus	
		Clear Cell Focus	
	[Basophilic Focus TGLS = 2-4]		
* Lung		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	
	[Fibroadenoma TGLS = 3-7]		
* Pituitary Gland	Pars Distalis	Adenoma	
		Cyst	Moderate
	[Adenoma TGLS = 1-8]		
	[Cyst TGLS = 1-8]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 142

TRT#: 2

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26574

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
-------------------------	---------------------

OBSERVATIONS

* Intestine Large, Rectum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Larynx	Epithelium	Hyperplasia	Mild
		Inflammation	Suppurative, Mild
Note: lesions in vp and caudal lx sections			
* Liver		Clear Cell Focus	
		[Clear Cell Focus TGLS = 5-11]	
* Mammary Gland		Fibroadenoma	Multiple
		[Fibroadenoma TGLS = 1,2,3-12+13+14+15]	
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Uterus		Polyp Stromal	
		[Polyp Stromal TGLS = 4-8]	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 143

TRT#: 2

SEX: Female

DAY ON TEST: 733

DOSE: CONTROL

DISP: Terminal Sacrifice

HISTO: 26575

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|--------------------------|-----------------------------|---------------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Esophagus | * Heart |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic | * Larynx | * Liver |
| * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Nose | * Ovary | * Pancreas |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | * Uterus | |

OBSERVATIONS

- | | | | |
|---------------------------------|---------------|-------------------|---------------|
| * Clitoral Gland | | Carcinoma | |
| [Carcinoma TGLS = 3-7] | | | |
| * Intestine Large, Rectum | | Parasite Metazoan | |
| * Kidney | Renal Tubule | Mineralization | Mild |
| | | Nephropathy | Chronic, Mild |
| * Mammary Gland | | Fibroadenoma | |
| [Fibroadenoma TGLS = 1-11+12] | | | |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 2-8] | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 144

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 715

HISTO: 26576

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex	Zona Reticul	Pigmentation	Moderate
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
Note: large mass (tgl 1) was fibroadenoma; small mass not clearly attached to fibroadenoma is CA. All this is on slide 12.			
[Fibroadenoma TGLS = 1-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-11]			
* Stomach, Forestomach		Hyperkeratosis	Mild
		Hyperplasia	Mild
* Thymus		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 144

TRT#: 2
DOSE: CONTROL

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 715
HISTO: 26576

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma
CONTRIBUTORY CAUSE OF DEATH	- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 145

TRT#: 2

SEX: Female

DAY ON TEST: 678

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 26577

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Brain		Hemorrhage	Marked
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
* Liver		Angiectasis	Moderate
		Vacuolization Cytoplasmic	Moderate
			[Angiectasis TGLS = 3-4]
			[Vacuolization Cytoplasmic TGLS = 4-4]
* Mammary Gland		Fibroadenoma	
			[Fibroadenoma TGLS = 1-11]
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
		Cyst	Marked
			[Cyst TGLS = 2-8]

PRIMARY CAUSE OF DEATH

- Pituitary Gland Cyst

CONTRIBUTORY CAUSE OF DEATH

- Brain Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 146

TRT#: 2
DOSE: CONTROL

SEX: Female
DISP: Terminal Sacrifice

DAY ON TEST: 734
HISTO: 26578

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Islets, Pancreatic		Hyperplasia	Moderate
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
		Galactocele	Marked
[Fibroadenoma TGLS = 5-13]			
[Galactocele TGLS = 4-12]			
* Ovary		Cyst	Moderate
[Cyst TGLS = 6-7]			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Nervosa	Cyst	Moderate
[Adenoma TGLS = 3-8]			
* Skin		Hyperkeratosis	Marked
		Hyperplasia	Marked
[Hyperkeratosis TGLS = 2-11]			
[Hyperplasia TGLS = 2-11]			
* Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 147

TRT#: 2
DOSE: CONTROL

SEX: Female
DISP: Natural Death

DAY ON TEST: 411
HISTO: 26579

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
Eye	Cornea	Hyperplasia	Mild
[Hyperplasia TGLS = 1-11]			
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Larynx	Glands	Inflammation	Suppurative, Minimal
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Hemorrhage	Moderate
[Hemorrhage TGLS = 4-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Spleen		Hemorrhage	Moderate
		Leukemia Mononuclear	
[Hemorrhage TGLS = 3-13]			
[Leukemia Mononuclear TGLS = 2,3-12+13]			

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 148

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Natural Death

DAY ON TEST: 718

HISTO: 26580

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex
* Bone Marrow
* Heart
* Lung
* Lymph Node, Mesenteric
* Pancreas
* Spleen
* Thyroid Gland

* Adrenal Medulla
* Brain
* Islets, Pancreatic
* Lymph Node, Bronchial
* Mammary Gland
* Parathyroid Gland
* Stomach, Forestomach
* Trachea

Blood Vessel
* Clitoral Gland
* Larynx
* Lymph Node, Mandibular
* Nose
* Salivary Glands
* Stomach, Glandular
* Urinary Bladder

* Bone
* Esophagus
* Liver
* Lymph Node, Mediastinal
* Ovary
* Skin
* Thymus
* Uterus

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum
* Intestine Small, Ileum

* Intestine Large, Colon
* Intestine Small, Jejunum

* Intestine Large, Rectum

* Intestine Small, Duodenum

OBSERVATIONS

* Kidney
* Pituitary Gland

Renal Tubule

Mineralization
Nephropathy
Cyst

Mild
Chronic, Minimal
Mild

PRIMARY CAUSE OF DEATH

- UNCERTAIN

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 149

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 663

HISTO: 26581

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
Lymph Node	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Bone Marrow		Hyperplasia	Reticulum Cell, Moderate
* Brain		Gliosis	Minimal
	Ventricle	Hydrocephalus	Moderate
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Hyperplasia	Reticulum Cell, Moderate
		Vacuolization Cytoplasmic	Moderate
* Mammary Gland		Carcinoma	
[Carcinoma TGLS = 2-7+11]			
* Pituitary Gland	Pars Distalis	Adenoma	
		Cyst	Marked
[Adenoma TGLS = 1-8]			
* Spleen		Hematopoietic Cell Proliferation	Moderate

PRIMARY CAUSE OF DEATH

- Pituitary Gland Cyst

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 150

TRT#: 2

DOSE: CONTROL

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 657

HISTO: 26582

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Mediastinal

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy Leukemia Mononuclear	Mild Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-4]			
* Lung		Fibroadenoma	
* Mammary Gland			
[Fibroadenoma TGLS = 4-12]			
* Pancreas		Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma Hemorrhage	Moderate
[Adenoma TGLS = 3-8]			
[Hemorrhage TGLS = 3-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-11]			
* Stomach, Forestomach		Hyperplasia Ulcer	Moderate Marked

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

CONTRIBUTORY CAUSE OF DEATH - Pituitary Gland Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 301

TRT#: 4

SEX: Female

DAY ON TEST: 733

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26833

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Ovary	* Pancreas
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy Leukemia Mononuclear	Mild Chronic, Minimal
* Liver			
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Nasolacrim Dct	Inflammation Inflammation	Suppurative, Moderate Suppurative, Mild
Note: unilateral in xs1 and 2.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
Tongue		Squamous Cell Papilloma	
[Squamous Cell Papilloma TGLS = 2-11]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 301

TRT#: 4

SEX: Female

DAY ON TEST: 733

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26833

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 302

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 491

HISTO: 26834

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Brain		Hemorrhage	Minimal
* Kidney	Renal Tubule Cortex	Mineralization Necrosis	Minimal Moderate
	[Necrosis TGLS = 12-5]		
* Liver		Leukemia Mononuclear Vacuolization Cytoplasmic	Marked
	[Leukemia Mononuclear TGLS = 6-4] [Vacuolization Cytoplasmic TGLS = 6-4]		
* Lung		Hemorrhage Leukemia Mononuclear	Minimal
	[Hemorrhage TGLS = 3,4-3]		
Lymph Node	Pancreatic	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 11-14]		
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-2]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
	[Fibroadenoma TGLS = 13-15]		
* Spleen		Hemorrhage	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 302

TRT#: 4

SEX: Female

DAY ON TEST: 491

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26834

ORGAN AND ACCOUNTABLE SITE STATUS

[Hemorrhage TGLS = 9,10-12+13]

[Leukemia Mononuclear TGLS = 7-11]

* Thymus

Leukemia Mononuclear

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

- Spleen Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 303

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 26835

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
Eye		Cataract	Marked
[Cataract TGLS = 2-12]			
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-8]			
* Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 304

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Natural Death

DAY ON TEST: 670

HISTO: 26836

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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OBSERVATIONS

* Kidney		Nephropathy	Chronic, Mild
* Liver		Angiectasis	Marked
		Hemorrhage	Marked
[Angiectasis TGLS = 3-4]			
[Hemorrhage TGLS = 4-12]			
* Lung		Hemorrhage	Moderate
	Alveolar Epith	Infiltration Cellular	Histiocyte, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Angiectasis	Marked
[Angiectasis TGLS = 5-11]			

PRIMARY CAUSE OF DEATH

- Liver Hemorrhage

CONTRIBUTORY CAUSE OF DEATH

- Spleen Angiectasis

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 305

TRT#: 4

SEX: Female

DAY ON TEST: 719

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26837

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Clitoral Gland

OBSERVATIONS

* Intestine Large, Cecum		Carcinoma Ulcer	Moderate
[Carcinoma TGLS = 1-11]			
[Ulcer TGLS = 1-12]			
* Kidney	Renal Tubule	Mineralization	Minimal
* Larynx	Epithelium	Inflammation Metaplasia	Suppurative, Mild Squamous, Mild
Note: most caudal laryngeal section, ventral aspect.			
* Lymph Node, Mesenteric		Inflammation	Suppurative, Moderate
[Inflammation TGLS = 5-13]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Uterus		Leiomyoma	
[Leiomyoma TGLS = 4-8]			

PRIMARY CAUSE OF DEATH - Intestine Large, Cecum Carcinoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 306

TRT#: 4

SEX: Female

DAY ON TEST: 681

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26838

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Brain	Ventricle	Hydrocephalus	Moderate
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
		Angiectasis	Moderate
* Liver			
[Angiectasis TGLS = 4-4]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 307

TRT#: 4

SEX: Female

DAY ON TEST: 733

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26839

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|--------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Heart | * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Larynx |
| * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Mammary Gland | * Nose | * Ovary |
| * Pancreas | * Parathyroid Gland | * Salivary Glands | * Skin |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Thymus |
| * Thyroid Gland | * Trachea | * Urinary Bladder | |

OBSERVATIONS

- | | | | |
|-------------------------------|---------------|-------------------|---------------|
| * Intestine Large, Rectum | | Parasite Metazoan | |
| * Kidney | Renal Tubule | Mineralization | Mild |
| | | Nephropathy | Chronic, Mild |
| * Liver | | Basophilic Focus | |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 1-8] | | | |
| * Uterus | | Polyp Stromal | |
| [Polyp Stromal TGLS = 2-11] | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 308

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26840

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy Leukemia Mononuclear	Mild Chronic, Mild
* Liver	[Leukemia Mononuclear TGLS = 2-4]		
* Lung		Hemorrhage Carcinoma	Mild
* Mammary Gland	[Carcinoma TGLS = 1-11]		
* Nose		Foreign Body Inflammation	Suppurative, Mild
Note: assoc with fb in xs 2.			
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear Polyp Stromal	
* Spleen			
* Uterus			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 309

TRT#: 4

SEX: Female

DAY ON TEST: 614

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26841

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Brain	Ventricle	Hydrocephalus	Marked
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
* Liver		Vacuolization Cytoplasmic	Moderate
[Vacuolization Cytoplasmic TGLS = 3-4+11]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 310

