

**TDMS No.** 20009 - 03  
**Test Type:** CHRONIC  
**Route:** DOSED WATER  
**Species/Strain:** RATS/F 344/N

**P04: NEOPLASMS BY INDIVIDUAL ANIMAL**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 05/27/2011  
**Time Report Requested:** 10:09:56  
**First Dose M/F:** 11/18/04 / 11/19/04  
**Lab:** BAT

F2\_R2

**C Number:** C20009  
**Lock Date:** 06/05/2008  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**Study Gender:** Both  
**TDMSE Version:** 2.4.1.0\_004  
**PWG Approval Date:** 06/29/2010

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		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DAY ON TEST		7	7	4	6	7	6	7	7	7	7	7	7	7	7	7	7	4	7	5	2	2	7	7	7	3
FISCHER 344 RATS MALE		2	2	9	6	2	7	2	2	2	2	2	2	2	2	2	6	2	9	7	2	2	2	2	9	
0 mg/l		7	6	9	4	6	7	7	7	6	6	7	6	6	7	6	7	8	3	3	6	6	6	6	1	
ANIMAL ID		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
		males (cont...)																								

**ALIMENTARY SYSTEM**

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Cecum Leukemia Mononuclear	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	A	+	A	+	+	+	+	+	+	+
Intestine Large, Colon Adenoma Leukemia Mononuclear Mesothelioma Malignant	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
															X			X							
																					X				
Intestine Large, Rectum Leukemia Mononuclear	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
																					X				
Intestine Small, Duodenum Leukemia Mononuclear Mesothelioma Malignant	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
																					X				
																							X		
Intestine Small, Ileum Leukemia Mononuclear Mesothelioma Malignant	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+
																				X					
																						X			
Intestine Small, Jejunum Leukemia Mononuclear Mesothelioma Malignant	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	A	+	+	+	+	+
																							X		
																								X	
Liver Hepatocellular Adenoma Hepatocellular Adenoma, Multiple	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
																								X	
																								X	

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
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FISCHER 344 RATS MALE	DAY ON TEST																									males (cont...)
	0 7 2 7	0 7 2 6	0 4 9 6	0 6 6 4	0 7 2 6	0 6 7 6	0 7 2 7	0 7 2 7	0 7 2 6	0 7 2 6	0 7 2 7	0 7 2 6	0 7 2 7	0 7 2 6	0 7 2 7	0 4 6 7	0 7 2 3	0 5 9 6	0 2 7 6	0 7 2 6	0 7 2 6	0 7 2 6	0 3 9 1			
0 mg/l	ANIMAL ID																									
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	males (cont...)	
Leukemia Mononuclear	X									X	X	X		X	X		X									
Mesothelioma Malignant																										
Mesentery																										
Mesothelioma Malignant																										
Pancreas																										
Adenoma, Mixed Cell																										
Leukemia Mononuclear																										
Mesothelioma Malignant																										
Salivary Glands																										
Leukemia Mononuclear																										
Stomach, Forestomach																										
Leukemia Mononuclear																										
Mesothelioma Malignant																										
Stomach, Glandular																										
Leukemia Mononuclear																										
<b>CARDIOVASCULAR SYSTEM</b>																										
Blood Vessel																										
Aorta, Leukemia Mononuclear																										
Heart																										
Leukemia Mononuclear																										
<b>ENDOCRINE SYSTEM</b>																										

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FISCHER 344 RATS MALE		DAY ON TEST																									males (cont...)	
0 mg/l		0727	0727	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729		0729
ANIMAL ID		0001	0002	0003	0004	0005	0006	0007	0008	0009	0010	0011	0012	0013	0014	0015	0016	0017	0018	0019	0020	0021	0022	0023	0024	0025		
		0011	0012	0013	0014	0015	0016	0017	0018	0019	0020	0021	0022	0023	0024	0025	0026	0027	0028	0029	0030	0031	0032	0033	0034	0035		
Adrenal Cortex		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Adenoma																												
Leukemia Mononuclear												X	X					X				X						
Adrenal Medulla		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Leukemia Mononuclear														X				X			X							
Pheochromocytoma Benign										X	X	X	X															
Pheochromocytoma Complex																												
Bilateral, Pheochromocytoma Benign															X													
Islets, Pancreatic		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Adenoma																									X			
Parathyroid Gland		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Pituitary Gland		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Leukemia Mononuclear																									X			
Pars Distalis, Adenoma		X		X	X	X		X		X	X	X	X		X			X			X			X		X		
Thyroid Gland		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Leukemia Mononuclear																									X			
C-cell, Adenoma						X		X				X		X	X										X			
C-cell, Carcinoma																												
Follicular Cell, Carcinoma																												

**GENERAL BODY SYSTEM**

Peritoneum +  
 Leukemia Mononuclear X  
 Mesothelioma Malignant

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		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>males (cont...)</b>
DAY ON TEST		7	7	4	6	7	6	7	7	7	7	7	7	7	7	4	7	5	2	7	7	7	7	7	7	3	3	
<b>FISCHER 344 RATS MALE</b>		2	2	9	6	2	7	2	2	2	2	2	2	2	2	6	2	9	7	2	2	2	2	2	2	2	9	
<b>0 mg/l</b>		7	6	9	4	6	7	7	6	6	7	6	6	7	6	7	8	3	3	6	6	6	6	6	6	6	1	
ANIMAL ID		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

**GENITAL SYSTEM**

Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia Mononuclear																X										
Mesothelioma Malignant							X												X							
Preputial Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Carcinoma																										
Leukemia Mononuclear																X										
Prostate	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia Mononuclear																	X									
Mesothelioma Malignant							X													X						
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia Mononuclear																			X							
Mesothelioma Malignant							X														X					
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia Mononuclear																			X							
Mesothelioma Malignant									X																	
Bilateral, Interstitial Cell, Adenoma			X							X	X				X	X					X		X			
Interstitial Cell, Adenoma					X		X					X	X		X						X		X			

**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia Mononuclear												X	X		X	X				X						
Lymph Node					+	+							+	+		+										+

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		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DAY ON TEST		7	7	4	6	7	6	7	7	7	7	7	7	7	7	7	7	7	4	7	5	2	2	7	7	7	7	3
FISCHER 344 RATS MALE		2	2	9	6	2	7	2	2	2	2	2	2	2	2	2	2	6	2	9	7	2	2	2	2	2	2	9
0 mg/l		7	6	9	4	6	7	7	6	6	7	6	6	7	6	7	6	7	8	3	3	6	6	6	6	6	6	1
ANIMAL ID		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	2	2	2	2	2

males  
(cont...)

**MUSCULOSKELETAL SYSTEM**

Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Carcinoma, Metastatic, Harderian Gland																												

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Leukemia Mononuclear																												

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Alveolar/Bronchiolar Adenoma																												
Carcinoma, Metastatic, Harderian Gland																												
Carcinoma, Metastatic, Preputial Gland																												
Leukemia Mononuclear	X																											
Rhabdomyosarcoma, Metastatic, Uncertain Primary Site																												

Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Carcinoma, Metastatic, Harderian Gland																													

Trachea	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
---------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

**SPECIAL SENSES SYSTEM**

Ear																													
Neural Crest Tumor																													

Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
-----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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FISCHER 344 RATS MALE 0 mg/l	DAY ON TEST																									ANIMAL ID	males (cont...)
	077	077	074	076	077	076	077	077	077	077	077	077	077	077	077	077	074	077	075	072	077	072	077	072	077		
	27	26	29	26	22	27	22	22	22	22	22	22	22	22	22	22	26	29	27	23	26	26	26	26	26		
	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5		

Carcinoma, Metastatic, Harderian Gland  
 Leukemia Mononuclear

X

Harderian Gland  
 Carcinoma  
 Leukemia Mononuclear

+ +

X

Zymbal's Gland  
 Carcinoma

**URINARY SYSTEM**

Kidney  
 Leukemia Mononuclear  
 Mesothelioma Malignant

+ +

X

X

X

X

Urinary Bladder  
 Leukemia Mononuclear  
 Mesothelioma Malignant

+ +

X

X

X

**SYSTEMIC LESIONS**

Multiple Organ  
 Leukemia Mononuclear  
 Mesothelioma Malignant

+ +

X

X

X

X

X

X

X

X

X

X

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| FISCHER 344 RATS MALE | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |
|-----------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
|                       | 078         | 076  | 054  | 072  | 078  | 065  | 066  | 077  | 077  | 066  | 077  | 077  | 000  | 066  | 077  | 066  | 077  | 077  | 077  | 066  | 077  | 066  | 077  | 066  |          |
| 0 mg/l                | 0028        | 0066 | 0044 | 0077 | 0088 | 0055 | 0066 | 0077 | 0077 | 0066 | 0077 | 0077 | 0000 | 0066 | 0077 | 0066 | 0077 | 0077 | 0077 | 0066 | 0077 | 0066 | 0077 | 0066 |          |
|                       | 0002        | 0007 | 0002 | 0003 | 0003 | 0003 | 0003 | 0003 | 0003 | 0003 | 0003 | 0003 | 0003 | 0004 | 0004 | 0004 | 0004 | 0004 | 0004 | 0004 | 0004 | 0004 | 0004 | 0005 |          |

**ALIMENTARY SYSTEM**

|                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum           | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | A | + | + | + | + | + | + | + | 45 |
| Leukemia Mononuclear             |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Intestine Large, Colon           | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | A | + | + | + | + | + | + | + | 47 |
| Adenoma                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Leukemia Mononuclear             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Mesothelioma Malignant           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Intestine Large, Rectum          | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | A | + | + | + | + | + | + | + | 47 |
| Leukemia Mononuclear             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Intestine Small, Duodenum        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | 48 |
| Leukemia Mononuclear             |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Mesothelioma Malignant           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Intestine Small, Ileum           | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | 46 |
| Leukemia Mononuclear             |   |   | X |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3  |
| Mesothelioma Malignant           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Intestine Small, Jejunum         | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | A | + | + | + | + | + | + | 45 |
| Leukemia Mononuclear             |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Mesothelioma Malignant           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Liver                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hepatocellular Adenoma           |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Hepatocellular Adenoma, Multiple |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>0 mg/l | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |
|---------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
|                                 | 0728        | 0726  | 0704  | 0727  | 0778  | 0665  | 0667  | 0722  | 0728  | 0654  | 0667  | 0722  | 0728  | 0116  | 0677  | 0668  | 0725  | 0721  | 0773  | 0722  | 0726  | 0683  | 0728  | 0670  |          |
| ANIMAL ID                       | 00026       | 00007 | 00008 | 00000 | 00003 | 00001 | 00002 | 00003 | 00004 | 00005 | 00006 | 00007 | 00008 | 00009 | 00000 | 00001 | 00002 | 00003 | 00004 | 00005 | 00006 | 00007 | 00008 | 00009 | 00000    |
| Leukemia Mononuclear            |             |       | X     |       |       |       |       |       | X     |       |       |       |       |       | X     |       |       | X     | X     |       |       |       |       |       |          |
| Mesothelioma Malignant          |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       |          |
| Mesentery                       |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Mesothelioma Malignant          |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Pancreas                        | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        |
| Adenoma, Mixed Cell             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Leukemia Mononuclear            |             |       | X     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Mesothelioma Malignant          |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Salivary Glands                 | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        |
| Leukemia Mononuclear            |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Stomach, Forestomach            | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        |
| Leukemia Mononuclear            |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Mesothelioma Malignant          |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Stomach, Glandular              | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        |
| Leukemia Mononuclear            |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| <b>CARDIOVASCULAR SYSTEM</b>    |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Blood Vessel                    | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        |
| Aorta, Leukemia Mononuclear     |             |       | X     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Heart                           | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        |
| Leukemia Mononuclear            |             |       | X     |       |       |       |       |       |       |       |       |       |       | X     |       |       |       | X     |       |       |       |       |       |       |          |
| <b>ENDOCRINE SYSTEM</b>         |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
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M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>0 mg/l    | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |
|------------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
|                                    | 0728        | 0726  | 0704  | 0727  | 0728  | 0705  | 0706  | 0727  | 0728  | 0704  | 0706  | 0727  | 0728  | 0701  | 0706  | 0727  | 0728  | 0703  | 0706  | 0727  | 0728  | 0703  | 0708  | 0700  |          |
| ANIMAL ID                          | 00026       | 00007 | 00008 | 00009 | 00010 | 00011 | 00012 | 00013 | 00014 | 00015 | 00016 | 00017 | 00018 | 00019 | 00020 | 00021 | 00022 | 00023 | 00024 | 00025 | 00026 | 00027 | 00028 | 00029 | 00030    |
| Adrenal Cortex                     | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |
| Adenoma                            |             |       |       | X     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1        |
| Leukemia Mononuclear               |             |       | X     |       |       |       |       | X     |       |       |       |       | X     |       |       |       |       |       |       |       |       |       |       |       | 7        |
| Adrenal Medulla                    | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |
| Leukemia Mononuclear               |             |       | X     |       |       |       |       | X     |       |       |       |       | X     |       |       |       |       |       |       |       |       |       |       |       | 6        |
| Pheochromocytoma Benign            |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 4        |
| Pheochromocytoma Complex           |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       | 1        |
| Bilateral, Pheochromocytoma Benign |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1        |
| Islets, Pancreatic                 | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |
| Adenoma                            | X           |       |       | X     |       |       |       |       |       | X     |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 4        |
| Parathyroid Gland                  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |
| Pituitary Gland                    | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |
| Leukemia Mononuclear               |             |       |       |       |       |       |       |       | X     |       |       |       |       |       |       | X     |       |       |       |       |       |       |       |       | 3        |
| Pars Distalis, Adenoma             |             | X     | X     | X     |       | X     | X     | X     |       | X     | X     |       | X     |       | X     | X     |       |       |       |       | X     | X     | X     | X     | 28       |
| Thyroid Gland                      | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |
| Leukemia Mononuclear               |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1        |
| C-cell, Adenoma                    |             |       |       |       | X     |       | X     |       | X     |       | X     |       |       |       | X     |       |       |       |       |       |       | X     |       |       | 12       |
| C-cell, Carcinoma                  |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       |       |       |       |       | 1        |
| Follicular Cell, Carcinoma         |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       |       | 1        |
| <b>GENERAL BODY SYSTEM</b>         |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Peritoneum                         |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 2        |
| Leukemia Mononuclear               |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1        |
| Mesothelioma Malignant             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1        |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  | * TOTALS |
|-----------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|----------|
|                       | 0728        | 0726 | 0704 | 0702 | 0701 | 0700 | 0699 | 0698 | 0697 | 0696 | 0695 | 0694 | 0693 | 0692 | 0691 | 0690 | 0689 | 0688 | 0687 | 0686 | 0685 | 0684 | 0683 |  |          |
| 0 mg/l                | 0026        | 0007 | 0008 | 0009 | 0000 | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0010 | 0011 | 0012 | 0013 | 0014 | 0015 | 0016 | 0017 | 0018 |  |          |
|                       | 6           | 7    | 8    | 9    | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |  |          |
|                       | 0           | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |  |          |

**GENITAL SYSTEM**

|                                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Epididymis                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Mesothelioma Malignant                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   | X | 4  |
| Preputial Gland                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | X | 2  |
| Leukemia Mononuclear                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Prostate                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Leukemia Mononuclear                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Mesothelioma Malignant                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 3  |
| Seminal Vesicle                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Mesothelioma Malignant                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 3  |
| Testes                                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Mesothelioma Malignant                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   | 2  |
| Bilateral, Interstitial Cell, Adenoma | X | X |   |   | X |   | X |   | X |   |   | X | X |   |   | X | X |   | X | X |   | X |   | 22 |
| Interstitial Cell, Adenoma            |   |   | X | X |   |   | X |   | X | X |   |   |   |   |   | X |   |   | X |   |   |   |   | 13 |

**HEMATOPOIETIC SYSTEM**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear |   |   | X |   |   |   |   |   | X |   |   |   |   | X |   | X |   |   |   |   |   |   |   | 9  |
| Lymph Node           |   |   |   |   |   |   |   |   | + |   |   |   |   |   |   |   |   |   | + | + |   |   |   | 9  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
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TDMS No. 20009 - 03  
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P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |
|-----------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
|                       | 0728        | 0726 | 0724 | 0722 | 0720 | 0718 | 0716 | 0714 | 0712 | 0710 | 0708 | 0706 | 0704 | 0702 | 0700 | 0698 | 0696 | 0694 | 0692 | 0690 | 0688 | 0686 | 0684 | 0682 |          |
| 0 mg/l                | 0026        | 0007 | 0008 | 0009 | 0000 | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0000 | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0000     |

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Deep Cervical, Carcinoma, Metastatic, Harderian Gland |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 1  |   |
| Lumbar, Leukemia Mononuclear                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 |
| Mediastinal, Leukemia Mononuclear                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X  | 4 |
| Pancreatic, Leukemia Mononuclear                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X  | 1 |
| Lymph Node, Mandibular                                | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | 0  |   |
| Lymph Node, Mesenteric                                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Leukemia Mononuclear                                  |   |   | X |   |   |   |   |   | X |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   | 5  |   |
| Spleen  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Leukemia Mononuclear                                  |   |   | X |   |   |   |   |   | X |   |   |   |   |   | X | X |   | X | X |   |   |   |   |   |   | 14 |   |
| Mesothelioma Malignant                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |   |
| Thymus  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 49 |   |
| Carcinoma, Metastatic, Harderian Gland                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 1  |   |
| Leukemia Mononuclear                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 3  |   |

**INTEGUMENTARY SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Mammary Gland                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Fibroadenoma                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X  | 1 |
| Skin                                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Basal Cell Adenoma                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 1  |   |
| Carcinoma, Metastatic, Harderian Gland |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 1  |   |
| Keratoacanthoma                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 5  |   |
| Leukemia Mononuclear                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 1  |   |
| Subcutaneous Tissue, Fibroma           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 3  |   |
| Subcutaneous Tissue, Fibrosarcoma      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 1  |   |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE                  | DAY ON TEST |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    | * TOTALS |
|--|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----------|
|  | 078         | 076 | 054 | 072 | 077 | 066 | 066 | 077 | 077 | 066 | 077 | 077 | 077 | 000 | 066 | 077 | 066 | 077 | 077 | 077 | 066 | 077 | 066 |    |          |
| 0 mg/l                                 | 000         | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 |    |          |
|  | 000         | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 |    |          |
|  | 206         | 207 | 208 | 209 | 203 | 203 | 203 | 203 | 203 | 203 | 203 | 203 | 203 | 203 | 204 | 204 | 204 | 204 | 204 | 204 | 204 | 204 | 205 |    |          |
|  | 6           | 7   | 8   | 9   | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |    |          |
| Carcinoma, Metastatic, Harderian Gland |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X  |          |
| Leukemia Mononuclear                   |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |          |
| Harderian Gland                        | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | 50 |          |
| Carcinoma                              |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X  |          |
| Leukemia Mononuclear                   |             |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |          |
| Zymbal's Gland                         |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | +  |          |
| Carcinoma                              |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X  |          |
| <b>URINARY SYSTEM</b>                  |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |          |
| Kidney                                 | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | 50 |          |
| Leukemia Mononuclear                   |             |     |     | X   |     |     |     |     |     | X   |     |     |     |     |     | X   |     |     |     |     |     |     |     |    |          |
| Mesothelioma Malignant                 |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |          |
| Urinary Bladder                        | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | 50 |          |
| Leukemia Mononuclear                   |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |          |
| Mesothelioma Malignant                 |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |          |
| <b>SYSTEMIC LESIONS</b>                |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |          |
| Multiple Organ                         | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | 50 |          |
| Leukemia Mononuclear                   |             |     |     | X   |     |     |     |     |     | X   |     |     |     |     | X   | X   |     | X   | X   |     |     |     |     | 14 |          |
| Mesothelioma Malignant                 |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     | X   | 4  |          |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P04: NEOPLASMS BY INDIVIDUAL ANIMAL**  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|                              |                    | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | males<br>(cont...) |      |  |
|------------------------------|--------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|------|--|
|                              |                    | 0638        | 0728 | 0778 | 0778 | 0778 | 0778 | 0778 | 0659 | 0578 | 0578 | 0578 | 0578 | 0578 | 0578 | 0578 | 0578 | 0578 | 0578 | 0578 | 0578 | 0578 | 0578 | 0578 | 0578 |                    | 0578 |  |
| <b>FISCHER 344 RATS MALE</b> | <b>156.25 mg/l</b> | 0051        | 0052 | 0053 | 0054 | 0055 | 0056 | 0057 | 0058 | 0059 | 0060 | 0061 | 0062 | 0063 | 0064 | 0065 | 0066 | 0067 | 0068 | 0069 | 0070 | 0071 | 0072 | 0073 | 0074 | 0075               |      |  |
|                              |                    | 0000        | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000               | 0000 |  |
|                              |                    | 0000        | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000               | 0000 |  |
|                              |                    | 0000        | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000               | 0000 |  |

**ALIMENTARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Esophagus   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Intestine Large, Cecum                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Intestine Large, Colon                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Intestine Large, Rectum                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Intestine Small, Duodenum<br>Leukemia Mononuclear | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Intestine Small, Ileum<br>Leukemia Mononuclear    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Intestine Small, Jejunum<br>Leukemia Mononuclear  | + | + | + | + | + | + | + | + | + | X | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Liver<br>Hepatocellular Adenoma                   | + | + | + | + | + | + | + | + | + | + | X | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Leukemia Mononuclear                              | X |   |   | X |   | X | X | X |   | X |   | X |   | X |   | X |   |   |   |   |   |   |   |   | X |   |   |   |  |
| Osteosarcoma, Metastatic, Uncertain Primary Site  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Mesentery<br>Mesothelioma Malignant               |   |   |   |   | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + |   |   |   |   |   | + |   |  |
| Osteosarcoma, Metastatic, Uncertain Primary Site  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Pancreas  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| DAY ON TEST                                      | FISCHER 344 RATS MALE |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | ANIMAL ID | males<br>(cont...) |      |      |      |      |
|--|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|--------------------|------|------|------|------|
|  | 0638                  | 0728 | 0778 | 0778 | 0778 | 0778 | 0657 | 0579 | 0579 | 0579 | 0579 | 0579 | 0579 | 0579 | 0579 | 0579 | 0579 | 0579 | 0579 | 0579 | 0579 | 0579 | 0579 | 0579 | 0579 |           |                    | 0579 | 0579 | 0579 | 0579 |
| 156.25 mg/l                                      | 0051                  | 0052 | 0053 | 0054 | 0055 | 0056 | 0057 | 0058 | 0059 | 0060 | 0061 | 0062 | 0063 | 0064 | 0065 | 0066 | 0067 | 0068 | 0069 | 0070 | 0071 | 0072 | 0073 | 0074 | 0075 | 0076      | 0077               | 0078 | 0079 | 0080 |      |
| Adenoma, Mixed Cell                              |                       |      |      |      |      |      | X    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |      |      |      |      |
| Leukemia Mononuclear                             |                       |      |      |      |      |      |      |      |      |      |      |      |      |      | X    |      |      |      |      |      |      |      |      |      |      |           |                    |      |      |      |      |
| Osteosarcoma, Metastatic, Uncertain Primary Site |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |      |      |      |      |
| Salivary Glands                                  | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +         | +                  | +    | +    | +    | +    |
| Stomach, Forestomach                             | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +         | +                  | +    | +    | +    | +    |
| Squamous Cell Papilloma                          |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |      |      |      |      |
| Stomach, Glandular                               | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +         | +                  | +    | +    | +    | +    |
| <b>CARDIOVASCULAR SYSTEM</b>                     |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |      |      |      |      |
| Blood Vessel                                     | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +         | +                  | +    | +    | +    | +    |
| Aorta, Leukemia Mononuclear                      |                       |      |      |      |      |      |      |      |      |      |      |      |      |      | X    |      |      |      |      |      |      |      |      |      |      |           |                    |      |      |      |      |
| Heart  | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +         | +                  | +    | +    | +    | +    |
| Leukemia Mononuclear                             | X                     |      |      |      |      |      | X    | X    |      |      |      |      |      |      |      |      |      | X    |      |      |      |      |      |      |      |           | X                  |      |      |      |      |
| <b>ENDOCRINE SYSTEM</b>                          |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |      |      |      |      |
| Adrenal Cortex                                   | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +         | +                  | +    | +    | +    | +    |
| Leukemia Mononuclear                             | X                     |      |      |      |      |      | X    | X    |      |      |      |      |      |      |      |      | X    | X    |      |      |      |      |      |      |      | X         |                    |      |      |      |      |
| Osteosarcoma, Metastatic, Uncertain Primary Site |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |      |      |      |      |
| Adrenal Medulla                                  | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | A    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +         | +                  | +    | +    | +    | +    |
| Leukemia Mononuclear                             | X                     |      |      |      |      |      | X    | X    |      |      |      |      |      |      |      |      | X    | X    |      |      |      |      |      |      |      | X         |                    |      |      |      |      |
| Osteosarcoma, Metastatic, Uncertain Primary Site |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |      |      |      |      |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
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TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE      |  | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | males<br>(cont...) |  |
|----------------------------|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------|--|
| 156.25 mg/l                |  | ANIMAL ID   | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 4 | 7 | 7 | 2 | 7 | 7 |                    |  |
|                            |  |             | 3 | 2 | 2 | 2 | 2 | 9 | 8 | 2 | 4 | 1 | 4 | 2 | 2 | 2 | 6 | 6 | 2 | 2 | 9 | 2 | 2 | 2 | 2 | 2 |                    |  |
|                            |  |             | 8 | 8 | 8 | 6 | 7 | 7 | 9 | 0 | 4 | 7 | 5 | 6 | 6 | 6 | 4 | 8 | 7 | 7 | 8 | 6 | 6 | 6 | 6 | 6 |                    |  |
| Pheochromocytoma Benign    |  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   | X |   |   |   |   | X |   |                    |  |
| Islets, Pancreatic Adenoma |  |             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |                    |  |
| Parathyroid Gland          |  |             | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + |                    |  |
| Pituitary Gland            |  |             | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |                    |  |
| Leukemia Mononuclear       |  |             | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                    |  |
| Pars Distalis, Adenoma     |  |             | X | X | X |   | X | X |   | X | X |   | X | X |   | X | X | X | X |   | X | X | X | X | X | X |                    |  |
| Thyroid Gland              |  |             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |                    |  |
| C-cell, Adenoma            |  |             | X |   | X | X |   |   |   |   |   |   |   | X |   | X |   |   |   |   |   |   |   |   | X | X |                    |  |
| C-cell, Carcinoma          |  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | X |                    |  |
| Follicular Cell, Carcinoma |  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |                    |  |

**GENERAL BODY SYSTEM**

Peritoneum  
 Osteosarcoma, Metastatic, Uncertain Primary Site

**GENITAL SYSTEM**

Epididymis  
 Mesothelioma Malignant  
 Osteosarcoma, Metastatic, Uncertain Primary Site