TRT#: 4

SEX: Female

DAY ON TEST: 336

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26842

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
* Liver		Inflammation	Granulomatous, Minimal
* Lung		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 1-8]		

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 311

TRT#: 4

SEX: Female

DAY ON TEST: 733

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26843

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Islets, Pancreatic		Carcinoma	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 4-11]			
* Nose	Nasopharyn Dct	Hyperplasia	Marked
	Nasolacrim Dct	Inflammation	Suppurative, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
* Thymus		Cyst	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 312

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: 26844

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Cyst	Moderate
		Nephropathy	Chronic, Moderate
[Cyst TGLS = 3-5]			
* Larynx	Epiglottis	Metaplasia	Squamous, Minimal
* Liver		Angiectasis	Mild
Note: no "mass" on slide 4; mild angiectasis near surface on one lobe.			
[Angiectasis TGLS = 4-4]			
* Lung	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 5,6,7-12+13+14]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 2-11]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 313

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 714

HISTO: 26845

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Esophagus	* Heart	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Inflammation	Suppurative, Marked
[Inflammation TGLS = 2-7]			
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 1-8]			
[Leukemia Mononuclear TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-11]			
* Thymus		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 313

TRT#: 4

SEX: Female

DAY ON TEST: 714

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26845

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 314

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26846

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Clitoral Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 1-11]			
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 4-12]		Galactocele	Moderate
[Galactocele TGLS = 1-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]		Cyst	Marked
[Cyst TGLS = 2-8]			
* Thyroid Gland	C Cell	Adenoma	
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 3-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 315

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 26847

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Mild
* Liver		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 3-4]			
* Lung		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 4-12]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 5-13]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Skin		Squamous Cell Papilloma	
[Squamous Cell Papilloma TGLS = 1-11]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 316

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26848

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Kidney		Cyst	Moderate
	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
[Cyst TGLS = 6-5]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 3-13]			
Mesentery	Fat	Necrosis	Marked
[Necrosis TGLS = 5,7-14]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Skin	Subcut Tiss	Fibrosarcoma	
[Fibrosarcoma TGLS = 4-11+12]			
* Thyroid Gland	C Cell	Adenoma	
		Ultimobranchial Cyst	Marked
Note: this cyst may be unrelated to thyroid, altho it is adjacent to thyroid.			
			[Ultimobranchial Cyst TGLS = 1-2]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 316

TRT#: 4

SEX: Female

DAY ON TEST: 735

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26848

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 317

TRT#: 4

SEX: Female

DAY ON TEST: 733

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26849

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Minimal
* Clitoral Gland		Carcinoma	
[Carcinoma TGLS = 1-11]			
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
		Hemorrhage	Moderate
[Adenoma TGLS = 2-8]			
[Hemorrhage TGLS = 2-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 318

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: 26850

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Clitoral Gland	* Lymph Node, Bronchial
------------------	-------------------------

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Moderate
[Nephropathy TGLS = 5-5]			
* Liver		Clear Cell Focus	
[Clear Cell Focus TGLS = 4-4]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 2,3-11+12+13+14]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 319

TRT#: 4

SEX: Female

DAY ON TEST: 681

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26851

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

OBSERVATIONS

* Intestine Large, Cecum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
* Liver		Clear Cell Focus	
		Hepatodiaphragmatic Nodule	
	[Clear Cell Focus TGLS = 5-15]		
	[Hepatodiaphragmatic Nodule TGLS = 6-14]		
* Lung		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	Multiple
	[Fibroadenoma TGLS = 1,3-11+12+13+15]		
* Ovary	Bilateral	Cyst	Moderate
	[Cyst TGLS = 4-7]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 2-8]		
* Uterus		Polyp Stromal	

PRIMARY CAUSE OF DEATH - Mammary Gland Fibroadenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 320

TRT#: 4

SEX: Female

DAY ON TEST: 733

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26852

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Heart | * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic |
| * Larynx | * Mammary Gland | * Nose | * Ovary |
| * Pancreas | * Parathyroid Gland | * Salivary Glands | * Skin |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | * Uterus | |

MISSING

- * Pituitary Gland

OBSERVATIONS

- | | | |
|---------------------------|----------------------|------------------|
| * Kidney | Nephropathy | Chronic, Minimal |
| * Liver | Leukemia Mononuclear | |
| * Lung | Leukemia Mononuclear | |
| * Lymph Node, Bronchial | Leukemia Mononuclear | |
| * Lymph Node, Mandibular | Leukemia Mononuclear | |
| * Lymph Node, Mediastinal | Leukemia Mononuclear | |
| * Lymph Node, Mesenteric | Leukemia Mononuclear | |
| * Spleen | Leukemia Mononuclear | |

[Leukemia Mononuclear TGLS = 1-4]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 321

TRT#: 4

SEX: Female

DAY ON TEST: 658

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26853

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Marked
[Vacuolization Cytoplasmic TGLS = 6-5]			
* Kidney	Renal Tubule	Granulosa-Theca Tumor Malignant	Metastatic (Ovary)
		Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Moderate
[Leukemia Mononuclear TGLS = 2-4]			
[Vacuolization Cytoplasmic TGLS = 2-4]			
* Lung		Granulosa-Theca Tumor Malignant	Metastatic (Ovary)
		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Ovary		Granulosa-Theca Tumor Malignant	
[Granulosa-Theca Tumor Malignant TGLS = 1-12]			
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Spleen		Leukemia Mononuclear	
		Necrosis	Marked
[Leukemia Mononuclear TGLS = 3,4,5-11]			
[Necrosis TGLS = 5-11]			

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:42
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 321	TRT#: 4	SEX: Female	DAY ON TEST: 658
	DOSE: 200 PPM	DISP: Moribund Sacrifice	HISTO: 26853

ORGAN AND ACCOUNTABLE SITE STATUS

CONTRIBUTORY CAUSE OF DEATH	- Ovary Granulosa-Theca Tumor Malignant
-----------------------------	---

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 322

TRT#: 4

SEX: Female

DAY ON TEST: 500

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26854

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Salivary Glands
* Skin	* Spleen	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Mediastinal	* Parathyroid Gland
---------------------------	---------------------

OBSERVATIONS

* Brain		Hemorrhage	Moderate
	Ventricle	Hydrocephalus	Moderate
* Kidney		Nephropathy	Chronic, Mild
* Liver		Vacuolization Cytoplasmic	Marked
	[Vacuolization Cytoplasmic TGLS = 3-4]		
* Lung		Hemorrhage	Minimal
	[Hemorrhage TGLS = 1-3]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 2-8]		
* Stomach, Forestomach		Hyperplasia	Minimal
		Inflammation	Suppurative, Minimal
		Necrosis	Marked
		Ulcer	Moderate
	[Necrosis TGLS = 7-12]		
	[Ulcer TGLS = 6-11]		

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH - Brain Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 323

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26855

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Clitoral Gland [Hyperplasia TGLS = 2-7+12]		Hyperplasia	Moderate
* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Mild
* Liver [Clear Cell Focus TGLS = 4-11]		Clear Cell Focus	
* Mammary Gland [Fibroadenoma TGLS = 1-13+14]		Fibroadenoma	
Mesentery [Necrosis TGLS = 3-12]	Fat	Necrosis	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 324

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26856

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	Tissue NOS	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Intestine Large, Rectum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	
* Lung		Hemorrhage	Minimal
* Mammary Gland		Carcinoma	
[Carcinoma TGLS = 2-11]			
* Nose		Foreign Body	
		Inflammation	Suppurative, Mild
	Olfactory Epi	Metaplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH

-

Animal Note: resp metaplasia of olfact epith assoc with fb unilaterally in xs3.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:42

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 325

TRT#: 4

SEX: Female

DAY ON TEST: 565

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26857

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Brain	Ventricle	Hydrocephalus	Moderate
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
* Liver		Inflammation	Granulomatous, Mild
		Vacuolization Cytoplasmic	Marked
			[Vacuolization Cytoplasmic TGLS = 4,5-4+12]
* Lung		Hemorrhage	Minimal
Lymph Node	Pancreatic	Pigmentation	Marked
			Note: pancreatic LN on sl 11 contains yellow pigment, oval to needlelike clear crystalline structures in macrophages; probly lipogenic, related to fatty liver.
			[Pigmentation TGLS = 3-11]
* Nose	Nasolacrim Dct	Inflammation	Suppurative, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
			[Adenoma TGLS = 2-8]
* Spleen		Pigmentation	Marked
* Stomach, Forestomach		Hyperkeratosis	Moderate
		Hyperplasia	Moderate
		Inflammation	Suppurative, Moderate
		Ulcer	Marked
			[Hyperplasia TGLS = 6-13]
			[Inflammation TGLS = 6-13]
			[Ulcer TGLS = 6-13]

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 325

TRT#: 4
DOSE: 200 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 565
HISTO: 26857

ORGAN AND ACCOUNTABLE SITE STATUS

* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 326

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 687

HISTO: 26858

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Mild
* Kidney	Renal Tubule	Mineralization	Minimal
	[Nephropathy TGLS = 11-5]	Nephropathy	Chronic, Moderate
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 10-4]	Vacuolization Cytoplasmic	Marked
	[Vacuolization Cytoplasmic TGLS = 10-4]		
* Lung	Alveolar Epith	Hyperplasia	Mild
	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
	[Leukemia Mononuclear TGLS = 4-3]	Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 2-7]		
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Ovary		Cyst	Marked
	[Cyst TGLS = 7-7]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 3-8]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 326	TRT#: 4	SEX: Female	DAY ON TEST: 687
	DOSE: 200 PPM	DISP: Moribund Sacrifice	HISTO: 26858

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Hemorrhage TGLS = 9-12] [Leukemia Mononuclear TGLS = 8-12]	Hemorrhage Leukemia Mononuclear	Moderate
* Stomach, Forestomach [Ulcer TGLS = 12-8+13]	Ulcer	Marked
* Thymus [Leukemia Mononuclear TGLS = 5-11]	Leukemia Mononuclear	
* Uterus [Atrophy TGLS = 13-14]	Atrophy	Marked

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 327

TRT#: 4

SEX: Female

DAY ON TEST: 733

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26859

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Brain	Ventricle	Hydrocephalus	Moderate
* Clitoral Gland		Hyperplasia	Marked
[Hyperplasia TGLS = 1-7]			
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
[Nephropathy TGLS = 5-5]			
* Liver		Vacuolization Cytoplasmic	Mild
[Vacuolization Cytoplasmic TGLS = 4-4]			
* Mammary Gland	Epithelium	Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Skin		Ulcer	Marked
[Ulcer TGLS = 1-7]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
* Uterus		Atrophy	Marked
[Atrophy TGLS = 6-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 328

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: 26860

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Moderate
[Nephropathy TGLS = 5-5]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,3,4-11+12+13]			
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 329

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 651

HISTO: 26861

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Marked
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Marked
		[Leukemia Mononuclear TGLS = 5-4]	
		[Vacuolization Cytoplasmic TGLS = 5-4]	
* Lung		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Carcinoma	
		Fibroadenoma	
		[Carcinoma TGLS = 1-12]	
		[Fibroadenoma TGLS = 1-12]	
* Ovary		Cyst	Marked
		[Cyst TGLS = 3-7]	
* Pituitary Gland	Pars Distalis	Adenoma	
		[Adenoma TGLS = 2-8]	
* Spleen		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 4-11]	
* Thyroid Gland	C Cell	Adenoma	
	C Cell	Carcinoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 329	TRT#: 4	SEX: Female	DAY ON TEST: 651
	DOSE: 200 PPM	DISP: Moribund Sacrifice	HISTO: 26861

ORGAN AND ACCOUNTABLE SITE STATUS

* Uterus Polyp Stromal

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 330	TRT#: 4	SEX: Female	DAY ON TEST: 719
	DOSE: 200 PPM	DISP: Moribund Sacrifice	HISTO: 26862