Preputial Gland  
 Adenoma

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |
|  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|  |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| DAY ON TEST                                      | FISCHER 344 RATS MALE |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | ANIMAL ID | males<br>(cont...) |
|--|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|--------------------|
|  | 0638                  | 0728 | 0778 | 0776 | 0772 | 0772 | 0698 | 0589 | 0570 | 0574 | 0571 | 0675 | 0772 | 0772 | 0772 | 0664 | 0778 | 0777 | 0478 | 0772 | 0726 | 0776 | 0772 | 0776 | 0776 |           |                    |
| 156.25 mg/l                                      | 0051                  | 0052 | 0053 | 0054 | 0055 | 0056 | 0057 | 0058 | 0059 | 0060 | 0061 | 0062 | 0063 | 0064 | 0065 | 0066 | 0067 | 0068 | 0069 | 0070 | 0071 | 0072 | 0073 | 0074 | 0075 |           |                    |
| Spleen   | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |           |                    |
| Leukemia Mononuclear                             | X                     |      |      | X    |      | X    | X    |      | X    |      |      | X    |      | X    | X    |      |      |      |      |      |      | X    |      |      |      |           |                    |
| Mesothelioma Malignant                           |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |
| Osteosarcoma, Metastatic, Uncertain Primary Site |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |
| Thymus   | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |           |                    |
| Leukemia Mononuclear                             | X                     |      |      |      |      |      |      |      | X    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |
| <b>INTEGUMENTARY SYSTEM</b>                      |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |
| Mammary Gland                                    | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | M         |                    |
| Carcinoma  |                       | X    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |
| Fibroadenoma                                     |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |
| Skin   | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |           |                    |
| Basal Cell Adenoma                               |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |
| Keratoacanthoma                                  |                       |      |      |      |      | X    |      |      | X    |      |      | X    |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |
| Squamous Cell Carcinoma                          |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |
| Subcutaneous Tissue, Fibroma                     |                       |      |      | X    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |
| Subcutaneous Tissue, Hemangioma                  |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X    |      |      |           |                    |
| <b>MUSCULOSKELETAL SYSTEM</b>                    |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |
| Bone   | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |           |                    |
| <b>NERVOUS SYSTEM</b>                            |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |
| Brain  | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |           |                    |
| Leukemia Mononuclear                             |                       |      |      |      |      |      |      |      | X    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                    |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|                              |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                            |   |   |   |
|------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------------|---|---|---|
|                              |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | <b>males<br/>(cont...)</b> |   |   |   |
| DAY ON TEST                  |  | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 4 | 7 | 7 | 7 | 7 |                            |   |   |   |
| <b>FISCHER 344 RATS MALE</b> |  | 3 | 2 | 2 | 2 | 2 | 2 | 9 | 8 | 2 | 4 | 1 | 4 | 2 | 2 | 2 | 6 | 2 | 2 | 9 | 2 | 2 | 2 |                            |   |   |   |
|                              |  | 8 | 8 | 8 | 6 | 7 | 6 | 7 | 9 | 0 | 4 | 7 | 5 | 6 | 6 | 6 | 4 | 8 | 7 | 8 | 6 | 6 | 6 |                            | 6 |   |   |
| <b>156.25 mg/l</b>           |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                            |   |   |   |
|                              |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                            | 0 |   |   |
| ANIMAL ID                    |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                            |   |   |   |
|                              |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                            | 0 |   |   |
|                              |  | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 |                            |   |   |   |
|                              |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 |                            | 3 | 4 | 5 |

**RESPIRATORY SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lung   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Alveolar/Bronchiolar Adenoma                     |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   | X |   |   |   |   |
| Carcinoma, Metastatic, Thyroid Gland             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leukemia Mononuclear                             | X |   |   | X |   | X | X | X |   | X |   |   |   | X | X |   |   |   |   |   | X |   |   |   |
| Osteosarcoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Nose   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Respiratory Epithelium, Adenoma                  |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Trachea  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

**SPECIAL SENSES SYSTEM**

|                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

**URINARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemangiosarcoma   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leukemia Mononuclear                                      | X |   |   |   | X | X | X |   | X |   |   |   |   | X | X |   |   |   |   |   | X |   |   |   |
| Mesothelioma Malignant                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Capsule, Osteosarcoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Renal Tubule, Adenoma                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Urinary Bladder   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                    |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|
| FISCHER 344 RATS MALE<br><br>156.25 mg/l | DAY ON TEST | 0638 | 0728 | 0728 | 0728 | 0728 | 0728 | 0659 | 0572 | 0575 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0422 | 0722 | 0722 | 0722 | 0722 | 0722 | 0722 | 0722 | males<br>(cont...) |
|  | ANIMAL ID   | 0051 | 0052 | 0053 | 0054 | 0055 | 0056 | 0057 | 0058 | 0059 | 0060 | 0061 | 0062 | 0063 | 0064 | 0065 | 0066 | 0067 | 0068 | 0069 | 0070 | 0071 | 0072 | 0073 | 0074 | 0075 | 0076 |                    |
|  |             | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 |                    |

**SYSTEMIC LESIONS**

|                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Multiple Organ         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear   | X |   |   | X |   | X | X | X |   | X |   |   | X |   | X | X |   |   |   |   |   | X |   |   |   |   |   |
| Mesothelioma Malignant |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|                       |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * TOTALS |   |
|-----------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|---|
| DAY ON TEST           |             | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 5 | 6 | 7 | 6 | 6 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 |   |          |   |
| FISCHER 344 RATS MALE | 156.25 mg/l | 2 | 2 | 6 | 2 | 2 | 2 | 2 | 6 | 9 | 2 | 7 | 9 | 8 | 2 | 8 | 2 | 2 | 2 | 1 | 1 | 2 | 6 | 2 | 2 |          |   |
|                       |             | 8 | 6 | 6 | 7 | 7 | 6 | 8 | 7 | 4 | 6 | 3 | 3 | 4 | 6 | 6 | 6 | 8 | 6 | 9 | 3 | 7 | 4 | 6 | 2 |          | 7 |
| ANIMAL ID             |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        |   |
| 0                     | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |   |
| 0                     | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |          |   |
| 7                     | 7           | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 |          |   |
| 6                     | 7           | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 0 |          |   |

**ALIMENTARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|
| Esophagus   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50      |
| Intestine Large, Cecum                            | + | + | A | + | + | + | + | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | 47      |
| Intestine Large, Colon                            | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49      |
| Intestine Large, Rectum                           | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49      |
| Intestine Small, Duodenum<br>Leukemia Mononuclear | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | + | + | + | + | 49<br>1 |
| Intestine Small, Ileum<br>Leukemia Mononuclear    | + | + | A | + | + | + | + | + | + | + | A | + | + | A | + | + | + | + | + | X | + | + | + | + | 47<br>1 |
| Intestine Small, Jejunum<br>Leukemia Mononuclear  | + | + | A | + | + | + | + | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | 47<br>1 |
| Liver   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50      |
| Hepatocellular Adenoma                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1       |
| Leukemia Mononuclear                              |   |   | X |   |   |   |   |   | X | X |   |   |   |   | X |   | X | X |   | X | X |   |   |   | 18      |
| Osteosarcoma, Metastatic, Uncertain Primary Site  |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   | 1       |
| Mesentery   |   |   |   |   |   | + |   |   |   |   |   | + |   |   |   |   |   |   |   | + |   | + |   |   | 8       |
| Mesothelioma Malignant                            |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   | 1       |
| Osteosarcoma, Metastatic, Uncertain Primary Site  |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   | 1       |
| Pancreas  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50      |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE                            | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |    |  |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|----|--|
|  | 0728        | 0726  | 0726  | 0722  | 0722  | 0722  | 0722  | 0722  | 0722  | 0722  | 0722  | 0722  | 0722  | 0722  | 0722  | 0722  | 0722  | 0722  | 0722  | 0722  | 0722  | 0722  | 0722  | 0722  |          |    |  |
| 156.25 mg/l                                      | ANIMAL ID   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |    |  |
|  | 00076       | 00077 | 00078 | 00079 | 00080 | 00081 | 00082 | 00083 | 00084 | 00085 | 00086 | 00087 | 00088 | 00089 | 00090 | 00091 | 00092 | 00093 | 00094 | 00095 | 00096 | 00097 | 00098 | 00099 |          |    |  |
| Adenoma, Mixed Cell                              |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1        |    |  |
| Leukemia Mononuclear                             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X        | 2  |  |
| Osteosarcoma, Metastatic, Uncertain Primary Site |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X        | 1  |  |
| Salivary Glands                                  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |    |  |
| Stomach, Forestomach                             | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |    |  |
| Squamous Cell Papilloma                          |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X        | 1  |  |
| Stomach, Glandular                               | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |    |  |
| <b>CARDIOVASCULAR SYSTEM</b>                     |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |    |  |
| Blood Vessel                                     | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |    |  |
| Aorta, Leukemia Mononuclear                      |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1        |    |  |
| Heart  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |    |  |
| Leukemia Mononuclear                             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X        | 7  |  |
| <b>ENDOCRINE SYSTEM</b>                          |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |    |  |
| Adrenal Cortex                                   | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |    |  |
| Leukemia Mononuclear                             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X        | 11 |  |
| Osteosarcoma, Metastatic, Uncertain Primary Site |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X        | 1  |  |
| Adrenal Medulla                                  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 49       |    |  |
| Leukemia Mononuclear                             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X        | 11 |  |
| Osteosarcoma, Metastatic, Uncertain Primary Site |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X        | 1  |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  | * TOTALS |
|-----------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|----------|
|                       | 078         | 076  | 077  | 077  | 077  | 077  | 075  | 066  | 067  | 066  | 066  | 067  | 066  | 067  | 067  | 067  | 067  | 067  | 066  | 067  | 067  | 067  | 067  |  |          |
| 156.25 mg/l           | 0076        | 0076 | 0077 | 0077 | 0077 | 0077 | 0075 | 0066 | 0067 | 0066 | 0066 | 0067 | 0066 | 0067 | 0067 | 0067 | 0067 | 0067 | 0066 | 0067 | 0067 | 0067 | 0067 |  |          |
| ANIMAL ID             | 0076        | 0076 | 0077 | 0077 | 0077 | 0077 | 0075 | 0066 | 0067 | 0066 | 0066 | 0067 | 0066 | 0067 | 0067 | 0067 | 0067 | 0067 | 0066 | 0067 | 0067 | 0067 | 0067 |  |          |

|                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |         |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---------|
| Pheochromocytoma Benign    |   |   |   |   |   |   | X |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 5       |
| Islets, Pancreatic Adenoma | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 50<br>1 |
| Parathyroid Gland          | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |         |
| Pituitary Gland            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |         |
| Leukemia Mononuclear       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   | X | 3  |         |
| Pars Distalis, Adenoma     |   | X |   | X |   | X | X |   | X | X | X | X | X | X | X | X | X |   | X |   |   | X | 35 |         |
| Thyroid Gland              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |         |
| C-cell, Adenoma            |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   | X |   | X | 10 |         |
| C-cell, Carcinoma          |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   | X |   |   |   |   |   |   | 3  |         |
| Follicular Cell, Carcinoma |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |         |

**GENERAL BODY SYSTEM**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| Peritoneum                                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Osteosarcoma, Metastatic, Uncertain Primary Site |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |

**GENITAL SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Epididymis                                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Mesothelioma Malignant                           |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   | 2  |
| Osteosarcoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   | 1  |
| Preputial Gland                                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenoma  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| DAY ON TEST                                      | FISCHER 344 RATS MALE |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |      |      |      |    |
|--|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|------|------|----|
|  | 0728                  | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 |          | 0728 | 0728 |      |    |
| ANIMAL ID  | 156.25 mg/l           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |      |      |      |    |
| 0076   | 0077                  | 0078 | 0079 | 0080 | 0081 | 0082 | 0083 | 0084 | 0085 | 0086 | 0087 | 0088 | 0089 | 0090 | 0091 | 0092 | 0093 | 0094 | 0095 | 0096 |          | 0097 | 0098 | 0099 |    |
| Carcinoma  |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |      |      | X    | 1  |
| Prostate   | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | +    | +    | +    | 50 |
| Mesothelioma Malignant                           |                       |      |      |      |      |      |      |      |      |      |      |      | X    |      |      |      |      |      |      |      |          |      |      |      | 1  |
| Osteosarcoma, Metastatic, Uncertain Primary Site |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X    |      |      |      |          |      |      |      | 1  |
| Seminal Vesicle                                  | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | +    | +    | +    | 50 |
| Testes   | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | +    | +    | +    | 50 |
| Mesothelioma Malignant                           |                       |      |      |      |      |      |      |      |      |      |      |      | X    |      |      |      |      |      |      |      |          |      |      |      | 1  |
| Bilateral, Interstitial Cell, Adenoma            | X                     | X    | X    |      | X    |      | X    |      | X    |      | X    |      |      |      |      |      | X    |      | X    | X    |          |      | X    |      | 20 |
| Interstitial Cell, Adenoma                       |                       |      |      |      | X    |      |      |      |      |      |      |      |      |      | X    | X    | X    |      |      |      | X        |      |      |      | 18 |
| <b>HEMATOPOIETIC SYSTEM</b>                      |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |      |      |      |    |
| Bone Marrow                                      | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | +    | +    | +    | 50 |
| Leukemia Mononuclear                             |                       |      | X    |      |      |      |      |      | X    | X    |      |      |      |      |      | X    |      | X    | X    |      | X        | X    |      |      | 15 |
| Lymph Node                                       |                       |      | +    |      |      |      |      |      |      |      |      |      |      |      |      | +    | +    |      | +    |      |          |      |      |      | 11 |
| Mediastinal, Leukemia Mononuclear                |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X    |      |      | X    |      |          |      |      |      | 6  |
| Mediastinal, Pancreatic, Leukemia Mononuclear    |                       |      | X    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |      |      |      | 1  |
| Pancreatic, Leukemia Mononuclear                 |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |      |      |      | 1  |
| Renal, Leukemia Mononuclear                      |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |      |      |      | 2  |
| Lymph Node, Mandibular                           | M                     | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M        | M    | M    | M    | 0  |
| Lymph Node, Mesenteric                           | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | +    | +    | +    | 50 |
| Leukemia Mononuclear                             |                       |      | X    |      |      |      |      |      | X    | X    |      |      |      |      |      |      |      | X    | X    |      | X        |      |      |      | 10 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
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M .. Missing tissue  
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 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| DAY ON TEST                                      | FISCHER 344 RATS MALE |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |    | * TOTALS |
|--|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|----------|
|  | 078                   | 076  | 077  | 077  | 077  | 077  | 075  | 066  | 067  | 066  | 066  | 067  | 066  | 067  | 066  | 066  | 067  | 067  | 067  | 066  | 067  | 067  | 067  |    |          |
| ANIMAL ID  | 0076                  | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 |    |          |
| Spleen   | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50 |          |
| Leukemia Mononuclear                             |                       |      | X    |      |      |      |      | X    | X    | X    |      |      |      |      |      |      | X    |      | X    | X    |      | X    | X    | 19 |          |
| Mesothelioma Malignant                           |                       |      |      |      |      |      |      |      |      |      |      | X    |      |      |      |      |      |      |      |      |      |      |      | 1  |          |
| Osteosarcoma, Metastatic, Uncertain Primary Site |                       |      |      |      |      |      |      |      |      |      |      |      |      |      | X    |      |      |      |      |      |      |      |      | 1  |          |
| Thymus   | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | M    | +    | +    | +    | +    | 49 |          |
| Leukemia Mononuclear                             |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X    |      |      |      |      | 3  |          |
| <b>INTEGUMENTARY SYSTEM</b>                      |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |    |          |
| Mammary Gland                                    | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 49 |          |
| Carcinoma  |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 1  |          |
| Fibroadenoma                                     |                       |      |      |      |      |      |      |      |      |      |      |      | X    |      |      |      |      |      |      |      |      |      |      | 1  |          |
| Skin   | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50 |          |
| Basal Cell Adenoma                               |                       | X    |      |      |      |      |      |      | X    |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 2  |          |
| Keratoacanthoma                                  | X                     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X    |      |      |      |      |      |      | 5  |          |
| Squamous Cell Carcinoma                          |                       |      |      |      |      | X    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 1  |          |
| Subcutaneous Tissue, Fibroma                     | X                     |      |      |      |      |      |      |      |      |      |      | X    | X    |      |      |      |      |      |      |      |      |      |      | 4  |          |
| Subcutaneous Tissue, Hemangioma                  |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 1  |          |
| <b>MUSCULOSKELETAL SYSTEM</b>                    |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |    |          |
| Bone   | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50 |          |
| <b>NERVOUS SYSTEM</b>                            |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |    |          |
| Brain  | +                     | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50 |          |
| Leukemia Mononuclear                             |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 1  |          |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
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 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |    | * TOTALS |
|-----------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|----------|
|                       | 078         | 076  | 077  | 077  | 077  | 077  | 075  | 066  | 067  | 066  | 066  | 067  | 066  | 067  | 067  | 067  | 067  | 067  | 066  | 067  | 067  | 067  | 067  |    |          |
| 156.25 mg/l           | 0076        | 0077 | 0078 | 0077 | 0077 | 0077 | 0075 | 0066 | 0067 | 0066 | 0066 | 0067 | 0066 | 0067 | 0067 | 0067 | 0067 | 0067 | 0066 | 0067 | 0067 | 0067 | 0067 | 50 |          |
| ANIMAL ID             | 0076        | 0077 | 0078 | 0077 | 0077 | 0077 | 0075 | 0066 | 0067 | 0066 | 0066 | 0067 | 0066 | 0067 | 0067 | 0067 | 0067 | 0067 | 0066 | 0067 | 0067 | 0067 | 0067 | 50 |          |