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Brain	Ventricle	Hydrocephalus	Moderate
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	
		Vacuolization Cytoplasmic	Moderate
* Mammary Gland		Carcinoma	
		Fibroadenoma	
		[Carcinoma TGLS = 3-12]	
		[Fibroadenoma TGLS = 2-11]	
Mesentery	Fat	Necrosis	Marked
		[Necrosis TGLS = 4-13]	
* Pancreas		Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
		[Adenoma TGLS = 1-8]	
* Stomach, Forestomach		Hyperplasia	Mild

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 331

TRT#: 4

SEX: Female

DAY ON TEST: 733

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26863

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Heart | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Lung |
| * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric |
| * Mammary Gland | * Nose | * Ovary | * Parathyroid Gland |
| * Salivary Glands | * Skin | * Stomach, Forestomach | * Stomach, Glandular |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

OBSERVATIONS

- | | | | |
|---------------------------------------|---------------|----------------------|------------------|
| * Intestine Large, Cecum | | Parasite Metazoan | |
| * Kidney | Renal Tubule | Mineralization | Minimal |
| | | Nephropathy | Chronic, Minimal |
| * Larynx | Epithelium | Hyperplasia | Mild |
| Note: hyperplasia of epith lining vp. | | | |
| * Liver | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 1-4] | | | |
| * Pancreas | | Atrophy | Mild |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| * Spleen | | Leukemia Mononuclear | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 332

TRT#: 4

SEX: Female

DAY ON TEST: 58

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26864

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex

* Bone Marrow

* Heart

* Intestine Small, Duodenum

* Larynx

* Lymph Node, Mesenteric

* Parathyroid Gland

* Spleen

* Thyroid Gland

* Adrenal Medulla

* Brain

* Intestine Large, Cecum

* Intestine Small, Ileum

* Liver

* Mammary Gland

* Pituitary Gland

* Stomach, Forestomach

* Trachea

Blood Vessel

* Clitoral Gland

* Intestine Large, Colon

* Intestine Small, Jejunum

* Lymph Node, Mandibular

* Nose

* Salivary Glands

* Stomach, Glandular

* Urinary Bladder

* Bone

* Esophagus

* Intestine Large, Rectum

* Islets, Pancreatic

* Lymph Node, Mediastinal

* Pancreas

* Skin

* Thymus

* Uterus

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Kidney

* Lung

* Ovary

[Cyst TGLS = 2-7]

Tooth

Renal Tubule

Mineralization

Hemorrhage

Cyst

Developmental Malformation

Mild

Minimal

Minimal

PRIMARY CAUSE OF DEATH

- Tooth Developmental Malformation

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 333

TRT#: 4

SEX: Female

DAY ON TEST: 624

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26865

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
Note: In on slide 11 is pancreatic, not renal; pancreas attached.			
[Leukemia Mononuclear TGLS = 8-11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Mineralization	Marked
[Mineralization TGLS = 6,7-12+13]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
[Hyperplasia TGLS = 3-8]			
* Spleen		Leukemia Mononuclear	
		Necrosis	Moderate
[Leukemia Mononuclear TGLS = 4-11]			
[Necrosis TGLS = 5-11]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 333

TRT#: 4

SEX: Female

DAY ON TEST: 624

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26865

ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Forestomach

Squamous Cell Papilloma

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 334

TRT#: 4

SEX: Female

DAY ON TEST: 705

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26866

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Salivary Glands	* Skin	* Spleen
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Brain	Ventricle	Hydrocephalus	Mild
* Islets, Pancreatic		Adenoma	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Vacuolization Cytoplasmic	Marked
* Lung	Alveolar Epith	Hyperplasia	Moderate
Note: only part of lesion on slide 3; ordered recuts, embedding of additional wet tissue to get remainder of lesions. Lesion on recut of slide3.			
[Hyperplasia TGLS = 2-3]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 4-12]			
* Nose		Foreign Body	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Stomach, Forestomach		Hyperplasia	Moderate
		Ulcer	Marked
[Ulcer TGLS = 7-12]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 334

TRT#: 4

SEX: Female

DAY ON TEST: 705

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26866

ORGAN AND ACCOUNTABLE SITE STATUS

CONTRIBUTORY CAUSE OF DEATH

- Stomach;Forestomach Ulcer

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 335

TRT#: 4

SEX: Female

DAY ON TEST: 681

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26867

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy Clear Cell Focus	Moderate Chronic, Minimal
* Liver			
[Clear Cell Focus TGLS = 4-11]			
* Lung		Hemorrhage	Mild
[Hemorrhage TGLS = 1-3]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 3-12+13+14+15]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			

PRIMARY CAUSE OF DEATH - Mammary Gland Fibroadenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 336

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: 26868

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hemorrhage	Moderate
Eye		Cataract	Mild
[Cataract TGLS = 1-11]			
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
		Angiectasis	Moderate
* Liver			
[Angiectasis TGLS = 5-12]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 6,7,8-13+14+15]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 337

TRT#: 4

SEX: Female

DAY ON TEST: 705

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26869

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Brain | * Clitoral Gland | * Esophagus | * Heart |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Larynx |
| * Mammary Gland | * Ovary | * Pancreas | * Parathyroid Gland |
| * Salivary Glands | * Skin | * Stomach, Glandular | * Trachea |
| * Uterus | | | |

OBSERVATIONS

- | | | | |
|---|---------------|----------------------------|-------------------|
| * Bone Marrow | | Leukemia Mononuclear | |
| * Kidney | Renal Tubule | Mineralization | Mild |
| | | Nephropathy | Chronic, Moderate |
| * Liver | | Hepatodiaphragmatic Nodule | |
| | | Leukemia Mononuclear | |
| | | Vacuolization Cytoplasmic | Moderate |
| | | | |
| [Hepatodiaphragmatic Nodule TGLS = 10-14] | | | |
| * Lung | | Leukemia Mononuclear | |
| [Leukemia Mononuclear TGLS = 12,15-11+13] | | | |
| Lymph Node | Deep Cervical | Leukemia Mononuclear | |
| | Iliac | Leukemia Mononuclear | |
| | Pancreatic | Leukemia Mononuclear | |
| | Renal | Leukemia Mononuclear | |
| | Thoracic | Leukemia Mononuclear | |
| Note: axillary not available site, used thoracic LN | | | |
| [Leukemia Mononuclear TGLS = 2-13] | | | |
| [Leukemia Mononuclear TGLS = 8-14] | | | |
| [Leukemia Mononuclear TGLS = 3-15] | | | |
| [Leukemia Mononuclear TGLS = 11-16] | | | |
| [Leukemia Mononuclear TGLS = 16-17] | | | |
| * Lymph Node, Bronchial | | Leukemia Mononuclear | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 337

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 705

HISTO: 26869

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 1-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 14-12]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 17-6]			
* Nose		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 5-8]			
[Leukemia Mononuclear TGLS = 5-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-4]			
* Stomach, Forestomach		Ulcer	Marked
[Ulcer TGLS = 18-8]			
* Thymus		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 13-12]			
* Thyroid Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-2]			
* Urinary Bladder	Transit Epithe	Hyperplasia	Marked
		Leukemia Mononuclear	
Note: 3 recuts of bladder, no change.			
[Hyperplasia TGLS = 7-8]			
[Leukemia Mononuclear TGLS = 7-8]			

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 338

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 26870

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Mild
* Larynx	Epithelium	Foreign Body Hyperplasia	Mild
Note: hyperplasia in vp assoc with fb.			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-11]			
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 339

TRT#: 4

SEX: Female

DAY ON TEST: 505

DOSE: 200 PPM

DISP: Natural Death

HISTO: 26871

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Rectum	* Islets, Pancreatic	* Larynx
* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Mediastinal

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Nose	* Stomach, Forestomach	* Stomach, Glandular

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization	Minimal
* Lung		Hemorrhage	Minimal
* Pituitary Gland		Cyst	Mild

PRIMARY CAUSE OF DEATH

- UNCERTAIN

Animal Note: gross lesions reflect autolytic change.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 340

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26872

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Parathyroid Gland

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy	Minimal Chronic, Moderate
[Nephropathy TGLS = 4-5]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,5-11+13]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 3-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 341

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: 26873

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Moderate
	[Nephropathy TGLS = 2-5]		
* Liver		Clear Cell Focus	
	[Clear Cell Focus TGLS = 1-11]		
* Pancreas		Atrophy	Mild
* Pituitary Gland		Cyst	Mild
	[Cyst TGLS = 3-8]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 342

TRT#: 4

SEX: Female

DAY ON TEST: 478

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26874

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	Eye	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Glandular	* Thymus	* Trachea	

OBSERVATIONS

* Adren Medulla			
Note: cortex of right adrenal is infarcted; left adrenal is normal.			
* Adrenal Cortex		Necrosis	Marked
[Necrosis TGLS = 7-5]			
* Bone Marrow		Hyperplasia	Reticulum Cell, Mild
* Esophagus			
Note: multiple xs taken through anterior esophagus, pharynx, and adjacent larynx; no abnormalities found.			
* Kidney	Renal Tubule	Mineralization	Moderate
		Nephropathy	Chronic, Minimal
* Liver	Hepatocyte	Regeneration	Moderate
		Vacuolization Cytoplasmic	Moderate
Note: wierd liver lesion; diffuse basophilia with numerous mitoses, plus cytoplasmic vacuolization, no MCL.			
* Lung		Hemorrhage	Minimal
* Lymph Node, Bronchial		Hemorrhage	Minimal
* Lymph Node, Mediastinal		Hemorrhage	Minimal
[Hemorrhage TGLS = 1-2]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 9-14]			
* Pituitary Gland		Cyst	Mild
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Stomach, Forestomach		Hyperplasia	Minimal
[Hyperplasia TGLS = 10-15]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 342

TRT#: 4

SEX: Female

DAY ON TEST: 478

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26874

ORGAN AND ACCOUNTABLE SITE STATUS

* Thyroid Gland

C Cell

Hyperplasia

Minimal

* Urinary Bladder

Transit Epithe

Hyperplasia

Minimal

* Uterus

Sarcoma Stromal

[Sarcoma Stromal TGLS = 6-11+12+13]

PRIMARY CAUSE OF DEATH

- Uterus Sarcoma Stromal

CONTRIBUTORY CAUSE OF DEATH

- Adrenal Cortex Necrosis

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 343

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26875

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Moderate
* Liver		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 2-4]			
* Mammary Gland		Carcinoma	
[Carcinoma TGLS = 4-11]			
Mesentery	Fat	Necrosis	Marked
[Necrosis TGLS = 3,5-12+13]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 344

TRT#: 4

SEX: Female

DAY ON TEST: 719

DOSE: 200 PPM

DISP: Moribund Sacrifice

HISTO: 26876

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Heart	Atrium	Thrombosis	Moderate
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver	Hepatocyte	Necrosis	Moderate
		Vacuolization Cytoplasmic	Moderate
			[Necrosis TGLS = 4,5-4]
			[Vacuolization Cytoplasmic TGLS = 4,5-4]
Lymph Node			Note: slide 13 is pancreatic LN, not mesenteric as indicated in tgl 6.
* Mammary Gland		Fibroadenoma	
			[Fibroadenoma TGLS = 2-11]
* Nose	Nasolacrim Dct	Inflammation	Suppurative, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
			[Adenoma TGLS = 3-8]
* Stomach, Forestomach		Hyperplasia	Mild
* Uterus		Polyp Stromal	

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 345

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26877

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Uterus	

OBSERVATIONS

* Clitoral Gland		Inflammation	Suppurative, Marked
[Inflammation TGLS = 4-7]			
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Mild
* Liver		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Marked
[Hepatodiaphragmatic Nodule TGLS = 1-11]			
[Leukemia Mononuclear TGLS = 2-4]			
[Vacuolization Cytoplasmic TGLS = 1,2-4+11]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Urinary Bladder	Transit Epithe	Papilloma	
[Papilloma TGLS = 5-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 346

TRT#: 4

SEX: Female

DAY ON TEST: 733

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26878

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Clitoral Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 1-12]			
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	
		Vacuolization Cytoplasmic	Mild
[Clear Cell Focus TGLS = 4-11]			
[Vacuolization Cytoplasmic TGLS = 3-4+11]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-12+13]			
* Pituitary Gland	Pars Distalis	Adenoma	
* Skin		Ulcer	Moderate
[Ulcer TGLS = 5-14]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 347

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Natural Death

DAY ON TEST: 695

HISTO: 26879

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Islets, Pancreatic	* Larynx	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

AUTO PRECLUDES DIAG.

* Intestine Small, Jejunum

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Inflammation	Suppurative, Moderate
[Inflammation TGLS = 8-7]			
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-11]			
* Lung		Hemorrhage	Moderate
		Leukemia Mononuclear	
[Hemorrhage TGLS = 6-3]			
[Leukemia Mononuclear TGLS = 6-3]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
		Leukemia Mononuclear	
Note: hepatic In not available as a site.			
[Leukemia Mononuclear TGLS = 7-11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	Multiple

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 347

TRT#: 4

SEX: Female

DAY ON TEST: 695

DOSE: 200 PPM

DISP: Natural Death

HISTO: 26879

ORGAN AND ACCOUNTABLE SITE STATUS

[Fibroadenoma TGLS = 1,2-13+14+15]

* Pituitary Gland

Pars Distalis

Adenoma

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 3-12]

* Uterus

Polyp Stromal

[Polyp Stromal TGLS = 4-8]

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 348

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 467

HISTO: 26880

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Kidney	Renal Tubule	Mineralization	Mild
* Liver		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Moderate
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
		Cyst	Minimal
[Cyst TGLS = 1-8]			
* Spleen		Fibrosis	Minimal
		Leukemia Mononuclear	
[Fibrosis TGLS = 3-11]			
[Leukemia Mononuclear TGLS = 2-11]			
* Stomach, Forestomach		Hyperplasia	Mild
		Inflammation	Suppurative, Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 348	TRT#: 4	SEX: Female	DAY ON TEST: 467
	DOSE: 200 PPM	DISP: Moribund Sacrifice	HISTO: 26880

ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus	Leukemia Mononuclear
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 349

TRT#: 4

DOSE: 200 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 592

HISTO: 26881

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Adenoma Hemorrhage Vacuolization Cytoplasmic	Moderate Marked
[Adenoma TGLS = 6-5]			
[Hemorrhage TGLS = 5-5]			
[Vacuolization Cytoplasmic TGLS = 6-5]			
* Bone Marrow		Leukemia Mononuclear	
* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Hemorrhage Leukemia Mononuclear	Minimal
[Leukemia Mononuclear TGLS = 2-3]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland		Cyst	Moderate
[Cyst TGLS = 3-8]			
* Spleen		Hemorrhage	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 349

TRT#: 4
DOSE: 200 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 592
HISTO: 26881

ORGAN AND ACCOUNTABLE SITE STATUS

Leukemia Mononuclear

[Hemorrhage TGLS = 8-11]

[Leukemia Mononuclear TGLS = 7,8-11]

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 350

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 200 PPM

DISP: Terminal Sacrifice

HISTO: 26882

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Brain	Ventricle	Hydrocephalus	Mild
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Larynx		Foreign Body	
	Epithelium	Hyperplasia	Moderate
Note: hyperplasia in epith lining vp, assoc with fb.			
* Pancreas		Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
		[Adenoma TGLS = 1-8]	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 501

TRT#: 6

SEX: Female

DAY ON TEST: 569

DOSE: 600 PPM

DISP: Natural Death

HISTO: 26733

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Brain	Ventricle	Hydrocephalus	Mild
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Larynx		Foreign Body	
* Lung		Hemorrhage	Mild
* Lymph Node, Mediastinal		Hemorrhage	Moderate
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	

[Adenoma TGLS = 2-8]

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 502

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26734

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Lung		Hemorrhage	Minimal
* Ovary		Cyst	Moderate
[Cyst TGLS = 2-7]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 503

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26735

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-11+12]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 4-13]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 504

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26736

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 505

TRT#: 6

SEX: Female

DAY ON TEST: 607

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26737

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Brain	Ventricle	Hydrocephalus	Moderate
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Liver		Vacuolization Cytoplasmic	Mild
	[Vacuolization Cytoplasmic TGLS = 3-4]		
* Lung		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 4-8]		

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 506

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: 26738

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Mediastinal	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Kidney	Renal Tubule	Mineralization	Mild
* Liver		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
	[Hepatodiaphragmatic Nodule TGLS = 6-4]		
	[Leukemia Mononuclear TGLS = 5-4]		
* Lymph Node, Mandibular		Hyperplasia	Lymphoid, Moderate
	[Hyperplasia TGLS = 1-11]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-4]		
* Thyroid Gland	Follicular Cel	Adenoma	
	[Adenoma TGLS = 3-2]		
Zymbal's Gland		Carcinoma	
	[Carcinoma TGLS = 2-12]		

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 507

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26739

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

INSUFFICIENT TISSUE

* Larynx

OBSERVATIONS

* Clitoral Gland [Inflammation TGLS = 2-11]		Inflammation	Suppurative, Moderate
* Kidney	Renal Tubule	Mineralization Nephropathy Hemorrhage Fibroadenoma	Mild Chronic, Mild Mild
* Lung			
* Mammary Gland [Fibroadenoma TGLS = 3-12]			
* Pituitary Gland [Cyst TGLS = 1-8]	Pars Distalis	Cyst Hyperplasia	Mild Marked

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 508

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26740

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Intestine Large, Cecum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-11+12]			
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 509

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26741

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Brain		Astrocytoma Malignant	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Lung		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11]			
* Pituitary Gland	Pars Distalis	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 510

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: 26742

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Moderate
[Nephropathy TGLS = 3-5]			
* Lung	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
* Nose	Nasolacrim Dct	Inflammation	Suppurative, Moderate
	Respirat Epith	Inflammation	Suppurative, Mild
		Metaplasia	Squamous, Mild
Note: lesions assoc with nasolacrimal duct in xs1.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 2-11]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 511

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26743

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Salivary Glands	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	Tissue NOS	* Trachea
* Urinary Bladder	* Uterus		

MISSING

- * Parathyroid Gland

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
* Nose		Foreign Body	
	Respirat Epith	Hyperplasia	Marked
		Inflammation	Suppurative, Moderate
Note: lesions assoc with fb in xs1.			
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Skin	Subcut Tiss	Lipoma	

[Lipoma TGLS = 1-11]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 512

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: 26744

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Clitoral Gland [Carcinoma TGLS = 3-11]		Carcinoma	
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
* Mammary Gland [Fibroadenoma TGLS = 1-12+13+14]		Fibroadenoma	
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Spleen Note: early MCL [Leukemia Mononuclear TGLS = 4-4]		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 513

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: 26745

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
Eye		Cataract	Mild
[Cataract TGLS = 4-12]			
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Lung		Hemorrhage	Mild
	Alveolar Epith	Hyperplasia	Mild
	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
[Hemorrhage TGLS = 5-3]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11]			
* Pituitary Gland	Pars Distalis	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 514

TRT#: 6

SEX: Female

DAY ON TEST: 519

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26746

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Brain		Hemorrhage	Minimal
	Ventricle	Hydrocephalus	Mild
* Clitoral Gl			
Note: tgl 1, classified as clitoral gland mass, is a mammary gland fibroadenoma adjacent to normal clitoral gland on slide 11.			
* Kidney	Renal Tubule	Mineralization	Mild
* Lung		Hemorrhage	Minimal
[Hemorrhage TGLS = 2-3]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH - Brain Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 515

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Natural Death

DAY ON TEST: 683

HISTO: 26747

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Small, Jejunum
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OBSERVATIONS

* Heart	Endocardium	Hemorrhage	Moderate
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Hepatodiaphragmatic Nodule	
	[Hepatodiaphragmatic Nodule TGLS = 2-4]		
* Ovary		Cyst	Moderate
	[Cyst TGLS = 3-7]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 1-8]		
* Uterus		Polyp Stromal	
	[Polyp Stromal TGLS = 4-11+12+13]		

PRIMARY CAUSE OF DEATH

- Uterus Polyp Stromal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 516

TRT#: 6

SEX: Female

DAY ON TEST: 649

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26748

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Minimal
* Liver		Leukemia Mononuclear Vacuolization Cytoplasmic	Moderate
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 2-12]			
* Pituitary Gland	Pars Distalis	Cyst Hyperplasia	Moderate Moderate
[Cyst TGLS = 1-8]			
[Hyperplasia TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-11]			
* Stomach, Forestomach		Hyperplasia	Moderate
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 517

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: 26749

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Blood Vessel	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mediastinal
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Hyperplasia	Moderate
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 4,5-11+12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-14]			
Vagina		Polyp	
[Polyp TGLS = 3-13]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 518

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: 26750

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Brain		Hemorrhage	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
* Liver		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Moderate
[Leukemia Mononuclear TGLS = 5-4]			
[Vacuolization Cytoplasmic TGLS = 5-4]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Mammary Gland		Carcinoma	
[Carcinoma TGLS = 1-14]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 4-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Skin		Ulcer	Moderate
[Ulcer TGLS = 6-13]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-11]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 519

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 26751

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Intestine Large, Cecum		Parasite Metazoan	
* Islets, Pancreatic		Carcinoma	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
	[Nephropathy TGLS = 4-5]		
* Liver		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Mild
* Mammary Gland		Fibroadenoma	Multiple
	[Fibroadenoma TGLS = 2,3-11+12]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 1-8]		
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 520

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26752

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

INSUFFICIENT TISSUE

* Larynx

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy	Minimal Chronic, Mild
* Liver		Leukemia Mononuclear	
* Lung		Hemorrhage	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 3-11]			
* Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 521

TRT#: 6
DOSE: 600 PPM

SEX: Female
DISP: Natural Death

DAY ON TEST: 626
HISTO: 26753

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Rectum
* Islets, Pancreatic	* Larynx	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Clitoral Gland		Hyperplasia	Marked
		Inflammation	Suppurative, Marked
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
* Liver		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Moderate
	[Leukemia Mononuclear TGLS = 5-4]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-2]		
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
	[Fibroadenoma TGLS = 2-12]		
* Nose		Foreign Body	
		Inflammation	Suppurative, Moderate
	Note: unilateral in xs3 only, assoc with fb.		
* Ovary		Cyst	Moderate
	[Cyst TGLS = 8-7]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 521	TRT#: 6 DOSE: 600 PPM	SEX: Female DISP: Natural Death	DAY ON TEST: 626 HISTO: 26753
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ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland [Adenoma TGLS = 4-8]	Pars Distalis	Adenoma Hemorrhage	Marked
* Skin [Ulcer TGLS = 1-7]		Ulcer	Marked
* Spleen [Leukemia Mononuclear TGLS = 6-4]		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma
CONTRIBUTORY CAUSE OF DEATH	- Pituitary Gland Hemorrhage;Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 522

TRT#: 6

SEX: Female

DAY ON TEST: 663

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26754

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Brain	Ventricle	Hydrocephalus	Moderate
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Larynx		Foreign Body	
	Epithelium	Metaplasia	Squamous, Mild
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 2,3-11+12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 523

TRT#: 6

SEX: Female

DAY ON TEST: 538

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26755

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Mammary Gland	Duct	Dilatation	Moderate
		Fibroadenoma	
[Dilatation TGLS = 1-11]			
[Fibroadenoma TGLS = 2-12+13]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			