**RESPIRATORY SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Lung   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Alveolar/Bronchiolar Adenoma                     | X |   |   |   | X |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   | 5  |
| Carcinoma, Metastatic, Thyroid Gland             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   | 1  |
| Leukemia Mononuclear                             |   |   | X |   |   |   |   |   | X | X |   |   |   |   | X |   | X | X |   | X | X |   |   | 17 |
| Osteosarcoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   | 1  |
| Nose   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Respiratory Epithelium, Adenoma                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Trachea  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

**SPECIAL SENSES SYSTEM**

|                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Eye             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

**URINARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Kidney  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemangiosarcoma   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   | 1  |
| Leukemia Mononuclear                                      |   |   | X |   |   |   |   |   |   |   |   |   |   |   | X |   | X | X |   | X |   |   |   | 13 |
| Mesothelioma Malignant                                    |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Capsule, Osteosarcoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   | 1  |
| Renal Tubule, Adenoma                                     |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Urinary Bladder   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|                       |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |
|-----------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| FISCHER 344 RATS MALE | DAY ON TEST | 078  | 076  | 076  | 077  | 077  | 077  | 057  | 066  | 076  | 066  | 066  | 076  | 066  | 076  | 077  | 077  | 077  | 077  | 066  | 076  | 077  | 077  | * TOTALS |
|                       | 156.25 mg/l | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000  |          |
|                       | ANIMAL ID   | 0076 | 0077 | 0078 | 0079 | 0080 | 0081 | 0082 | 0083 | 0084 | 0085 | 0086 | 0087 | 0088 | 0089 | 0090 | 0091 | 0092 | 0093 | 0094 | 0095 | 0096 | 0097 |          |

**SYSTEMIC LESIONS**

|                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Multiple Organ         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear   |   |   | X |   |   |   |   | X | X | X |   |   |   |   |   | X |   | X | X |   | X | X |   |   | 19 |
| Mesothelioma Malignant |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
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TDMS No. 20009 - 03  
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P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
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|                              |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                      | 0 |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|---|
| <b>FISCHER 344 RATS MALE</b> | DAY ON TEST | 7 | 7 | 5 | 3 | 7 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 7                      | 7 |
|                              |             | 2 | 2 | 6 | 9 | 2 | 8 | 2 | 2 | 5 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 7 | 4 | 2 | 1                      | 2 |
|                              |             | 8 | 6 | 9 | 3 | 8 | 1 | 6 | 6 | 7 | 7 | 7 | 8 | 1 | 7 | 7 | 8 | 3 | 7 | 6 | 7 | 5                      | 7 |
| <b>312.5 mg/l</b>            | ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                      | 0 |
|                              |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                      | 0 |
|                              |             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1                      | 1 |
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2                      |   |
|                              | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2                      |   |
|                              |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>males (cont...)</b> |   |

**ALIMENTARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus                                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum                        | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon                        | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum                       | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum                     | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum                        | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum                      | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Carcinoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Hepatocellular Carcinoma                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leukemia Mononuclear                          |   |   | X |   |   | X | X |   |   | X |   | X |   |   |   |   | X | X |   |   | X |   |
| Mesentery                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mesothelioma Malignant                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pancreas                                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear                          |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mesothelioma Malignant                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Salivary Glands                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear                          |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | ANIMAL ID | males<br>(cont...) |
|-----------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|--------------------|
|                       | 0<br>7<br>2<br>8 | 0<br>7<br>2<br>6 | 0<br>5<br>6<br>9 | 0<br>3<br>7<br>3 | 0<br>7<br>2<br>8 | 0<br>6<br>8<br>1 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>6<br>5<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>6<br>2<br>8 | 0<br>7<br>2<br>3 | 0<br>6<br>4<br>6 | 0<br>7<br>2<br>7 | 0<br>6<br>1<br>5 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>8 | 0<br>7<br>2<br>6 |                  |           |                    |
| 312.5 mg/l            | 0<br>0<br>1<br>0 | 0<br>0<br>1<br>0 | 0<br>0<br>1<br>0 | 0<br>0<br>1<br>0 | 0<br>0<br>1<br>0 | 0<br>0<br>1<br>0 | 0<br>0<br>1<br>0 | 0<br>0<br>1<br>0 | 0<br>0<br>1<br>0 | 0<br>0<br>1<br>0 | 0<br>0<br>1<br>1 | 0<br>0<br>1<br>1 | 0<br>0<br>1<br>1 | 0<br>0<br>1<br>1 | 0<br>0<br>1<br>1 | 0<br>0<br>1<br>1 | 0<br>0<br>1<br>1 | 0<br>0<br>1<br>2 | 0<br>0<br>1<br>2 | 0<br>0<br>1<br>2 | 0<br>0<br>1<br>2 | 0<br>0<br>1<br>2 | 0<br>0<br>1<br>2 | 0<br>0<br>1<br>2 |           |                    |

Stomach, Forestomach  
 Squamous Cell Papilloma

+  
 X

Stomach, Glandular

+ +

Tongue  
 Squamous Cell Carcinoma  
 Squamous Cell Papilloma

+  
 X

**CARDIOVASCULAR SYSTEM**

Blood Vessel

+ +

Heart  
 Leukemia Mononuclear

+  
 X

**ENDOCRINE SYSTEM**

Adrenal Cortex  
 Adenoma  
 Leukemia Mononuclear

+  
 X  
 X

Adrenal Medulla  
 Leukemia Mononuclear  
 Pheochromocytoma Benign  
 Pheochromocytoma Malignant  
 Bilateral, Pheochromocytoma Malignant

+  
 X  
 X  
 X

Islets, Pancreatic  
 Adenoma

+  
 X

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          | ANIMAL ID | males<br>(cont...) |
|-----------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|-----------|--------------------|
|                       | 078         | 076  | 059  | 032  | 078  | 061  | 077  | 076  | 067  | 077  | 077  | 077  | 077  | 077  | 077  | 077  | 077  | 067  | 077  | 066  | 077  | 066  | 077  | 067  | 077      |           |                    |
| 312.5 mg/l            | 0010        | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 00110001 |           |                    |

Leukemia Mononuclear

Parathyroid Gland

Pituitary Gland

Leukemia Mononuclear

Pars Distalis, Adenoma

Pars Intermedia, Adenoma

Thyroid Gland

Leukemia Mononuclear

C-cell, Adenoma

C-cell, Carcinoma

Follicular Cell, Adenoma

**GENERAL BODY SYSTEM**

Peritoneum

Mesothelioma Malignant

**GENITAL SYSTEM**

Epididymis

Leukemia Mononuclear

Bilateral, Mesothelioma Malignant

Preputial Gland

Adenoma

Carcinoma

Leukemia Mononuclear

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
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 BLANK .. Not examined microscopically



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
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 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

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 Lab: BAT

| DAY ON TEST                                   | FISCHER 344 RATS MALE |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | ANIMAL ID | males (cont...) |      |  |
|---|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|-----------------|------|--|
|   | 0728                  | 0726 | 0756 | 0739 | 0772 | 0768 | 0777 | 0767 | 0776 | 0766 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 |           |                 |      |  |
| <b>312.5 mg/l</b>                             | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0001 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0002 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0003 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0004 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0005 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0006 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0007 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0008 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0009 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0010 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0011 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0012 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0013 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0014 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0015 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0016 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0017 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0018 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0019 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0020 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0021 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0022 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0023 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0024 |  |
|   | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0025 |  |
| Prostate                                      | +                     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Leukemia Mononuclear                          |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Seminal Vesicle                               | +                     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Leukemia Mononuclear                          |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Testes  | +                     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Leukemia Mononuclear                          |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Mesothelioma Malignant                        |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Bilateral, Interstitial Cell, Adenoma         |                       | X    |      |      | X    |      | X    | X    |      | X    | X    | X    |      | X    |      | X    |      |      | X    | X    |      |      |      | X    |      |           |                 |      |  |
| Interstitial Cell, Adenoma                    | X                     |      | X    |      |      | X    |      |      | X    |      |      |      |      | X    |      | X    |      |      | X    |      |      | X    |      |      | X    | X         |                 |      |  |
| Tunic, Leiomyosarcoma                         |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| <b>HEMATOPOIETIC SYSTEM</b>                   |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Bone Marrow                                   | +                     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Leukemia Mononuclear                          |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Lymphoma Malignant                            |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Lymph Node                                    |                       | +    |      | +    |      | +    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           | +               |      |  |
| Deep Cervical, Leukemia Mononuclear           |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Lumbar, Leukemia Mononuclear                  |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Mediastinal, Leukemia Mononuclear             |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Pancreatic, Leukemia Mononuclear              |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Lymph Node, Mandibular                        | M                     | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M         | M               |      |  |
| Lymph Node, Mesenteric                        | +                     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Carcinoma, Metastatic, Uncertain Primary Site |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |
| Leukemia Mononuclear                          |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                 |      |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>312.5 mg/l | DAY ON TEST |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      | ANIMAL ID | males<br>(cont...) |
|-------------------------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----------|--------------------|
|                                     | 078         | 076 | 059 | 032 | 078 | 061 | 077 | 076 | 067 | 077 | 076 | 077 | 076 | 077 | 076 | 077 | 068 | 076 | 077 | 064 | 076 | 077 | 067 | 076 | 077  |           |                    |
|                                     | 0           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0001      |                    |
|                                     | 7           | 7   | 5   | 3   | 7   | 6   | 7   | 7   | 6   | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 6   | 7   | 6   | 7   | 6   | 7   | 6   | 7   | 7    | 0002      |                    |
|                                     | 2           | 2   | 6   | 9   | 2   | 8   | 2   | 2   | 5   | 2   | 2   | 0   | 2   | 2   | 2   | 2   | 7   | 4   | 2   | 1   | 2   | 2   | 2   | 2   | 0003 |           |                    |
|                                     | 8           | 6   | 9   | 3   | 8   | 1   | 6   | 6   | 7   | 7   | 8   | 1   | 7   | 7   | 7   | 3   | 7   | 6   | 7   | 5   | 7   | 7   | 8   | 2   | 0004 |           |                    |
|                                     | 0           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0005 |           |                    |
|                                     | 0           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0006 |           |                    |
|                                     | 1           | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 0007 |           |                    |
|                                     | 0           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 2   | 2   | 2   | 2   | 2   | 2   | 0008 |           |                    |
|                                     | 1           | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 0   | 1   | 2   | 3   | 4   | 0009 |           |                    |
| Spleen                              | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   |     |      |           |                    |
| Leukemia Mononuclear                |             |     | X   |     |     | X   | X   |     |     |     | X   |     | X   |     |     |     |     | X   | X   |     |     | X   |     |     |      |           |                    |
| Lymphoma Malignant                  |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |           |                    |
| Thymus                              | +           | +   | +   | M   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | M   | M   | M    |           |                    |
| Leukemia Mononuclear                |             |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |           |                    |
| <b>INTEGUMENTARY SYSTEM</b>         |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |           |                    |
| Mammary Gland                       | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   |      |           |                    |
| Adenoma                             |             |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |      |           |                    |
| Fibroadenoma                        | X           |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |           |                    |
| Skin                                | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   |      |           |                    |
| Basal Cell Adenoma                  |             |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |      |           |                    |
| Keratoacanthoma                     | X           | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |      |           |                    |
| Squamous Cell Papilloma             |             |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |      |           |                    |
| Subcutaneous Tissue, Fibroma        |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |           |                    |
| Subcutaneous Tissue, Lipoma         |             |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     | X   |     |     |     |     |     |     |      |           |                    |
| Subcutaneous Tissue, Sarcoma        |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |           |                    |
| <b>MUSCULOSKELETAL SYSTEM</b>       |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |           |                    |
| Bone                                | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   |      |           |                    |
| Sarcoma                             |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |           |                    |
| <b>NERVOUS SYSTEM</b>               |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |           |                    |
| Brain                               | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   |      |           |                    |
| Leukemia Mononuclear                |             |     | X   |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |           |                    |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | ANIMAL ID | males<br>(cont...) |
|-----------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|--------------------|
|                       | 078         | 076 | 059 | 032 | 078 | 061 | 077 | 076 | 067 | 077 | 077 | 077 | 077 | 077 | 077 | 077 | 077 | 067 | 077 | 066 | 077 | 066 | 077 | 066 | 077 |           |                    |
| 312.5 mg/l            | 0           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0         | 0                  |
|                       | 0           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0         | 0                  |
|                       | 1           | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1         | 1                  |
|                       | 0           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0         | 0                  |
|                       | 1           | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 0   | 1   | 2   | 3   | 4   | 5   | 6         | 7                  |

**RESPIRATORY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lung  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Alveolar/Bronchiolar Adenoma                            |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Alveolar/Bronchiolar Carcinoma                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   | X |   |   |   |   |
| Alveolar/Bronchiolar Carcinoma, Multiple                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Carcinoma, Metastatic, Thyroid Gland                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Carcinoma, Metastatic, Zymbal'S Gland                   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |
| Leukemia Mononuclear                                    |   |   |   | X |   |   | X | X |   |   |   |   | X |   |   |   |   |   |   | X | X |   |   |   |   |   |   |
| Pheochromocytoma Malignant, Metastatic, Adrenal Medulla |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Nose  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear                                    |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Trachea   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

**SPECIAL SENSES SYSTEM**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Harderian Gland      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Zymbal's Gland       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Carcinoma            |   |   |   |   |   |   |   |   |   | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                      |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**URINARY SYSTEM**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear |   |   | X |   |   | X | X |   |   |   |   | X |   |   | X |   |   |   |   |   |   |   |   | X |   |   |   |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
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 Species/Strain: RATS/F 344/N

**P04: NEOPLASMS BY INDIVIDUAL ANIMAL**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|                              | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                  |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------|
| <b>FISCHER 344 RATS MALE</b> | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                  |
|                              | 7           | 7 | 5 | 3 | 7 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 6 | 7 | 7 |                  |
|                              | 2           | 2 | 6 | 9 | 2 | 8 | 2 | 2 | 5 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 7 | 2 | 4 | 2 | 1 | 2 | 2 | 2 |                  |
|                              | 8           | 6 | 9 | 3 | 8 | 1 | 6 | 6 | 7 | 7 | 7 | 8 | 1 | 7 | 7 | 7 | 8 | 3 | 7 | 6 | 7 | 5 | 7 | 8 | 6 |                  |
| <b>312.5 mg/l</b>            | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                  |
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                  |
|                              | 1           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |                  |
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |                  |
|                              | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | <b>males</b>     |
|                              |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>(cont...)</b> |

Renal Tubule, Adenoma, Multiple

Urinary Bladder +  
 Leiomyoma  
 Leukemia Mononuclear X

**SYSTEMIC LESIONS**

Multiple Organ +  
 Leukemia Mononuclear X X X X  
 Lymphoma Malignant X X  
 Mesothelioma Malignant X

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
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 BLANK .. Not examined microscopically



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>312.5 mg/l                   | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |         | * TOTALS |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------|----------|
|   | 0726        | 0771 | 0778 | 0777 | 0777 | 0777 | 0775 | 0777 | 0777 | 0777 | 0776 | 0777 | 0777 | 0777 | 0776 | 0776 | 0777 | 0776 | 0776 | 0777 | 0777 | 0777 | 0777 | 0777    |          |
| ANIMAL ID   | 001         | 001  | 002  | 002  | 003  | 003  | 003  | 003  | 003  | 004  | 005  | 006  | 007  | 008  | 009  | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000  | 000     |          |
| Stomach, Forestomach Squamous Cell Papilloma          | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50<br>1 |          |
| Stomach, Glandular                                    | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50      |          |
| Tongue Squamous Cell Carcinoma                        |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 2<br>1  |          |
| Tongue Squamous Cell Papilloma                        |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 1<br>1  |          |
| <b>CARDIOVASCULAR SYSTEM</b>                          |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |         |          |
| Blood Vessel  | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50      |          |
| Heart Leukemia Mononuclear                            | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50<br>7 |          |
| <b>ENDOCRINE SYSTEM</b>                               |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |         |          |
| Adrenal Cortex Adenoma                                | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50<br>1 |          |
| Adrenal Cortex Leukemia Mononuclear                   |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 7       |          |
| Adrenal Medulla Leukemia Mononuclear                  | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 49<br>6 |          |
| Adrenal Medulla Pheochromocytoma Benign               |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 6<br>6  |          |
| Adrenal Medulla Pheochromocytoma Malignant            |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 2       |          |
| Adrenal Medulla Bilateral, Pheochromocytoma Malignant |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 1       |          |
| Islets, Pancreatic Adenoma                            | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50<br>3 |          |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
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TDMS No. 20009 - 03  
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P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
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 Lab: BAT

| FISCHER 344 RATS MALE<br>312.5 mg/l | DAY ON TEST |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            | * TOTALS   |    |   |
|-------------------------------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|----|---|
|                                     | 07<br>26    | 07<br>27   | 06<br>17   | 07<br>27   | 07<br>27   | 07<br>27   | 05<br>28   | 07<br>27   | 07<br>27   | 07<br>27   | 06<br>24   | 07<br>27   | 07<br>27   | 06<br>22   | 06<br>22   | 06<br>22   | 06<br>22   | 06<br>22   | 07<br>27   | 07<br>27   | 07<br>27   | 07<br>27   | 07<br>27   | 07<br>27   |            |    |   |
| ANIMAL ID                           | 001<br>226  | 000<br>227 | 000<br>228 | 000<br>229 | 000<br>230 | 000<br>231 | 000<br>232 | 000<br>233 | 000<br>234 | 000<br>235 | 000<br>236 | 000<br>237 | 000<br>238 | 000<br>239 | 000<br>240 | 000<br>241 | 000<br>242 | 000<br>243 | 000<br>244 | 000<br>245 | 000<br>246 | 000<br>247 | 000<br>248 | 000<br>249 | 000<br>250 |    |   |
| Leukemia Mononuclear                |             |            | X          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            | 1  |   |
| Parathyroid Gland                   | +           | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | 48 |   |
| Pituitary Gland                     | +           | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | 50 |   |
| Leukemia Mononuclear                |             |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            | X          |            |            |            |            | 4  |   |
| Pars Distalis, Adenoma              | X           |            |            | X          |            |            |            | X          | X          | X          | X          | X          |            | X          | X          | X          | X          | X          |            | X          | X          |            | X          |            | 28         |    |   |
| Pars Intermedia, Adenoma            |             |            |            |            |            |            |            |            |            |            |            |            |            |            |            | X          |            |            |            |            |            |            |            |            |            | 1  |   |
| Thyroid Gland                       | +           | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | 50 |   |
| Leukemia Mononuclear                |             |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            | 1  |   |
| C-cell, Adenoma                     |             |            |            |            |            |            |            |            |            | X          |            |            |            |            |            |            |            |            |            | X          |            |            |            |            |            | 4  |   |
| C-cell, Carcinoma                   |             |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            | 1  |   |
| Follicular Cell, Adenoma            |             |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            | X          |            |            |            | 1  |   |
| <b>GENERAL BODY SYSTEM</b>          |             |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |    |   |
| Peritoneum                          |             |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            | +  | 1 |
| Mesothelioma Malignant              |             |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            | X  | 1 |
| <b>GENITAL SYSTEM</b>               |             |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |    |   |
| Epididymis                          | +           | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | 50 |   |
| Leukemia Mononuclear                |             |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |    | 1 |
| Bilateral, Mesothelioma Malignant   |             |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            | X  | 1 |
| Preputial Gland                     | +           | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          | 50 |   |
| Adenoma                             |             |            |            |            |            |            |            | X          |            |            |            |            |            |            |            |            |            |            |            | X          |            |            |            |            |            | 2  |   |
| Carcinoma                           |             |            |            |            |            |            |            |            | X          |            |            |            |            |            |            |            |            | X          |            |            |            |            |            |            |            | 2  |   |
| Leukemia Mononuclear                |             |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |    | 1 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
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P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
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 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
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 Lab: BAT

| FISCHER 344 RATS MALE<br>312.5 mg/l           | DAY ON TEST |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | * TOTALS |        |        |        |        |      |  |
|---|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|------|--|
|   | 0726        | 0727   | 0728   | 0729   | 0730   | 0731   | 0732   | 0733   | 0734   | 0735   | 0736   | 0737   | 0738   | 0739   | 0740   | 0741   | 0742   | 0743   | 0744   | 0745   |          | 0746   | 0747   | 0748   | 0749   | 0750 |  |
| ANIMAL ID                                     | 001267      | 001277 | 001288 | 001299 | 001300 | 001311 | 001322 | 001333 | 001344 | 001355 | 001366 | 001377 | 001388 | 001399 | 001400 | 001411 | 001422 | 001433 | 001444 | 001455 | 001466   | 001477 | 001488 | 001499 | 001500 |      |  |
| Prostate                                      | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +        | +      | +      | +      | +      | 50   |  |
| Leukemia Mononuclear                          |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |        |        |        |        | 1    |  |
| Seminal Vesicle                               | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +        | +      | +      | +      | +      | 50   |  |
| Leukemia Mononuclear                          |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |        |        |        |        | 1    |  |
| Testes  | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +        | +      | +      | +      | +      | 50   |  |
| Leukemia Mononuclear                          |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |        |        |        |        | 1    |  |
| Mesothelioma Malignant                        |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |        |        | X      |        | 1    |  |
| Bilateral, Interstitial Cell, Adenoma         |             | X      | X      | X      | X      | X      | X      | X      | X      |        |        | X      | X      | X      |        |        | X      |        |        | X      |          |        | X      | X      |        | 26   |  |
| Interstitial Cell, Adenoma                    | X           |        |        |        |        |        |        |        |        |        | X      | X      |        |        | X      |        |        | X      |        | X      |          | X      |        |        |        | 16   |  |
| Tunic, Leiomyosarcoma                         |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |        |        |        |        | 1    |  |
| <b>HEMATOPOIETIC SYSTEM</b>                   |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |        |        |        |        |      |  |
| Bone Marrow                                   | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +        | +      | +      | +      | +      | 50   |  |
| Leukemia Mononuclear                          |             |        | X      |        |        |        | X      |        |        | X      |        |        |        |        |        |        | X      |        |        | X      |          |        |        |        |        | 11   |  |
| Lymphoma Malignant                            |             |        |        |        |        |        |        |        |        |        |        |        |        | X      |        |        |        |        |        |        |          |        |        |        |        | 1    |  |
| Lymph Node                                    | +           | +      |        |        |        |        | +      |        | +      |        | +      |        | +      |        |        |        | +      |        |        |        |          |        |        |        |        | 11   |  |
| Deep Cervical, Leukemia Mononuclear           |             |        |        |        |        |        |        |        |        |        |        |        |        | X      |        |        |        |        |        |        |          |        |        |        |        | 1    |  |
| Lumbar, Leukemia Mononuclear                  |             |        |        |        |        |        |        |        |        | X      |        |        |        |        |        |        |        |        |        |        |          |        |        |        |        | 1    |  |
| Mediastinal, Leukemia Mononuclear             |             |        | X      |        |        |        |        |        | X      |        |        |        |        |        |        |        | X      |        |        |        |          |        |        |        |        | 3    |  |
| Pancreatic, Leukemia Mononuclear              |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |        |        |        |        | 1    |  |
| Lymph Node, Mandibular                        | M           | M      | M      | M      | M      | M      | M      | M      | M      | M      | M      | M      | M      | M      | M      | M      | M      | M      | M      | M      | M        | M      | M      | M      | M      | 0    |  |
| Lymph Node, Mesenteric                        | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +        | +      | +      | +      | +      | 50   |  |
| Carcinoma, Metastatic, Uncertain Primary Site |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |        |        |        |        | 1    |  |
| Leukemia Mononuclear                          |             |        | X      |        |        |        | X      |        | X      |        |        |        |        |        |        |        |        |        | X      |        |          |        |        |        |        | 6    |  |