PRIMARY CAUSE OF DEATH

- Mammary Gland Fibroadenoma

CONTRIBUTORY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 524

TRT#: 6

SEX: Female

DAY ON TEST: 674

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26756

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Brain [Hydrocephalus TGLS = 4-1]	Ventricle	Hydrocephalus	Moderate
* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Moderate
* Liver [Vacuolization Cytoplasmic TGLS = 3-4]		Vacuolization Cytoplasmic	Marked
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus		Polyp Stromal	

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 525

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 733

HISTO: 26757

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6,7,8-4+11+13]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-17]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2,4-15+16+18]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-8]			
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 3-12+14]			
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 525

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26757

ORGAN AND ACCOUNTABLE SITE STATUS

[Fibrosis TGLS = 9-4]

[Leukemia Mononuclear TGLS = 9-4]

* Thymus

Leukemia Mononuclear

* Thyroid Gland

C Cell

Adenoma

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 526

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 559

HISTO: 26758

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Brain [Hydrocephalus TGLS = 2-1]	Ventricle	Hydrocephalus	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Moderate
* Larynx		Foreign Body	
* Lung	Alveolar Epith	Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Mild
		Infiltration Cellular	Histiocyte, Mild
		Inflammation	Granulomatous, Mild
[Infiltration Cellular TGLS = 3-3] [Inflammation TGLS = 3-3]			
* Pituitary Gland [Adenoma TGLS = 1-8]	Pars Distalis	Adenoma	

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 527

TRT#: 6

SEX: Female

DAY ON TEST: 547

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26759

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Brain		Hemorrhage	Moderate
* Kidney	Renal Tubule	Degeneration	Mild
	Renal Tubule	Mineralization	Mild
	Renal Tubule	Pigmentation	Mild
Note: cortical tubular degen may be autolysis; this is msac rat but small bowel also somewhat autolyzed.			
* Liver		Hepatodiaphragmatic Nodule	
	[Hepatodiaphragmatic Nodule TGLS = 3-11]		
* Lung		Hemorrhage	Mild
* Mammary Gland		Carcinoma	
	[Carcinoma TGLS = 1-12]		
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 2-8+1]		

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH - Brain Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 528

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 575

HISTO: 26760

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Brain	* Esophagus
* Heart	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Nose	* Pituitary Gland	* Thyroid Gland	* Trachea

MISSING

* Clitoral Gland	* Parathyroid Gland
------------------	---------------------

INSUFFICIENT TISSUE

* Adrenal Medulla

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 13-5]			
* Bone Marrow		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Large, Rectum		Leukemia Mononuclear	
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Kidney	Renal Tubule	Leukemia Mononuclear	Minimal
[Leukemia Mononuclear TGLS = 12-5]			
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 5-11]			
Mesentery		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-13]			
* Ovary		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 528

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 575

HISTO: 26760

ORGAN AND ACCOUNTABLE SITE STATUS

* Pancreas

Leukemia Mononuclear

* Salivary Glands

Leukemia Mononuclear

* Skin

Leukemia Mononuclear

Note: clitoral gland, subcu mass in groin not found at trim.

[Leukemia Mononuclear TGLS = 11-15]

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 6-16]

* Stomach, Forestomach

Hyperkeratosis

Moderate

Hyperplasia

Mild

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 14-17]

* Stomach, Glandular

Leukemia Mononuclear

* Thymus

Leukemia Mononuclear

* Urinary Bladder

Leukemia Mononuclear

* Uterus

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 7,10-12+14]

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 529

TRT#: 6

SEX: Female

DAY ON TEST: 649

DOSE: 600 PPM

DISP: Natural Death

HISTO: 26761

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|-------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Bone Marrow | * Clitoral Gland | * Esophagus | * Heart |
| * Intestine Large, Cecum | * Intestine Small, Duodenum | * Islets, Pancreatic | * Larynx |
| * Liver | * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular |
| * Lymph Node, Mediastinal | * Lymph Node, Mesenteric | * Mammary Gland | * Nose |
| * Ovary | * Pancreas | * Parathyroid Gland | * Pituitary Gland |
| * Salivary Glands | * Skin | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

AUTO PRECLUDES DIAG.

- | | |
|--------------------------|----------------------------|
| * Intestine Small, Ileum | * Intestine Small, Jejunum |
|--------------------------|----------------------------|

OBSERVATIONS

- | | | | |
|---------------------------|--------------|-------------------|------------------|
| * Brain | | Hemorrhage | Marked |
| [Hemorrhage TGLS = 2-1] | | | |
| * Intestine Large, Colon | | Parasite Metazoan | |
| * Intestine Large, Rectum | | Parasite Metazoan | |
| * Kidney | Renal Tubule | Mineralization | Mild |
| | | Nephropathy | Chronic, Minimal |
| * Thymus | | Cyst | Moderate |

PRIMARY CAUSE OF DEATH

- Brain Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 530

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 26762

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Kidney	Renal Tubule	Mineralization	Mild
* Liver		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-12]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Skin		Amelanotic Melanoma, Benign	
Note: spindle cell tumor on eyelid on slide 11, tgl 1.			
[Amelanotic Melanoma, Benign TGLS = 1-11]			
* Spleen		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 531

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 26763

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Clitoral Gland		Hyperplasia	Marked
[Hyperplasia TGLS = 6-7]			
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]		Vacuolization Cytoplasmic	Moderate
* Lung	Alveolar Epith	Infiltration Cellular	Histiocyte, Moderate
[Leukemia Mononuclear TGLS = 3-3]		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-11+12]			
* Nose	Nasolacrimal Dct	Inflammation	Suppurative, Mild
		Inflammation	Suppurative, Mild
Note: unilateral inflam assoc with nasolacrimal duct inflam, in xs1 and 2.			
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 531

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26763

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 4-8]

* Spleen

Leukemia Mononuclear

* Uterus

Polyp Stromal

[Polyp Stromal TGLS = 7-8]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 532

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26764

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Heart | * Intestine Large, Cecum | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Larynx |
| * Lung | * Lymph Node, Bronchial | * Lymph Node, Mediastinal | * Nose |
| * Ovary | * Pancreas | * Parathyroid Gland | * Salivary Glands |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | | |

OBSERVATIONS

- | | | | |
|---------------------------------|---------------|----------------------|---------------|
| * Intestine Large, Colon | | Parasite Metazoan | |
| * Kidney | Renal Tubule | Mineralization | Minimal |
| | | Nephropathy | Chronic, Mild |
| * Liver | | Leukemia Mononuclear | |
| * Lymph Node, Mandibular | | Leukemia Mononuclear | |
| * Lymph Node, Mesenteric | | Leukemia Mononuclear | |
| * Mammary Gland | | Fibroadenoma | |
| [Fibroadenoma TGLS = 1-11] | | | |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 2-8] | | | |
| * Skin | | Keratoacanthoma | |
| [Keratoacanthoma TGLS = 3-12] | | | |
| * Spleen | | Leukemia Mononuclear | |
| * Uterus | | Polyp Stromal | |
| [Polyp Stromal TGLS = 4-8] | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 533

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26765

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy Fibroadenoma	Mild Chronic, Mild
* Mammary Gland [Fibroadenoma TGLS = 4-11]			
* Nose		Foreign Body	
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Uterus [Polyp Stromal TGLS = 3-8]		Polyp Stromal	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 534

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Natural Death

DAY ON TEST: 660

HISTO: 26766

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Parathyroid Gland

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lung
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OBSERVATIONS

* Bone [Fibrosis TGLS = 6-11]		Fibrosis	Moderate
* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Mild
* Larynx	Epithelium Glands Epithelium	Foreign Body Hyperplasia Inflammation Metaplasia	Mild Suppurative, Moderate Squamous, Mild
Note: lesions in vp.			
* Liver [Osteosarcoma TGLS = 3-4]		Osteosarcoma Vacuolization Cytoplasmic	Metastatic (Spleen) Marked
* Lymph Node, Bronchial Mesentery [Osteosarcoma TGLS = 5-13]		Osteosarcoma Osteosarcoma	Metastatic (Spleen) Metastatic (Spleen)
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma Cyst	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 534	TRT#: 6	SEX: Female	DAY ON TEST: 660
	DOSE: 600 PPM	DISP: Natural Death	HISTO: 26766

ORGAN AND ACCOUNTABLE SITE STATUS

[Cyst TGLS = 2-8]		
* Spleen		Osteosarcoma
[Osteosarcoma TGLS = 4-12]		
* Thyroid Gland	C Cell	Carcinoma
[Carcinoma TGLS = 7-2]		

PRIMARY CAUSE OF DEATH	- Spleen	Osteosarcoma
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* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 535

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 687

HISTO: 26767

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mandibular	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Brain	Ventricle	Hydrocephalus	Moderate
* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Larynx	Epithelium	Foreign Body	
		Hyperplasia	Mild
Note: hyperplasia in vp around fb.			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-11]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 5-12]			
Oral Mucosa		Hyperplasia	Moderate
Note: focal hyperplasia of pharyngeal mucosa ventral to nasopharyngeal duct in nasal xs3.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 535	TRT#: 6	SEX: Female	DAY ON TEST: 687
	DOSE: 600 PPM	DISP: Moribund Sacrifice	HISTO: 26767

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 3-4]

* Uterus

Polyp Stromal

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 536

TRT#: 6

SEX: Female

DAY ON TEST: 597

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26768

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Liver
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Clitoral Gland

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization	Mild
* Larynx		Foreign Body	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-7+11+12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

- Mammary Gland Fibroadenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 537

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26769

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Mediastinal

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Thymus		Hyperplasia	Lymphoid, Marked
Note: slide 11 is normal salivary gland. No mediastinal ln on slide 2, but thymus has severe EMH, which is not an available term on LDAS for thymus.			
[Hyperplasia TGLS = 2-2]			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 538

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26770

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Mediastinal	* Thymus
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OBSERVATIONS

* Kidney [Nephropathy TGLS = 3-5]	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Moderate
* Larynx Note: hyperplasia in ventral xs3.	Epithelium	Hyperplasia	Minimal
* Liver [Angiectasis TGLS = 2-11]		Angiectasis	Moderate
* Lung Mesentery [Necrosis TGLS = 4-11]	Alveolar Epith Fat	Hyperplasia Necrosis	Minimal Moderate
* Pituitary Gland [Adenoma TGLS = 1-8]	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Carcinoma	

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 539

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 677

HISTO: 26771

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Pituitary Gland
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver	Hepatocyte	Leukemia Mononuclear	
		Necrosis	Moderate
	[Leukemia Mononuclear TGLS = 4-4+11]		
	[Necrosis TGLS = 4-4]		
* Lung		Leukemia Mononuclear	
* Mammary Gland		Carcinoma	
	[Carcinoma TGLS = 2-13]		
* Skin	Pinna	Melanoma Benign	
	[Melanoma Benign TGLS = 1-12]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-11]		

PRIMARY CAUSE OF DEATH

- Mammary Gland Carcinoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 540

TRT#: 6

SEX: Female

DAY ON TEST: 597

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26772

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
Tissue NOS	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Clitoral Gland

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization	Mild
* Lung		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-7+11]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

- Mammary Gland Fibroadenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 541

TRT#: 6

SEX: Female

DAY ON TEST: 597

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26773

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 2,3-11+12]			
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH

- Mammary Gland Fibroadenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 542

TRT#: 6
DOSE: 600 PPM

SEX: Female
DISP: Moribund Sacrifice

DAY ON TEST: 727
HISTO: 26774

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Adrenal Medulla		Leukemia Mononuclear Necrosis	Marked
[Leukemia Mononuclear TGLS = 10-5]			
* Bone Marrow		Leukemia Mononuclear Necrosis	Marked
* Brain			
[Necrosis TGLS = 12,13-1]			
* Clitoral Gland		Hyperplasia	Marked
[Hyperplasia TGLS = 1,19-7+13]			
* Kidney	Renal Tubule	Leukemia Mononuclear Mineralization Nephropathy	Minimal Chronic, Mild
[Leukemia Mononuclear TGLS = 9-5]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-3+11]			
Lymph Node	Deep Cervical Pancreatic Renal	Leukemia Mononuclear Leukemia Mononuclear Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 18-12]			
[Leukemia Mononuclear TGLS = 4-13]			
[Leukemia Mononuclear TGLS = 16-17]			
* Lymph Node, Bronchial		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 542