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|-------------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|--|--|
|                                     | 0726        | 0727  | 0728  | 0729  | 0730  | 0731  | 0702  | 0703  | 0704  | 0705  | 0706  | 0707  | 0708  | 0709  | 0710  | 0711  | 0712  | 0713  | 0714  | 0715  | 0716  | 0717  | 0718  | 0719  |          |  |  |
| ANIMAL ID                           | 00126       | 00127 | 00128 | 00129 | 00130 | 00131 | 00132 | 00133 | 00134 | 00135 | 00136 | 00137 | 00138 | 00139 | 00140 | 00141 | 00142 | 00143 | 00144 | 00145 | 00146 | 00147 | 00148 | 00149 | 00150    |  |  |
| Spleen                              | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |  |
| Leukemia Mononuclear                |             |       | X     |       |       |       | X     |       |       | X     |       |       |       | X     | X     |       |       | X     |       |       | X     | X     |       |       | 16       |  |  |
| Lymphoma Malignant                  |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       |       |       |       |       |       |       |       | 1        |  |  |
| Thymus                              | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | M     | +     | +     | +     | +     | +     | +     | +     | +     | 45       |  |  |
| Leukemia Mononuclear                |             |       | X     |       |       |       | X     |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       |       |       | 4        |  |  |
| <b>INTEGUMENTARY SYSTEM</b>         |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |  |  |
| Mammary Gland                       | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |  |
| Adenoma                             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1        |  |  |
| Fibroadenoma                        |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       |       |       |       |       |       |       |       | 2        |  |  |
| Skin                                | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |  |
| Basal Cell Adenoma                  |             |       |       |       |       |       |       |       |       |       |       | X     |       |       |       |       |       |       |       |       |       |       |       |       | 2        |  |  |
| Keratoacanthoma                     |             |       |       |       |       |       |       | X     |       |       |       |       |       |       | X     |       |       |       |       | X     |       |       | X     |       | 7        |  |  |
| Squamous Cell Papilloma             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1        |  |  |
| Subcutaneous Tissue, Fibroma        |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       |       | X     |       |       |       |       | 2        |  |  |
| Subcutaneous Tissue, Lipoma         |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 2        |  |  |
| Subcutaneous Tissue, Sarcoma        |             |       |       |       |       |       |       |       |       | X     |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1        |  |  |
| <b>MUSCULOSKELETAL SYSTEM</b>       |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |  |  |
| Bone                                | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |  |
| Sarcoma                             |             |       |       |       |       |       |       | X     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1        |  |  |
| <b>NERVOUS SYSTEM</b>               |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |  |  |
| Brain                               | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |  |
| Leukemia Mononuclear                |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 2        |  |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|                       |             | 0        | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-----------------------|-------------|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FISCHER 344 RATS MALE | DAY ON TEST | 7        | 7 | 6 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
|                       |             | 2        | 2 | 1 | 2 | 2 | 2 | 8 | 2 | 2 | 2 | 4 | 2 | 2 | 2 | 4 | 2 | 4 | 9 | 2 | 1 | 2 | 0 | 2 | 2 | 2 | 2 |
|                       |             | 6        | 7 | 8 | 7 | 7 | 6 | 6 | 7 | 7 | 8 | 3 | 7 | 8 | 6 | 6 | 8 | 6 | 2 | 8 | 3 | 2 | 1 | 7 | 6 | 6 | 1 |
| 312.5 mg/l            | ANIMAL ID   | 0        | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                       |             | 0        | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                       |             | 1        | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|                       |             | 2        | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
|                       |             | 6        | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |   |
|                       |             | * TOTALS |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**RESPIRATORY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Lung  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Alveolar/Bronchiolar Adenoma                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Alveolar/Bronchiolar Carcinoma                          |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3  |
| Alveolar/Bronchiolar Carcinoma, Multiple                | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Carcinoma, Metastatic, Thyroid Gland                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Carcinoma, Metastatic, Zymbal'S Gland                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Leukemia Mononuclear                                    |   |   | X |   |   | X |   | X |   | X |   | X | X |   | X |   | X |   | X |   |   |   |   |   |   |   | 13 |
| Pheochromocytoma Malignant, Metastatic, Adrenal Medulla |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Nose  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Trachea   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

**SPECIAL SENSES SYSTEM**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Eye                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Harderian Gland      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Zymbal's Gland       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Carcinoma            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

**URINARY SYSTEM**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Kidney               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear |   |   | X |   |   | X |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 10 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P04: NEOPLASMS BY INDIVIDUAL ANIMAL**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>312.5 mg/l | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |    |
|-------------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|----|
|                                     | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |          |    |
|                                     | 7           | 7 | 6 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 |          |    |
| ANIMAL ID                           | 2           | 2 | 1 | 2 | 2 | 2 | 8 | 2 | 2 | 2 | 4 | 2 | 2 | 4 | 2 | 4 | 9 | 2 | 1 | 2 | 0 | 2 | 2 | 2 |          |    |
|                                     | 6           | 7 | 8 | 7 | 7 | 6 | 6 | 7 | 8 | 7 | 3 | 7 | 8 | 6 | 6 | 8 | 6 | 2 | 8 | 3 | 2 | 1 | 7 | 7 | 2        |    |
|                                     | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        |    |
|                                     | 1           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1        |    |
|                                     | 2           | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5        |    |
|                                     | 6           | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0        |    |
| Renal Tubule, Adenoma, Multiple     | X           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1        |    |
| Urinary Bladder                     | +           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 50       |    |
| Leiomyoma                           |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X        | 1  |
| Leukemia Mononuclear                |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X        | 2  |
| <b>SYSTEMIC LESIONS</b>             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |    |
| Multiple Organ                      | +           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 50       |    |
| Leukemia Mononuclear                |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X        | 16 |
| Lymphoma Malignant                  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X        | 1  |
| Mesothelioma Malignant              |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X        | 1  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | males<br>(cont...) |
|-----------------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------------|
|                       | 070227      | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 |                    |
| 625 mg/l              | 002         | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    | 002    |                    |
|                       | 001         | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    | 001    |                    |
|                       | 551         | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    | 551    |                    |
|                       | 12          | 13     | 14     | 15     | 16     | 17     | 18     | 19     | 20     | 21     | 22     | 23     | 24     | 25     | 26     | 27     | 28     | 29     | 30     | 31     | 32     | 33     | 34     | 35     | 36     |                    |

**ALIMENTARY SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + |
| Intestine Large, Colon   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum<br>Fibrous Histiocytoma, Metastatic, Skeletal Muscle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | + | + | + |
| Intestine Small, Duodenum  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum<br>Leukemia Mononuclear                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + |
| Intestine Small, Jejunum<br>Leiomyoma  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + |
| Liver<br>Fibrous Histiocytoma, Metastatic, Skeletal Muscle                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | + | + | + |
| Hepatocellular Adenoma   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leukemia Mononuclear   | X |   |   |   |   |   |   |   | X | X | X |   | X | X |   |   |   |   |   |   |   |   |   | X |
| Mesentery<br>Fibrous Histiocytoma, Metastatic, Skeletal Muscle               |   |   |   |   |   |   |   |   |   | + | + |   |   |   |   |   |   |   |   |   | + |   |   | + |
| Pancreas   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|                              |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>FISCHER 344 RATS MALE</b> | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
|                              |             | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 5 | 5 | 7 | 7 | 6 | 6 | 7 | 6 | 7 | 5 | 7 | 7 | 6 | 6 | 6 |
| <b>625 mg/l</b>              | ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                              |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                              |             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|                              |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
|                              |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |   |   |

males  
(cont...)

Fibrous Histiocytoma, Metastatic, Skeletal Muscle

X

Leukemia Mononuclear Acinus, Adenoma

X

X

Salivary Glands Carcinoma

+  
X

Stomach, Forestomach Squamous Cell Papilloma

+ +

Stomach, Glandular

+ +

Tongue Squamous Cell Carcinoma

**CARDIOVASCULAR SYSTEM**

Blood Vessel

+ +

Heart Alveolar/Bronchiolar Carcinoma, Metastatic, Lung

+ +

Carcinoma, Metastatic, Salivary Glands  
 Fibrous Histiocytoma, Metastatic, Skeletal Muscle

X

X

Leukemia Mononuclear

X

X

X

**ENDOCRINE SYSTEM**

Adrenal Cortex Adenoma

+ +

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE         | DAY ON TEST           |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            | ANIMAL ID                  | males<br>(cont...)         |                  |
|-------------------------------|-----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------|
|                               | 0<br>7<br>0<br>2      | 0<br>7<br>0<br>2           | 0<br>7<br>0<br>2           | 0<br>7<br>0<br>2           | 0<br>7<br>0<br>2           | 0<br>7<br>0<br>2           | 0<br>7<br>0<br>2           | 0<br>7<br>0<br>2           | 0<br>7<br>0<br>2           | 0<br>5<br>4<br>5           | 0<br>7<br>2<br>7           | 0<br>7<br>0<br>1           | 0<br>7<br>2<br>8           | 0<br>7<br>2<br>6           | 0<br>5<br>5<br>2           | 0<br>7<br>2<br>8           | 0<br>7<br>6<br>4           | 0<br>6<br>7<br>3           | 0<br>7<br>2<br>4           | 0<br>6<br>9<br>7           | 0<br>7<br>2<br>6           | 0<br>5<br>8<br>1           | 0<br>7<br>1<br>3           |                            |                            | 0<br>7<br>2<br>7 |
| 625 mg/l                      | 0<br>0<br>1<br>5<br>1 | 0<br>0<br>0<br>1<br>5<br>2 | 0<br>0<br>0<br>1<br>5<br>3 | 0<br>0<br>0<br>1<br>5<br>4 | 0<br>0<br>0<br>1<br>5<br>5 | 0<br>0<br>0<br>1<br>5<br>6 | 0<br>0<br>0<br>1<br>5<br>7 | 0<br>0<br>0<br>1<br>5<br>8 | 0<br>0<br>0<br>1<br>5<br>9 | 0<br>0<br>0<br>1<br>6<br>0 | 0<br>0<br>0<br>1<br>6<br>1 | 0<br>0<br>0<br>1<br>6<br>2 | 0<br>0<br>0<br>1<br>6<br>3 | 0<br>0<br>0<br>1<br>6<br>4 | 0<br>0<br>0<br>1<br>6<br>5 | 0<br>0<br>0<br>1<br>6<br>6 | 0<br>0<br>0<br>1<br>6<br>7 | 0<br>0<br>0<br>1<br>6<br>8 | 0<br>0<br>0<br>1<br>6<br>9 | 0<br>0<br>0<br>1<br>6<br>0 | 0<br>0<br>0<br>1<br>6<br>1 | 0<br>0<br>0<br>1<br>6<br>2 | 0<br>0<br>0<br>1<br>6<br>3 | 0<br>0<br>0<br>1<br>6<br>4 | 0<br>0<br>0<br>1<br>6<br>5 |                  |
| Leukemia Mononuclear          |                       |                            |                            |                            |                            |                            |                            | X                          | X                          |                            |                            |                            |                            | X                          |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            | X                |
| Adrenal Medulla               | +                     | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                |
| Leukemia Mononuclear          |                       |                            |                            |                            |                            |                            |                            | X                          |                            |                            |                            |                            | X                          |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            | X                |
| Pheochromocytoma Benign       |                       |                            | X                          |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            | X                          |                            |                            |                            |                            |                            | X                          |                            |                            | X                          |                            |                            |                  |
| Islets, Pancreatic<br>Adenoma | +                     | +                          | +                          | +                          | +                          | +                          | X                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          |                  |
| Parathyroid Gland             | +                     | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | M                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          |                  |
| Pituitary Gland               | +                     | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | I                          | +                          | +                          | +                          | +                          | +                          |                  |
| Leukemia Mononuclear          |                       |                            |                            |                            |                            |                            |                            | X                          | X                          |                            |                            |                            | X                          |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                  |
| Pars Distalis, Adenoma        | X                     | X                          |                            | X                          | X                          |                            | X                          |                            |                            | X                          | X                          | X                          |                            |                            | X                          | X                          | X                          | X                          | X                          | X                          |                            |                            | X                          | X                          | X                          |                  |
| Thyroid Gland                 | +                     | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          |                  |
| C-cell, Adenoma               |                       |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            | X                          |                            |                            |                            |                            |                            | X                          |                            | X                          |                            |                            |                            |                  |
| <b>GENERAL BODY SYSTEM</b>    |                       |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                  |
| Peritoneum                    |                       |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            | +                |
| Leukemia Mononuclear          |                       |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            | X                |
| <b>GENITAL SYSTEM</b>         |                       |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                  |
| Epididymis                    | +                     | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                |
| Preputial Gland               | +                     | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                |
| Prostate                      | +                     | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                          | +                |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>625 mg/l | DAY ON TEST |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ANIMAL ID | males<br>(cont...) |        |  |
|-----------------------------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------|--------------------|--------|--|
|                                   | 070227      | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 |           |                    |        |  |
|                                   | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0         | 000151             |        |  |
|                                   | 7           | 7      | 7      | 7      | 7      | 7      | 7      | 5      | 7      | 7      | 7      | 7      | 5      | 5      | 7      | 7      | 6      | 6      | 7      | 6      | 7      | 5      | 7      | 7      | 6      | 7         | 000152             |        |  |
|                                   | 2           | 2      | 2      | 2      | 2      | 2      | 2      | 4      | 2      | 0      | 2      | 2      | 5      | 6      | 2      | 2      | 6      | 7      | 4      | 3      | 7      | 9      | 2      | 8      | 1      | 2         | 5                  | 000153 |  |
|                                   | 7           | 7      | 7      | 7      | 6      | 6      | 7      | 5      | 7      | 1      | 8      | 6      | 2      | 8      | 7      | 6      | 4      | 3      | 7      | 4      | 7      | 6      | 3      | 7      | 7      | 7         | 000154             |        |  |
|                                   | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0         | 000155             |        |  |
|                                   | 1           | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1         | 000156             |        |  |
|                                   | 5           | 5      | 5      | 5      | 5      | 5      | 5      | 5      | 5      | 6      | 6      | 6      | 6      | 6      | 6      | 6      | 6      | 6      | 6      | 6      | 7      | 7      | 7      | 7      | 7      | 7         | 000157             |        |  |
|                                   | 1           | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 0      | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 0      | 1      | 2      | 3      | 4      | 5      | 000158    |                    |        |  |

Fibrous Histiocytoma, Metastatic, Skeletal Muscle

X

Leukemia Mononuclear

Seminal Vesicle  
Leukemia Mononuclear

+ +

Testes  
Leukemia Mononuclear  
Bilateral, Interstitial Cell, Adenoma  
Interstitial Cell, Adenoma

+  
 X  
 X

**HEMATOPOIETIC SYSTEM**

Bone Marrow  
Leukemia Mononuclear

+  
 X

Lymph Node  
Iliac, Chordoma, Metastatic, Uncertain Primary Site  
Pancreatic, Leukemia Mononuclear

+  
 +

Lymph Node, Mandibular

M M

Lymph Node, Mesenteric  
Fibrous Histiocytoma, Metastatic, Skeletal Muscle  
Leukemia Mononuclear

+  
 X  
 X

Spleen  
Leukemia Mononuclear

+  
 X

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | ANIMAL ID                  | males<br>(cont...) |
|-----------------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------------------|--------------------|
|                       | 070227      | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 | 070227 |                            |                    |
| 625 mg/l              | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 00151155111111111111111111 |                    |

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thymus  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Alveolar/Bronchiolar Carcinoma, Metastatic, Lung  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |
| Leukemia Mononuclear                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |

**INTEGUMENTARY SYSTEM**

|                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skin                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Keratoacanthoma              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   | X |   |   |
| Subcutaneous Tissue, Fibroma |   |   |   |   |   |   | X |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   | X |

**MUSCULOSKELETAL SYSTEM**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skeletal Muscle      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Fibrous Histiocytoma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + |
|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |

**NERVOUS SYSTEM**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |

**RESPIRATORY SYSTEM**

|                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lung                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Alveolar/Bronchiolar Adenoma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>625 mg/l | DAY ON TEST    |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                | ANIMAL ID | males<br>(cont...) |                |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
|-----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------|--------------------|----------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                                   | 07<br>00<br>22 | 07<br>02<br>27 | 07<br>02<br>27 | 07<br>02<br>27 | 07<br>02<br>26 | 07<br>02<br>26 | 07<br>02<br>27 | 07<br>02<br>27 | 05<br>04<br>25 | 07<br>02<br>27 | 07<br>02<br>27 | 07<br>02<br>27 | 07<br>02<br>27 | 05<br>05<br>22 | 05<br>05<br>28 | 07<br>02<br>27 | 07<br>02<br>26 | 06<br>06<br>24 | 06<br>07<br>23 | 07<br>02<br>27 | 06<br>02<br>27 | 05<br>08<br>26 | 07<br>01<br>23 | 07<br>02<br>27 |           |                    | 07<br>02<br>27 | 00<br>00<br>55<br>11 | 00<br>00<br>55<br>12 | 00<br>00<br>55<br>13 | 00<br>00<br>55<br>14 | 00<br>00<br>55<br>15 | 00<br>00<br>55<br>16 | 00<br>00<br>55<br>17 | 00<br>00<br>55<br>18 | 00<br>00<br>55<br>19 | 00<br>00<br>56<br>00 | 00<br>00<br>56<br>01 | 00<br>00<br>56<br>02 | 00<br>00<br>56<br>03 | 00<br>00<br>56<br>04 | 00<br>00<br>56<br>05 | 00<br>00<br>56<br>06 | 00<br>00<br>56<br>07 | 00<br>00<br>56<br>08 | 00<br>00<br>56<br>09 | 00<br>00<br>57<br>00 | 00<br>00<br>57<br>01 | 00<br>00<br>57<br>02 |

Alveolar/Bronchiolar Carcinoma  
 Fibrous Histiocytoma, Metastatic, Skeletal Muscle  
 Leukemia Mononuclear

X

X X X X

X

Nose  
 Leukemia Mononuclear

+  
 X

Trachea

+ +

**SPECIAL SENSES SYSTEM**

Eye

+ +

Harderian Gland  
 Leukemia Mononuclear

+  
 X

Zymbal's Gland  
 Adenoma

**URINARY SYSTEM**

Kidney  
 Fibrous Histiocytoma, Metastatic, Skeletal Muscle  
 Leukemia Mononuclear  
 Renal Tubule, Adenoma

+  
 X  
 X X X  
 X

Urinary Bladder  
 Fibrous Histiocytoma, Metastatic, Skeletal Muscle

+  
 X

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|                                       |             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                    |
|---------------------------------------|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------------------|
| FISCHER 344 RATS MALE<br><br>625 mg/l | DAY ON TEST | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 05 | 07 | 07 | 07 | 07 | 05 | 05 | 07 | 07 | 06 | 06 | 07 | 06 | 07 | 05 | 07 | 07 | 06 | males<br>(cont...) |
|                                       |             | 02 | 07 | 02 | 02 | 02 | 02 | 04 | 02 | 00 | 02 | 02 | 05 | 06 | 02 | 02 | 06 | 07 | 09 | 02 | 08 | 01 | 02 | 05 | 07 | 06 |                    |
|                                       | ANIMAL ID   | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |                    |
|                                       |             | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |    |                    |
|                                       |             | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 |    |                    |
|                                       |             | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |    |                    |

Leukemia Mononuclear

**SYSTEMIC LESIONS**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Multiple Organ       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear |   | X |   |   |   |   |   |   | X | X | X |   | X | X |   |   |   |   |   |   |   |   |   |   | X |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>625 mg/l | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  | * TOTALS |
|-----------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|----------|
|                                   | 0726        | 0727  | 0728  | 0661  | 0663  | 0664  | 0666  | 0667  | 0668  | 0669  | 0670  | 0671  | 0672  | 0673  | 0674  | 0675  | 0676  | 0677  | 0678  | 0679  | 0680  | 0681  | 0682  |  |          |
| ANIMAL ID                         | 00176       | 00177 | 00178 | 00179 | 00180 | 00181 | 00182 | 00183 | 00184 | 00185 | 00186 | 00187 | 00188 | 00189 | 00190 | 00191 | 00192 | 00193 | 00194 | 00195 | 00196 | 00197 | 00198 |  |          |

**ALIMENTARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum                            | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Large, Colon                            | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Large, Rectum                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Intestine Small, Duodenum                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Ileum                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Leukemia Mononuclear                              |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Intestine Small, Jejunum                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Leiomyoma   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Liver   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Hepatocellular Adenoma                            |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Leukemia Mononuclear                              |   |   | X |   |   | X |   |   |   |   |   | X | X |   |   |   |   | X |   |   | X |   | X | 14 |
| Mesentery   |   |   |   |   |   |   |   |   |   |   |   |   | + |   |   |   |   |   |   | + |   |   |   | 6  |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Pancreas  | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | A | + | 48 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
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 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>625 mg/l | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |  |
|-----------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|--|
|                                   | 0726        | 0727  | 0728  | 0621  | 0623  | 0629  | 0631  | 0637  | 0638  | 0644  | 0645  | 0646  | 0647  | 0648  | 0649  | 0650  | 0651  | 0652  | 0653  | 0654  | 0655  | 0656  | 0657  | 0658  |          |  |
| ANIMAL ID                         | 00176       | 00177 | 00178 | 00179 | 00180 | 00181 | 00182 | 00183 | 00184 | 00185 | 00186 | 00187 | 00188 | 00189 | 00190 | 00191 | 00192 | 00193 | 00194 | 00195 | 00196 | 00197 | 00198 | 00199 | 00200    |  |

Fibrous Histiocytoma, Metastatic, Skeletal Muscle 1

Leukemia Mononuclear Acinus, Adenoma X X 4 1

Salivary Glands Carcinoma + 50 1

Stomach, Forestomach Squamous Cell Papilloma + + + + + + + + + + + + X + + + + + + + + + + 50 1

Stomach, Glandular + 50

Tongue Squamous Cell Carcinoma + X 1 1

**CARDIOVASCULAR SYSTEM**

Blood Vessel + 50

Heart + 50

Alveolar/Bronchiolar Carcinoma, Metastatic, Lung X 1

Carcinoma, Metastatic, Salivary Glands 1

Fibrous Histiocytoma, Metastatic, Skeletal Muscle 1

Leukemia Mononuclear X X X X 7

**ENDOCRINE SYSTEM**

Adrenal Cortex Adenoma + 50

X 1

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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|-----------------------------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
|                                   | 0726        | 0727   | 0728   | 0661   | 0663   | 0664   | 0666   | 0668   | 0670   | 0671   | 0672   | 0673   | 0674   | 0675   | 0676   | 0677   | 0678   | 0679   | 0680   | 0681   | 0682   | 0683   | 0684   | 0685   |          |
| ANIMAL ID                         | 001766      | 001767 | 001768 | 001769 | 001770 | 001771 | 001772 | 001773 | 001774 | 001775 | 001776 | 001777 | 001778 | 001779 | 001780 | 001781 | 001782 | 001783 | 001784 | 001785 | 001786 | 001787 | 001788 | 001789 |          |
| Leukemia Mononuclear              |             |        | X      |        |        |        |        |        |        |        |        |        |        |        | X      |        |        |        |        |        |        |        | X      | 7      |          |
| Adrenal Medulla                   | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50     |          |
| Leukemia Mononuclear              |             |        | X      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | X      | 5      |          |
| Pheochromocytoma Benign           |             |        |        |        |        |        |        | X      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | 5      |          |
| Islets, Pancreatic                | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50     |          |
| Adenoma                           |             |        |        |        |        |        | X      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | 2      |          |
| Parathyroid Gland                 | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | M      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 48     |          |
| Pituitary Gland                   | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 49     |          |
| Leukemia Mononuclear              |             |        |        |        |        |        |        |        |        |        |        |        |        | X      |        |        |        |        |        |        |        |        | X      | 5      |          |
| Pars Distalis, Adenoma            | X           | X      | X      | X      | X      | X      | X      | X      | X      |        | X      | X      | X      | X      | X      |        |        | X      | X      |        | X      | X      |        | 36     |          |
| Thyroid Gland                     | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50     |          |
| C-cell, Adenoma                   | X           |        |        |        |        |        |        |        |        | X      |        |        |        | X      | X      | X      |        |        |        |        |        |        |        | 8      |          |
| <b>GENERAL BODY SYSTEM</b>        |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |
| Peritoneum                        |             |        |        |        |        |        |        |        | +      |        |        |        |        |        |        |        |        |        |        |        |        |        |        | 2      |          |
| Leukemia Mononuclear              |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | 1      |          |
| <b>GENITAL SYSTEM</b>             |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |
| Epididymis                        | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50     |          |
| Preputial Gland                   | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50     |          |
| Prostate                          | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50     |          |

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|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|------|---|
|   | 0726        | 0727  | 0728  | 0661  | 0663  | 0664  | 0666  | 0668  | 0670  | 0671  | 0672  | 0673  | 0674  | 0675  | 0676  | 0677  | 0678  | 0679  | 0680  | 0681  |          | 0682  | 0683  | 0684  | 0685  | 0686  | 0687  | 0688  | 0689  | 0690 |   |
| ANIMAL ID   | 00176       | 00177 | 00178 | 00179 | 00180 | 00181 | 00182 | 00183 | 00184 | 00185 | 00186 | 00187 | 00188 | 00189 | 00190 | 00191 | 00192 | 00193 | 00194 | 00195 | 00196    | 00197 | 00198 | 00199 | 00200 | 00201 | 00202 | 00203 | 00204 |      |   |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle   |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       |       |       |       |       |       | 1    |   |
| Leukemia Mononuclear                                |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       |       |       |       |       |       | X    | 1 |
| Seminal Vesicle                                     | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | +     | +     | +     | +     | +     | 50   |   |
| Leukemia Mononuclear                                |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       |       |       |       |       |       | X    | 1 |
| Testes  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | +     | +     | +     | +     | +     | 50   |   |
| Leukemia Mononuclear                                |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       |       |       |       |       |       | X    | 2 |
| Bilateral, Interstitial Cell, Adenoma               | X           |       | X     |       | X     |       |       | X     |       |       | X     |       | X     | X     |       |       | X     | X     |       | X     |          |       |       |       |       |       |       |       | X     | 24   |   |
| Interstitial Cell, Adenoma                          |             | X     |       | X     |       |       | X     |       | X     | X     |       | X     |       |       |       | X     | X     |       | X     |       |          |       | X     | X     |       |       |       |       |       | 18   |   |
| <b>HEMATOPOIETIC SYSTEM</b>                         |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       |       |       |       |       |       |      |   |
| Bone Marrow   | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | +     | +     | +     | +     | +     | 50   |   |
| Leukemia Mononuclear                                |             |       | X     |       |       | X     |       |       |       |       |       |       | X     | X     |       |       |       |       | X     |       |          | X     |       |       |       |       |       |       | X     | 12   |   |
| Lymph Node  |             |       |       |       |       |       | +     |       |       |       |       |       |       | +     | +     |       |       |       |       |       |          |       |       |       |       |       |       |       | +     | 8    |   |
| Iliac, Chordoma, Metastatic, Uncertain Primary Site |             |       |       |       |       |       |       |       |       |       |       |       |       | X     |       |       |       |       |       |       |          |       |       |       |       |       |       |       |       | 1    |   |
| Pancreatic, Leukemia Mononuclear                    |             |       |       |       |       |       | X     |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       |       |       |       |       | X     | 2    |   |
| Lymph Node, Mandibular                              | M           | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M        | M     | M     | M     | M     | M     | M     | M     | M     | 0    |   |
| Lymph Node, Mesenteric                              | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | +     | +     | +     | +     | +     | 50   |   |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle   |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       |       |       |       |       |       | 1    |   |
| Leukemia Mononuclear                                |             |       | X     |       |       | X     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          | X     |       |       |       |       |       |       | X     | 7    |   |
| Spleen  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | +     | +     | +     | +     | +     | 50   |   |
| Leukemia Mononuclear                                |             |       | X     |       |       | X     |       |       |       |       |       |       |       | X     | X     |       |       |       |       |       | X        |       |       |       |       |       | X     |       | X     | 14   |   |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
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|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
|   | 0726        | 0727  | 0728  | 0729  | 0730  | 0731  | 0732  | 0733  | 0734  | 0735  | 0736  | 0737  | 0738  | 0739  | 0740  | 0741  | 0742  | 0743  | 0744  | 0745  | 0746  | 0747  | 0748  | 0749  |          |
| ANIMAL ID   | 00176       | 00177 | 00178 | 00179 | 00180 | 00181 | 00182 | 00183 | 00184 | 00185 | 00186 | 00187 | 00188 | 00189 | 00190 | 00191 | 00192 | 00193 | 00194 | 00195 | 00196 | 00197 | 00198 | 00199 |          |
| Thymus  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50    |          |
| Alveolar/Bronchiolar Carcinoma, Metastatic, Lung  |             |       |       |       |       |       |       |       |       |       |       | X     |       |       |       |       |       |       |       |       |       |       |       | 1     |          |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1     |          |
| Leukemia Mononuclear                              |             |       |       |       |       |       | X     |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       | 3     |          |
| <b>INTEGUMENTARY SYSTEM</b>                       |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Mammary Gland                                     | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50    |          |
| Skin  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50    |          |
| Keratoacanthoma                                   |             |       |       |       |       |       |       |       | X     |       | X     |       |       |       |       |       |       |       |       | X     |       |       |       | 5     |          |
| Subcutaneous Tissue, Fibroma                      |             |       |       | X     |       |       |       |       |       |       |       |       |       |       | X     |       |       |       |       |       |       |       |       | 5     |          |
| <b>MUSCULOSKELETAL SYSTEM</b>                     |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Bone  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50    |          |
| Skeletal Muscle                                   |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1     |          |
| Fibrous Histiocytoma                              |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1     |          |
| <b>NERVOUS SYSTEM</b>                             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Brain   | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50    |          |
| Leukemia Mononuclear                              |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     | X     | 3     |          |
| <b>RESPIRATORY SYSTEM</b>                         |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Lung  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50    |          |
| Alveolar/Bronchiolar Adenoma                      |             |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       |       |       |       |       | X     |       |       | 2     |          |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>625 mg/l                 | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
|   | 0726        | 0727  | 0728  | 0661  | 0663  | 0664  | 0666  | 0668  | 0671  | 0672  | 0673  | 0674  | 0675  | 0676  | 0677  | 0678  | 0679  | 0680  | 0681  | 0682  | 0683  | 0684  | 0685  | 0686  |          |
| ANIMAL ID   | 00176       | 00077 | 00078 | 00089 | 00090 | 00091 | 00092 | 00093 | 00094 | 00095 | 00096 | 00097 | 00098 | 00099 | 00100 | 00101 | 00102 | 00103 | 00104 | 00105 | 00106 | 00107 | 00108 | 00109 |          |
| Alveolar/Bronchiolar Carcinoma                    |             |       |       |       |       |       |       |       | X     |       |       |       |       |       |       |       |       | X     |       |       |       |       |       |       |          |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Leukemia Mononuclear                              |             |       | X     |       |       | X     |       |       |       |       |       | X     |       |       |       |       |       | X     |       | X     |       | X     |       |       |          |
| Nose  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |          |
| Leukemia Mononuclear                              |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Trachea   | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |          |
| <b>SPECIAL SENSES SYSTEM</b>                      |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Eye   | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |          |
| Harderian Gland                                   | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |          |
| Leukemia Mononuclear                              |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |          |
| Zymbal's Gland                                    |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |          |
| Adenoma   |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       |          |
| <b>URINARY SYSTEM</b>                             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Kidney  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |          |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Leukemia Mononuclear                              |             |       | X     |       |       | X     |       |       |       |       |       |       | X     |       |       |       |       | X     |       | X     |       | X     |       |       |          |
| Renal Tubule, Adenoma                             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Urinary Bladder                                   | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |          |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|                              |                 | DAY ON TEST |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |       |          |          |          |          |           |           |          |
|------------------------------|-----------------|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|----------|----------|----------|-----------|-----------|----------|
|                              |                 | 07<br>26    | 07<br>27 | 07<br>27 | 06<br>21 | 06<br>31 | 04<br>09 | 06<br>09 | 06<br>08 | 06<br>01 | 07<br>07 | 06<br>07 | 07<br>07 | 07<br>07 | 07<br>07 | 07<br>07 | 07<br>07 | 07<br>07 | 06<br>22 | 07<br>22 | 05<br>12 | 07<br>22 | 07<br>08 | 05<br>07 | 06<br>07 |       | 05<br>06 | 06<br>03 | 06<br>06 | 06<br>09 | 06<br>04  | * TOTALS  |          |
| <b>FISCHER 344 RATS MALE</b> | <b>625 mg/l</b> |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |       |          |          |          |          |           |           |          |
| ANIMAL ID                    |                 | 00176       | 00077    | 00077    | 00089    | 00081    | 00002    | 00003    | 00004    | 00005    | 00006    | 00007    | 00008    | 00009    | 00010    | 00011    | 00012    | 00013    | 00014    | 00015    | 00016    | 00017    | 00018    | 00019    | 00020    | 00021 | 00022    | 00023    | 00024    | 00025    |           |           |          |
| Leukemia Mononuclear         |                 |             |          |          |          | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          | X        |          |          |          |       |          |          |          |          |           |           | <b>2</b> |
| <b>SYSTEMIC LESIONS</b>      |                 |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |       |          |          |          |          |           |           |          |
| Multiple Organ               |                 | +           | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +     | +        | +        | +        | +        |           | <b>50</b> |          |
| Leukemia Mononuclear         |                 |             |          | X        |          | X        |          |          |          |          |          |          |          |          | X        | X        |          |          |          |          |          |          | X        |          |          | X     |          | X        |          |          | <b>14</b> |           |          |