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 727

HISTO: 26774

ORGAN AND ACCOUNTABLE SITE STATUS

* Lymph Node, Mandibular [Leukemia Mononuclear TGLS = 20-7]		Leukemia Mononuclear	
* Lymph Node, Mediastinal [Leukemia Mononuclear TGLS = 7-2]		Leukemia Mononuclear	
* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 17-18]		Leukemia Mononuclear	
* Mammary Gland [Fibroadenoma TGLS = 3-15]		Fibroadenoma	
Mesentery [Necrosis TGLS = 15-16]	Fat	Necrosis	Moderate
* Ovary [Cyst TGLS = 14-7]		Cyst	Moderate
* Pituitary Gland [Adenoma TGLS = 6-8] [Leukemia Mononuclear TGLS = 6-8]	Pars Distalis	Adenoma Leukemia Mononuclear	
* Skin [Ulcer TGLS = 1-13]		Ulcer	Marked
* Spleen [Leukemia Mononuclear TGLS = 11-12]		Leukemia Mononuclear	
* Stomach, Forestomach		Hyperplasia	Mild
* Stomach, Glandular [Ulcer TGLS = 21-14]		Ulcer Ulcer	Marked Moderate
* Thymus		Leukemia Mononuclear	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

CONTRIBUTORY CAUSE OF DEATH - Brain Necrosis

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 543

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 667

HISTO: 26775

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Nose
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Mild
* Liver		Leukemia Mononuclear Vacuolization Cytoplasmic	Marked
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-11]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 6-12]			
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-11]			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 544

TRT#: 6

SEX: Female

DAY ON TEST: 699

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26776

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization	Moderate
		Nephropathy	Chronic, Moderate
* Liver		Vacuolization Cytoplasmic	Marked
[Vacuolization Cytoplasmic TGLS = 3-4]			
* Mammary Gland		Fibroadenoma	
Note: FA adjacent to clitoral gland on sl 7			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 545

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26777

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy Fibroadenoma	Mild Chronic, Mild
* Mammary Gland			
[Fibroadenoma TGLS = 1-11]			
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 2-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 546

TRT#: 6

DOSE: 600 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 705

HISTO: 26778

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Esophagus	* Heart	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Clitoral Gland

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Brain	Ventricle	Hydrocephalus	Moderate
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Vacuolization Cytoplasmic	Moderate
[Vacuolization Cytoplasmic TGLS = 3-4]			
* Mammary Gland		Carcinoma	
		Fibroadenoma	
[Carcinoma TGLS = 5-11+12+7]			
[Fibroadenoma TGLS = 2-13+14]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 4-15]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

- Mammary Gland Carcinoma

CONTRIBUTORY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 547

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26779

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 3-8]		
* Skin	Subcut Tiss	Fibroma	
	[Fibroma TGLS = 1-11]		
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 548

TRT#: 6

SEX: Female

DAY ON TEST: 699

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26780

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Heart	Atrium	Thrombosis	Marked
[Thrombosis TGLS = 13-4]			
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-4]		Vacuolization Cytoplasmic	Moderate
* Lung		Leukemia Mononuclear	
Lymph Node	Deep Cervical	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12-13]			
[Leukemia Mononuclear TGLS = 10-14]			
[Leukemia Mononuclear TGLS = 7-12]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Note: mes ln and pancreatic ln on slide 13.			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 548

TRT#: 6

SEX: Female

DAY ON TEST: 699

DOSE: 600 PPM

DISP: Moribund Sacrifice

HISTO: 26780

ORGAN AND ACCOUNTABLE SITE STATUS

[Leukemia Mononuclear TGLS = 12-13]

* Mammary Gland

Carcinoma

[Carcinoma TGLS = 11-15]

* Ovary

Cyst

Marked

[Cyst TGLS = 17-7]

* Pituitary Gland

Cyst

Mild

[Cyst TGLS = 6-8]

* Spleen

Leukemia Mononuclear

Necrosis

Marked

[Leukemia Mononuclear TGLS = 9,14,15-11+12]

[Necrosis TGLS = 14-11]

* Stomach, Glandular

Ulcer

Moderate

[Ulcer TGLS = 16-8]

* Thymus

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 549

TRT#: 6

SEX: Female

DAY ON TEST: 733

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26781

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy Fibroadenoma	Mild Chronic, Mild
* Mammary Gland [Fibroadenoma TGLS = 3-11]			
Mesentery [Necrosis TGLS = 1-12]	Fat	Necrosis	Minimal
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 550

TRT#: 6

SEX: Female

DAY ON TEST: 735

DOSE: 600 PPM

DISP: Terminal Sacrifice

HISTO: 26782

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Brain		Hemorrhage	Mild
* Clitoral Gland		Cyst	Marked
		Inflammation	Suppurative, Moderate
[Cyst TGLS = 2-7]			
[Inflammation TGLS = 2-7]			
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 701

TRT#: 8

SEX: Female

DAY ON TEST: 641

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26633

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Adrenal Medulla		Hyperplasia	Moderate
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
		Myelofibrosis	Mild
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
* Larynx		Foreign Body	
	Epithelium	Hyperplasia	Mild
	Epithelium	Metaplasia	Squamous, Mild
Note: lesions assoc with fb in ventral pouch.			
* Liver		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Marked
	[Leukemia Mononuclear TGLS = 1-4]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 8-12]		
* Mammary Gland		Fibroadenoma	
	[Fibroadenoma TGLS = 7-13]		
* Ovary		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 701	TRT#: 8 DOSE: 1800 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 641 HISTO: 26633
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ORGAN AND ACCOUNTABLE SITE STATUS

* Pituitary Gland [Adenoma TGLS = 6-8]	Pars Distalis	Adenoma
* Spleen [Leukemia Mononuclear TGLS = 2-11]		Leukemia Mononuclear
* Thymus [Leukemia Mononuclear TGLS = 4-2]		Leukemia Mononuclear

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 702

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26634

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Pancreas	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Parathyroid Gland

OBSERVATIONS

Eye		Cataract	Mild
[Cataract TGLS = 2-12]			
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
* Larynx	Epithelium	Hyperplasia	Mild
Note: lesion is in ventral aspect of caudal xs.			
* Liver		Clear Cell Focus	
		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 4-11]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11]			
* Ovary		Cyst	Mild
[Cyst TGLS = 5-7]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 703

TRT#: 8

DOSE: 1800 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: 26635

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial	* Parathyroid Gland
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INSUFFICIENT TISSUE

* Larynx

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Clitoral Gland		Inflammation	Chronic, Mild
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Clear Cell Focus	
		Leukemia Mononuclear	
		[Clear Cell Focus TGLS = 5-4]	
		[Leukemia Mononuclear TGLS = 4-4]	
* Lung	Alveolar Epith	Infiltration Cellular	Histiocyte, Mild
		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	Multiple
		[Fibroadenoma TGLS = 1,2-11+12]	
* Pituitary Gland	Pars Distalis	Adenoma	
		[Adenoma TGLS = 3-8]	
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 6-4]	
* Thyroid Gland	C Cell	Hyperplasia	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 703

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26635

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 704

TRT#: 8

SEX: Female

DAY ON TEST: 643

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26636

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mediastinal
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	Tissue NOS	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver	Hepatocyte	Leukemia Mononuclear	
		Necrosis	Moderate
		[Leukemia Mononuclear TGLS = 5-4]	
* Lung		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 2-3]	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
		[Fibroadenoma TGLS = 3-12]	
* Pituitary Gland	Pars Distalis	Adenoma	
		[Adenoma TGLS = 1-8]	
* Spleen		Leukemia Mononuclear	
		[Leukemia Mononuclear TGLS = 4-11]	

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 705

TRT#: 8

SEX: Female

DAY ON TEST: 691

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26637

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
Note: pale focus is more apparent on slide 3 than on slide 11.			
[Leukemia Mononuclear TGLS = 6-3+11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-13]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-12]			
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH - Mammary Gland Fibroadenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 706

TRT#: 8

SEX: Female

DAY ON TEST: 634

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26638

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Mediastinal	* Thymus
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OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Islets, Pancreatic		Adenoma	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
		Necrosis	Marked
[Leukemia Mononuclear TGLS = 3-11]			
[Necrosis TGLS = 4,5-11]			
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 6-8]			

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 707

TRT#: 8

SEX: Female

DAY ON TEST: 699

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26639

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Uterus

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Mild
[Hemorrhage TGLS = 11-1]			
* Intestine Large, Colon		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-6]			
* Kidney	Renal Tubule	Mineralization	Minimal
* Liver		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Marked
[Hepatodiaphragmatic Nodule TGLS = 4-4]			
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-12]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 8-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 707

TRT#: 8

SEX: Female

DAY ON TEST: 699

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26639

ORGAN AND ACCOUNTABLE SITE STATUS

* Spleen [Leukemia Mononuclear TGLS = 6-11]	Leukemia Mononuclear	
* Stomach, Forestomach	Ulcer	Mild
* Thymus [Leukemia Mononuclear TGLS = 5-2]	Leukemia Mononuclear	
* Urinary Bladder	Hemorrhage Leukemia Mononuclear	Mild

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

CONTRIBUTORY CAUSE OF DEATH - Brain Hemorrhage

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 708

TRT#: 8

DOSE: 1800 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: 26640

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Glandular	* Trachea	* Uterus

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-10+11]			
* Kidney	Renal Tubule	Mineralization	Moderate
[Nephropathy TGLS = 6-5]			
* Larynx	Epithelium	Foreign Body	
Note: squamous metaplasia in VP associated with fb.		Metaplasia	Squamous, Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Carcinoma	Multiple
Note: tgl 7 is large CA; tgl 3 is small CA arising in fibroadenoma.			
[Carcinoma TGLS = 3,7-7+14+15]			
[Fibroadenoma TGLS = 8-16]			
Mesentery	Fat	Inflammation	Granulomatous, Marked
[Inflammation TGLS = 9-13]			
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 708

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26640

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 2-8]

* Spleen

Leukemia Mononuclear

[Leukemia Mononuclear TGLS = 4-12]

* Stomach, Forestomach

Hyperplasia

Moderate

* Thymus

Leukemia Mononuclear

* Thyroid Gland

C Cell

Adenoma

* Urinary Bladder

Transit Epithe

Hyperplasia

Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 709

TRT#: 8

SEX: Female

DAY ON TEST: 532

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26641

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Lymph Node, Mandibular

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Brain		Hemorrhage	Marked
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Liver			
Note: tgl 2 is postmortem congestion; ncl.			
* Lung		Hemorrhage	Marked
[Hemorrhage TGLS = 1-3]			
* Pituitary Gland		Cyst	Marked
[Cyst TGLS = 5-8]			
* Uterus		Polyp Stromal	
Note: tgl 4 is postmortem change. ncl.			
[Polyp Stromal TGLS = 3-11]			

PRIMARY CAUSE OF DEATH

- Brain Hemorrhage

CONTRIBUTORY CAUSE OF DEATH

- Pituitary Gland Cyst

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 710

TRT#: 8

DOSE: 1800 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 523

HISTO: 26642

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Kidney	Renal Tubule	Mineralization	Minimal
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-14]			
[Leukemia Mononuclear TGLS = 4-11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-12]			
* Pituitary Gland		Cyst	Mild
[Cyst TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-13]			
* Stom Gland			

Note: I interpret gross lesion #16 as overcall of a fold of glandular mucosa.

Note: Nodule described grossly not present in slide 16 or regular stomach section; small area of squamous epithelium in slide 16 is considered to be artifactual.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 710	TRT#: 8 DOSE: 1800 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 523 HISTO: 26642
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ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Forestomach [Hyperplasia TGLS = 8-15] [Inflammation TGLS = 8-15]		Hyperplasia Inflammation	Moderate Suppurative, Moderate
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 711

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26643

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Larynx		Foreign Body	
		Inflammation	Suppurative, Mild
	Epithelium	Metaplasia	Squamous, Mild
Note: lesions in vp.			
* Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 1-11]			
* Lung		Hemorrhage	Minimal
* Stomach, Glandular		Mineralization	Mild

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 712

TRT#: 8

SEX: Female

DAY ON TEST: 714

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26644

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Blood Vessel	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Nose	* Ovary
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Parathyroid Gland	* Thymus
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OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver	Bile Duct	Hyperplasia	Moderate
	Hepatocyte	Leukemia Mononuclear	
		Necrosis	Mild
	[Leukemia Mononuclear TGLS = 4,5-4+12]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	Multiple
	[Fibroadenoma TGLS = 1,2-11+13]		
* Pancreas		Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 3-8]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-4]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 712	TRT#: 8	SEX: Female	DAY ON TEST: 714
	DOSE: 1800 PPM	DISP: Moribund Sacrifice	HISTO: 26644

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear
------------------------	-------------------------------

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 713

TRT#: 8

DOSE: 1800 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 735

HISTO: 26645

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Clitoral Gland		Inflammation	Chronic, Moderate
* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Larynx	Epithelium	Metaplasia	Squamous, Minimal
Note: lesion in ventral pouch.			
* Liver		Basophilic Focus	
[Basophilic Focus TGLS = 4-12]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-13]			
* Nose	Respirat Epith	Hyperplasia	Moderate
		Inflammation	Suppurative, Moderate
	Respirat Epith	Metaplasia	Squamous, Mild
Note: unilateral lesions ventral/lateral in xs1.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 714

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26646

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Brain		Hemorrhage	Moderate
* Kidney		Nephropathy	Chronic, Moderate
[Nephropathy TGLS = 4-5]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 1-2]			
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 5-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 715

TRT#: 8

SEX: Female

DAY ON TEST: 549

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26647

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Clitoral Gland	* Esophagus	* Heart	* Islets, Pancreatic
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Mild
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Minimal
* Liver		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
	[Hepatodiaphragmatic Nodule TGLS = 6-11]		
	[Leukemia Mononuclear TGLS = 4-4+11]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 7-6]		
* Pituitary Gland		Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
	[Cyst TGLS = 2-8]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 3-12]		
* Stom Gland			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 715

TRT#: 8

SEX: Female

DAY ON TEST: 549

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26647

ORGAN AND ACCOUNTABLE SITE STATUS

Note: tgl 5 on slide 13 is autolysis of mucosa.

* Thymus

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 716

TRT#: 8

SEX: Female

DAY ON TEST: 597

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26648

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Mild
* Bone Marrow		Myelofibrosis	Moderate
* Intestine Large, Cecum		Parasite Metazoan	
* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-12+13]			
* Nose	Goblet Cell, Respirat Epith	Foreign Body	
		Hypertrophy	Mild
		Inflammation	Suppurative, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-1+8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-11]			

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 717

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26649

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Mild
* Mammary Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 718

TRT#: 8

SEX: Female

DAY ON TEST: 498

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26650

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Mandibular	* Parathyroid Gland
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OBSERVATIONS

* Clitoral Gland		Carcinoma	
		Inflammation	Suppurative, Marked
[Carcinoma TGLS = 1-7]			
[Inflammation TGLS = 1-7]			
* Kidney	Renal Tubule	Mineralization	Moderate
		Nephropathy	Chronic, Mild
* Lung		Hemorrhage	Minimal
* Pancreas		Atrophy	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus			

Note: will look again in wet tissues and block for uterine lesion

PRIMARY CAUSE OF DEATH - Clitoral Gland Carcinoma

Animal Note: I examined bagged wet tissues, found normal horn remnants, normal uterine corpus and vagina. No sign of uterine mass(tgl 2). RAR 11/5/91

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 719

TRT#: 8

SEX: Female

DAY ON TEST: 646

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26651

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Bone Marrow		Hyperplasia	Reticulum Cell, Marked
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
[Basophilic Focus TGLS = 5-11]			
[Clear Cell Focus TGLS = 3,4,7-4]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-13]			
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Hematopoietic Cell Proliferation	Marked
[Hematopoietic Cell Proliferation TGLS = 6-12]			

PRIMARY CAUSE OF DEATH - Mammary Gland Fibroadenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 720

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26652

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Clitoral Gland [Inflammation TGLS = 3-7]		Inflammation	Suppurative, Moderate
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Lung		Hemorrhage	Mild
* Lymph Node, Bronchial		Hemorrhage	Moderate
* Mammary Gland [Fibroadenoma TGLS = 1-11]		Fibroadenoma	
* Nose	Olfactory Epi	Foreign Body	
Note: focal metapl in xs3 adjacent to fb.		Metaplasia	Squamous, Minimal
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 721

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26653

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Brain	Meninges	Hyperplasia	Minimal
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Chronic, Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-4]			
* Lung		Hemorrhage	Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12+13+14]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 3-15]			
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-11]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 722

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26654

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Heart | * Intestine Large, Cecum | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Larynx |
| * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Nose | * Ovary | * Pancreas |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | * Uterus | |

OBSERVATIONS

- | | | | |
|----------------------------------|---------------|-------------------|-----------------|
| * Intestine Large, Colon | | Parasite Metazoan | |
| * Kidney | Renal Tubule | Mineralization | Mild |
| | | Nephropathy | Chronic, Marked |
| * Liver | | Clear Cell Focus | |
| [Clear Cell Focus TGLS = 3-11] | | | |
| * Mammary Gland | | Fibroadenoma | |
| [Fibroadenoma TGLS = 1-12] | | | |
| * Pituitary Gland | Pars Distalis | Adenoma | |
| [Adenoma TGLS = 2-8] | | | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 723

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26655

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Clitoral Gland		Carcinoma	
		Inflammation	Chronic, Moderate
[Carcinoma TGLS = 1-11]			
* Intestine Large, Cecum		Parasite Metazoan	
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 2-4]			
* Lung		Hemorrhage	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 724

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26656

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Moderate
		Nephropathy	Chronic, Mild
[Nephropathy TGLS = 5-5]			
* Larynx	Epithelium	Foreign Body	
		Hyperplasia	Mild
Note: hyperplasia assoc with fb in vp.			
* Liver		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
[Hepatodiaphragmatic Nodule TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 4-12]			
* Pituitary Gland	Pars Distalis	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-11]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 724

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26656

ORGAN AND ACCOUNTABLE SITE STATUS

* Thymus

Leukemia Mononuclear

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 725

TRT#: 8

SEX: Female

DAY ON TEST: 705

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26657

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Minimal
		Nephropathy	Chronic, Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-11]			
* Nose	Nasolacrim Dct	Inflammation	Suppurative, Mild
		Inflammation	Suppurative, Mild
Note: inflam in xs1 adjacent to nasolacrimal duct, unilateral.			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH

- Mammary Gland Fibroadenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 726

TRT#: 8

SEX: Female

DAY ON TEST: 661

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26658

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

* Parathyroid Gland

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Small, Ileum	* Intestine Small, Jejunum
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OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Intestine Large, Colon		Sarcoma Stromal	Metastatic (Uterus)
Note: Possible fragment of colon mucosa and wall in sl 15. No visible bladder.			
* Kidney	Renal Tubule	Mineralization	Mild
* Liver		Nephropathy	Chronic, Mild
* Mammary Gland		Clear Cell Focus	
[Fibroadenoma TGLS = 1-13+14]		Fibroadenoma	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Uterus		Sarcoma Stromal	
[Sarcoma Stromal TGLS = 3-11+12+15]			

PRIMARY CAUSE OF DEATH

- Uterus Sarcoma Stromal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 727

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26659

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Malignant	
[Pheochromocytoma Malignant TGLS = 4-11]			
Eye		Cataract	Marked
[Cataract TGLS = 1-12]			
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Basophilic Focus	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 3-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
	Pars Intermed	Hyperplasia	Mild
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 728

TRT#: 8

DOSE: 1800 PPM

SEX: Female

DISP: Natural Death

DAY ON TEST: 588

HISTO: 26660

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Islets, Pancreatic	* Mammary Gland	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

AUTO PRECLUDES DIAG.

* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum		

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Kidney		Nephropathy	Chronic, Mild
* Larynx		Foreign Body	
* Liver		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Mild
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-14]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Hemorrhage	Moderate
		Leukemia Mononuclear	
[Hemorrhage TGLS = 3-11]			
[Leukemia Mononuclear TGLS = 2-11]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 728	TRT#: 8 DOSE: 1800 PPM	SEX: Female DISP: Natural Death	DAY ON TEST: 588 HISTO: 26660
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ORGAN AND ACCOUNTABLE SITE STATUS

* Stomach, Forestomach	Hyperkeratosis Hyperplasia Inflammation	Moderate Mild Suppurative, Moderate
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[Hyperkeratosis TGLS = 7-13]
[Hyperplasia TGLS = 7-13]
[Inflammation TGLS = 7-13]

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

Animal Note: tgl 6: no ulcer on slide; normal mammary gl duct, skin, infilt w/ MCL cells.

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 729

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26661

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Bone Marrow		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 2-10+11]			
* Kidney	Renal Tubule	Mineralization	Mild
[Nephropathy TGLS = 6-5]		Nephropathy	Chronic, Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 3-12]			
* Pituitary Gland		Cyst	Marked
[Cyst TGLS = 5-8]			
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 1-14]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 730

TRT#: 8

SEX: Female

DAY ON TEST: 420

DOSE: 1800 PPM

DISP: Natural Death

HISTO: 26662

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Bone Marrow
- * Heart
- * Lymph Node, Mediastinal
- * Parathyroid Gland
- * Spleen

- * Adrenal Medulla
- * Brain
- * Lung
- * Lymph Node, Mesenteric
- * Pituitary Gland
- * Thymus

- Blood Vessel
- * Clitoral Gland
- * Lymph Node, Bronchial
- * Mammary Gland
- * Salivary Glands
- * Uterus

- * Bone
- * Esophagus
- * Lymph Node, Mandibular
- * Ovary
- * Skin

AUTO PRECLUDES DIAG.

- * Intestine Large, Cecum
- * Intestine Small, Ileum
- * Pancreas
- * Trachea

- * Intestine Large, Colon
- * Intestine Small, Jejunum
- * Stomach, Forestomach
- * Urinary Bladder

- * Intestine Large, Rectum
- * Islets, Pancreatic
- * Stomach, Glandular

- * Intestine Small, Duodenum
- * Nose
- * Thyroid Gland

OBSERVATIONS

- | | | | |
|----------|--------------|----------------------------|----------|
| * Kidney | Renal Tubule | Mineralization | Moderate |
| * Larynx | | Foreign Body | |
| * Liver | | Hepatodiaphragmatic Nodule | |

[Hepatodiaphragmatic Nodule TGLS = 5-11]

PRIMARY CAUSE OF DEATH

- UNCERTAIN

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 731

TRT#: 8

SEX: Female

DAY ON TEST: 691

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26663

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Kidney	Renal Tubule	Mineralization	Mild
* Liver		Basophilic Focus	
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 3,4-11+12+13]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH - Mammary Gland Fibroadenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 732

TRT#: 8

SEX: Female

DAY ON TEST: 629

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26664

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Nose
* Ovary	* Pancreas	* Pituitary Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Bone Marrow		Leukemia Mononuclear	
* Kidney	Renal Tubule	Mineralization	Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12+13]			
* Parathyroid Gland		Hyperplasia	Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-11]			
* Thymus		Thymoma Malignant	
[Thymoma Malignant TGLS = 2-2]			

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 733

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26665

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Nose
* Ovary	* Pancreas	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Brain		Hemorrhage	Mild
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-4]		
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-12]		
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Carcinoma	
		Fibroadenoma	
	[Carcinoma TGLS = 2-11+14]		
	[Fibroadenoma TGLS = 1-7+13]		
Mesentery	Fat	Necrosis	Moderate
	[Necrosis TGLS = 3-15]		
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 733	TRT#: 8	SEX: Female	DAY ON TEST: 734
	DOSE: 1800 PPM	DISP: Terminal Sacrifice	HISTO: 26665

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 4-8]	
* Spleen	Leukemia Mononuclear
[Leukemia Mononuclear TGLS = 7-12]	

PRIMARY CAUSE OF DEATH -

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 734

TRT#: 8

SEX: Female

DAY ON TEST: 735

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26666

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Larynx	Epithelium	Hyperplasia	Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-11+12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 735

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26667

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Esophagus | * Heart |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic | * Larynx |
| * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Mammary Gland | * Nose | * Ovary |
| * Pancreas | * Parathyroid Gland | * Salivary Glands | * Stomach, Forestomach |
| * Stomach, Glandular | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

OBSERVATIONS

- | | | | |
|--|---------------|-------------------------------|-----------------------------|
| * Clitoral Gland
[Hyperplasia TGLS = 3-7] | | Hyperplasia | Moderate |
| * Kidney | Renal Tubule | Mineralization
Nephropathy | Minimal
Chronic, Minimal |
| * Liver | | Leukemia Mononuclear | |
| * Pituitary Gland
[Adenoma TGLS = 2-8] | Pars Distalis | Adenoma | |
| * Skin
[Sarcoma TGLS = 1-12,13] | Subcut Tiss | Sarcoma | |
| * Spleen
[Leukemia Mononuclear TGLS = 5-11] | | Leukemia Mononuclear | |
| * Uterus
[Polyp Stromal TGLS = 4-8] | | Polyp Stromal | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 736

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26668

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Marked
* Clitoral Gland		Carcinoma	
[Carcinoma TGLS = 2-11]			
* Kidney	Renal Tubule	Cyst	Marked
		Mineralization	Minimal
		Nephropathy	Chronic, Mild
[Cyst TGLS = 3-12]			
* Larynx	Epithelium	Hyperplasia	Moderate
	Epithelium	Metaplasia	Squamous, Moderate
Note: hyperplasia of epith lining ventral pouch and u-shaped cartilages.			
* Liver		Clear Cell Focus	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 4-12+13]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Thyroid Gland	Follicular Cel	Carcinoma	
[Carcinoma TGLS = 5-2]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 737

TRT#: 8

SEX: Female

DAY ON TEST: 478

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26669

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Intestine Small, Ileum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
* Lung		Hemorrhage	Minimal
[Hemorrhage TGLS = 1-3]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 3-11+12+13]			

PRIMARY CAUSE OF DEATH

- Mammary Gland Fibroadenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 738

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26670

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Pancreas	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Moderate
* Clitoral Gland		Cyst	Moderate
[Cyst TGLS = 1-7]			
* Kidney	Renal Tubule	Mineralization	Mild
[Nephropathy TGLS = 5-5]		Nephropathy	Chronic, Mild
* Liver		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 7-11]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 4-12]			
* Ovary		Cyst	Mild
[Cyst TGLS = 6-7]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Skin		Ulcer	Moderate
[Ulcer TGLS = 1-7]			
Tongue		Squamous Cell Papilloma	
[Squamous Cell Papilloma TGLS = 2-11]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 738

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26670

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 739

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26671

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

MISSING

* Clitoral Gland

OBSERVATIONS

* Kidney		Nephropathy	Chronic, Moderate
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,3,4-11+12+13]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 5-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 740

TRT#: 8

SEX: Female

DAY ON TEST: 691

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26672

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Heart | * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic |
| * Larynx | * Lung | * Lymph Node, Bronchial | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Nose | * Ovary | * Parathyroid Gland |
| * Pituitary Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | * Uterus | |

MISSING

- * Lymph Node, Mandibular

OBSERVATIONS

- | | | | |
|-----------------|--|--|-----------------------------|
| * Kidney | Renal Tubule | Mineralization
Nephropathy | Minimal
Chronic, Minimal |
| * Liver | | Basophilic Focus
Degeneration
Hepatodiaphragmatic Nodule | Cystic, Mild |
| | [Degeneration TGLS = 3-4]
[Hepatodiaphragmatic Nodule TGLS = 2-4] | | |
| * Mammary Gland | | Fibroadenoma | |
| | [Fibroadenoma TGLS = 1-12+13+14] | | |
| * Pancreas | | Atrophy | Mild |

PRIMARY CAUSE OF DEATH

- Mammary Gland Fibroadenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 741

TRT#: 8

DOSE: 1800 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 630

HISTO: 26673

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Nose	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart	Atrium, Endocardium	Fibrosis	Moderate
Note: lesion in atrium interpreted as recent site of attachment of thrombus.			
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
		Hyperplasia	Mild
* Larynx	Epithelium		
Note: hyperplasia of epith around u cartilages and adjacent ventral pouch.			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Carcinoma	Metastatic (Mammary Gland)
[Carcinoma TGLS = 2-3+11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Carcinoma	
[Carcinoma TGLS = 6-13]			
* Ovary		Granulosa-Theca Tumor Benign	
* Pituitary Gland	Pars Distalis	Adenoma	
		Cyst	Marked
[Adenoma TGLS = 1-8]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 741	TRT#: 8	SEX: Female	DAY ON TEST: 630
	DOSE: 1800 PPM	DISP: Moribund Sacrifice	HISTO: 26673

ORGAN AND ACCOUNTABLE SITE STATUS

[Cyst TGLS = 1-8]			
* Spleen		Leukemia Mononuclear Necrosis	Marked
[Leukemia Mononuclear TGLS = 3-12]			
[Necrosis TGLS = 4-12]			
* Stomach, Forestomach		Ulcer	Marked
[Ulcer TGLS = 8-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear
CONTRIBUTORY CAUSE OF DEATH	- Pituitary Gland Cyst;Spleen Necrosis;Stomach;Forestomach Ulcer

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 742

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26674

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Liver		Degeneration	Cystic, Moderate
[Degeneration TGLS = 2-11]			
* Lung		Hemorrhage	Minimal
* Mammary Gland		Inflammation	Suppurative, Moderate
* Ovary		Cyst	Marked
[Cyst TGLS = 3-7]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 743

TRT#: 8

SEX: Female

DAY ON TEST: 575

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26675

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mandibular	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney	Renal Tubule	Mineralization	Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Hemorrhage	Mild
	Alveolar Epith	Hyperplasia	Mild
	Alveolar Epith	Infiltration Cellular	Histiocyte, Moderate
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-3]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pancreas		Atrophy	Minimal
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Thyroid Gland		Ultimobranchial Cyst	Minimal

PRIMARY CAUSE OF DEATH - Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 744

TRT#: 8

DOSE: 1800 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: 26676

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Nose	* Ovary	* Pancreas	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Parathyroid Gland
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OBSERVATIONS

* Kidney	Renal Tubule	Mineralization Nephropathy	Mild Chronic, Moderate
[Nephropathy TGLS = 4-5]			
* Larynx	Epithelium	Hyperplasia	Mild
Note: focal hyperplasia unilateral on xs3.			
* Liver	Hepatocyte	Leukemia Mononuclear Necrosis	Moderate
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Fibrosis Leukemia Mononuclear	Marked
* Thymus		Cyst	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Tetrahydrofuran
CAS Number: 109-99-9

Date Report Requested: 10/20/2014
Time Report Requested: 06:03:43
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 744

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26676

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 745

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26677

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Adrenal Medulla		Hyperplasia	Moderate
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11+12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 746

TRT#: 8

DOSE: 1800 PPM

SEX: Female

DISP: Moribund Sacrifice

DAY ON TEST: 624

HISTO: 26678

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lung	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

MISSING

* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
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OBSERVATIONS

* Bone Marrow		Leukemia Mononuclear	
* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Minimal
* Larynx		Foreign Body	
	Epithelium	Hyperplasia	Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Ovary		Cyst	Marked
[Cyst TGLS = 3-7]			
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
[Fibrosis TGLS = 2-11]			
[Leukemia Mononuclear TGLS = 1-11]			

PRIMARY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 747

TRT#: 8

SEX: Female

DAY ON TEST: 733

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26679

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex | * Adrenal Medulla | Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Heart | * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic |
| * Larynx | * Liver | * Lung | * Lymph Node, Bronchial |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Nose | * Ovary |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Stomach, Forestomach |
| * Stomach, Glandular | * Thymus | * Trachea | * Urinary Bladder |
| * Uterus | | | |

MISSING

- * Lymph Node, Mediastinal

OBSERVATIONS

- | | | | |
|--|---------------|---|-----------------------------|
| * Kidney | Renal Tubule | Mineralization
Nephropathy
Fibroadenoma | Minimal
Chronic, Minimal |
| * Mammary Gland
[Fibroadenoma TGLS = 2-11+12] | | | |
| * Pancreas | | Atrophy | Moderate |
| * Pituitary Gland
[Adenoma TGLS = 1-8] | Pars Distalis | Adenoma | |
| * Spleen
[Accessory Spleen TGLS = 3-13] | | Accessory Spleen | |
| * Thyroid Gland | C Cell | Adenoma | |

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 748

TRT#: 8

SEX: Female

DAY ON TEST: 412

DOSE: 1800 PPM

DISP: Moribund Sacrifice

HISTO: 26680

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	Blood Vessel	* Bone
* Bone Marrow	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			

OBSERVATIONS

* Brain	Ventricle	Hydrocephalus	Marked
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Larynx	Glands	Inflammation	Suppurative, Mild
* Liver		Hepatodiaphragmatic Nodule	
	[Hepatodiaphragmatic Nodule TGLS = 2-11]		
* Lung		Hemorrhage	Minimal
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 1-8]		

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 749

TRT#: 8

SEX: Female

DAY ON TEST: 734

DOSE: 1800 PPM

DISP: Terminal Sacrifice

HISTO: 26681

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder

OBSERVATIONS

* Adrenal Medulla		Pheochromocytoma Benign	
Eye	Bilateral	Cataract	Mild
[Cataract TGLS = 1-11]			
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Moderate
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-4]			
* Pituitary Gland		Cyst	Mild
	Pars Distalis	Hyperplasia	Mild
[Cyst TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-12]			
* Thyroid Gland	C Cell	Carcinoma	
* Uterus		Polyp Stromal	
Note: polyp is infarcted, structure not clearly visible due to necrosis.			
[Polyp Stromal TGLS = 3-8]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 05181-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Tetrahydrofuran

CAS Number: 109-99-9

Date Report Requested: 10/20/2014

Time Report Requested: 06:03:43

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 750

TRT#: 8

DOSE: 1800 PPM

SEX: Female

DISP: Terminal Sacrifice

DAY ON TEST: 734

HISTO: 26682

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla	Blood Vessel	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Liver	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Ovary	* Pancreas	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Islets, Pancreatic		Carcinoma	
[Carcinoma TGLS = 3-11]			
* Kidney	Renal Tubule	Mineralization	Mild
		Nephropathy	Chronic, Mild
* Lung		Carcinoma	Metastatic (Islets, Pancreatic)
* Lymph Node, Mediastinal		Carcinoma	Metastatic (Islets, Pancreatic)
* Parathyroid Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 1-2]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Adenoma	
	C Cell	Hyperplasia	Marked

PRIMARY CAUSE OF DEATH

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** END OF REPORT **

* PROTOCOL REQUIRED TISSUE