\*\*\* END OF MALE DATA \*\*\*

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P04: NEOPLASMS BY INDIVIDUAL ANIMAL**  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                              |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------------|
| <b>FISCHER 344 RATS FEMALE</b><br><br><b>0 mg/l</b> | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | <b>females<br/>(cont...)</b> |
|   |             | 7 | 5 | 6 | 7 | 7 | 7 | 7 | 4 | 7 | 7 | 7 | 7 | 4 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 5 |                              |
|   |             | 1 | 1 | 4 | 2 | 1 | 2 | 2 | 1 | 8 | 2 | 2 | 0 | 2 | 5 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 |                              |
| ANIMAL ID   | 2           | 4 | 4 | 9 | 5 | 8 | 8 | 9 | 8 | 7 | 9 | 0 | 7 | 4 | 9 | 7 | 8 | 9 | 8 | 2 | 8 | 8 | 9 |                              |
|   | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                              |
|   | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                              |
|   | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |                              |
|   | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |                              |
|   | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 |                              |

**ALIMENTARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum  | + | A | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | A | + | + | + |
| Intestine Large, Colon  | + | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | A | + | + | + |
| Intestine Large, Rectum<br>Leiomyosarcoma, Metastatic, Uterus | + | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | A | + | + | + |
| Intestine Small, Duodenum                                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum  | + | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | A | + | + | + |
| Intestine Small, Jejunum                                      | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | A | + | + | + |
| Liver   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hepatocellular Adenoma  |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |
| Leukemia Mononuclear  |   |   |   |   |   |   |   |   |   |   | X |   | X | X | X |   | X |   | X |   |   |   |
| Mesentery   |   |   |   |   |   |   |   |   |   | + |   |   |   |   |   |   |   |   |   | + |   |   |
| Pancreas  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   | X |   |   |
| Salivary Glands   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Forestomach  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
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TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | females<br>(cont...) |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
|                         | 0<br>7<br>1<br>2      | 0<br>5<br>1<br>4      | 0<br>6<br>4<br>4      | 0<br>7<br>2<br>9      | 0<br>7<br>1<br>5      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>8      | 0<br>7<br>1<br>9      | 0<br>4<br>8<br>8      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>9      | 0<br>7<br>0<br>0      | 0<br>7<br>2<br>7      | 0<br>4<br>5<br>4      | 0<br>7<br>2<br>9      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>9      | 0<br>5<br>0<br>0      |                       |                      |
| 0 mg/l                  | 0<br>0<br>2<br>0<br>1 | 0<br>0<br>2<br>0<br>2 | 0<br>0<br>2<br>0<br>3 | 0<br>0<br>2<br>0<br>4 | 0<br>0<br>2<br>0<br>5 | 0<br>0<br>2<br>0<br>6 | 0<br>0<br>2<br>0<br>7 | 0<br>0<br>2<br>0<br>8 | 0<br>0<br>2<br>0<br>9 | 0<br>0<br>2<br>1<br>0 | 0<br>0<br>2<br>1<br>1 | 0<br>0<br>2<br>1<br>2 | 0<br>0<br>2<br>1<br>3 | 0<br>0<br>2<br>1<br>4 | 0<br>0<br>2<br>1<br>5 | 0<br>0<br>2<br>1<br>6 | 0<br>0<br>2<br>1<br>7 | 0<br>0<br>2<br>1<br>8 | 0<br>0<br>2<br>1<br>9 | 0<br>0<br>2<br>2<br>0 | 0<br>0<br>2<br>2<br>1 | 0<br>0<br>2<br>2<br>2 | 0<br>0<br>2<br>2<br>3 | 0<br>0<br>2<br>2<br>4 | 0<br>0<br>2<br>2<br>5 |                      |

Stomach, Glandular

+ +

**CARDIOVASCULAR SYSTEM**

Blood Vessel

+ +

Heart

+ +

Leukemia Mononuclear

X X X X

**ENDOCRINE SYSTEM**

Adrenal Cortex

+ +

Adenoma

X

Leukemia Mononuclear

X X X X

Adrenal Medulla

+ +

Leukemia Mononuclear

X X X X

Pheochromocytoma Benign

X X

Islets, Pancreatic

+ +

Parathyroid Gland

M + + + + + + + + + + + + + + + + M + + + + + + + +

Pituitary Gland

+ +

Leukemia Mononuclear

X X

Pars Distalis, Adenoma

X X

Thyroid Gland

+ +

Bilateral, C-cell, Adenoma

X

C-cell, Adenoma

X X

X X

X

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | females<br>(cont...) |
|-------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------|
|                         | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                      |
| 0 mg/l                  | 7           | 5 | 6 | 7 | 7 | 7 | 7 | 7 | 4 | 7 | 7 | 7 | 7 | 4 | 7 | 7 | 7 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |                      |
| ANIMAL ID               | 1           | 1 | 4 | 2 | 1 | 2 | 2 | 1 | 8 | 2 | 2 | 0 | 2 | 5 | 2 | 2 | 2 | 8 | 9 | 8 | 8 | 8 | 8 | 8 |   |                      |
|                         | 2           | 4 | 4 | 9 | 5 | 8 | 8 | 9 | 8 | 7 | 9 | 0 | 7 | 4 | 9 | 7 | 8 | 9 | 8 | 2 | 8 | 8 | 8 | 9 |   |                      |
|                         | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |                      |
|                         | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |                      |
|                         | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |   |                      |
|                         | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |   |                      |
|                         | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 |   |                      |

C-cell, Carcinoma

### GENERAL BODY SYSTEM

NONE

### GENITAL SYSTEM

|                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoma                |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   | X |   |   |   |   |   |   |   |
| Sarcoma                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ovary                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |
| Schwannoma Malignant   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Uterus                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leiomyosarcoma         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Polyp Stromal          |   |   |   |   |   | X | X |   |   |   | X |   |   |   |   |   |   | X |   |   |   |   |   |
| Endometrium, Carcinoma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Vagina                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leukemia Mononuclear   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Polyp                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

### HEMATOPOIETIC SYSTEM

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear |   |   |   |   |   |   |   |   |   |   |   | X |   | X | X | X |   | X |   | X |   |   |   |
| Lymph Node           |   |   |   |   |   |   | + |   |   |   |   |   |   | + |   |   |   |   |   |   | + |   |   |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P04: NEOPLASMS BY INDIVIDUAL ANIMAL**  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br><br>0 mg/l         | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | females<br>(cont...) |  |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|--|
|   | 0<br>7<br>1<br>2      | 0<br>5<br>1<br>4      | 0<br>6<br>4<br>4      | 0<br>7<br>2<br>9      | 0<br>7<br>1<br>5      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>8      | 0<br>7<br>1<br>9      | 0<br>4<br>8<br>8      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>9      | 0<br>7<br>0<br>0      | 0<br>7<br>2<br>7      | 0<br>4<br>5<br>4      | 0<br>7<br>2<br>9      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>8      | 0<br>7<br>1<br>2      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>9      | 0<br>5<br>2<br>0      |                       |                      |  |
| ANIMAL ID                                     | 0<br>0<br>2<br>0<br>1 | 0<br>0<br>2<br>0<br>2 | 0<br>0<br>2<br>0<br>3 | 0<br>0<br>2<br>0<br>4 | 0<br>0<br>2<br>0<br>5 | 0<br>0<br>2<br>0<br>6 | 0<br>0<br>2<br>0<br>7 | 0<br>0<br>2<br>0<br>8 | 0<br>0<br>2<br>0<br>9 | 0<br>0<br>2<br>0<br>0 | 0<br>0<br>2<br>0<br>1 | 0<br>0<br>2<br>0<br>2 | 0<br>0<br>2<br>0<br>3 | 0<br>0<br>2<br>0<br>4 | 0<br>0<br>2<br>0<br>5 | 0<br>0<br>2<br>0<br>6 | 0<br>0<br>2<br>0<br>7 | 0<br>0<br>2<br>0<br>8 | 0<br>0<br>2<br>0<br>9 | 0<br>0<br>2<br>0<br>0 | 0<br>0<br>2<br>0<br>1 | 0<br>0<br>2<br>0<br>2 | 0<br>0<br>2<br>0<br>3 | 0<br>0<br>2<br>0<br>4 | 0<br>0<br>2<br>0<br>5 |                      |  |
| Mediastinal, Leukemia Mononuclear             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       | X                     |                      |  |
| Mediastinal, Pancreatic, Leukemia Mononuclear |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |  |
| Pancreatic, Leukemia Mononuclear              |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |  |
| Lymph Node, Mandibular                        | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     |                      |  |
| Lymph Node, Mesenteric Leukemia Mononuclear   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | X                     | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |  |
| Spleen Leukemia Mononuclear                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | X                     | X                     | X                     | X                     |                       |                       |                       | X                     | X                     |                       |                       |                       |                      |  |
| Thymus Leukemia Mononuclear                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | M                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | X                     | X                     |                       |                       |                       |                      |  |
| <b>INTEGUMENTARY SYSTEM</b>                   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |  |
| Mammary Gland Carcinoma                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |  |
| Fibroadenoma                                  | X                     |                       |                       |                       |                       |                       | X                     | X                     | X                     |                       |                       |                       | X                     |                       |                       | X                     |                       | X                     |                       |                       |                       |                       |                       | X                     | X                     |                      |  |
| Fibroadenoma, Multiple                        |                       |                       | X                     |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | X                     |                       | X                     |                       |                       | X                     | X                     | X                     |                       |                       |                      |  |
| Skin Basal Cell Adenoma                       | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     |                      |  |
| Subcutaneous Tissue, Fibroma                  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                      |  |
| <b>MUSCULOSKELETAL SYSTEM</b>                 |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |  |
| Bone  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     |                      |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |  | females<br>(cont...) |
|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---|--|----------------------|
|                         | 0<br>7<br>1<br>2 | 0<br>5<br>1<br>4 | 0<br>6<br>4<br>4 | 0<br>7<br>2<br>9 | 0<br>7<br>1<br>5 | 0<br>7<br>2<br>8 | 0<br>7<br>2<br>8 | 0<br>7<br>1<br>9 | 0<br>4<br>8<br>8 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>9 | 0<br>7<br>0<br>0 | 0<br>7<br>2<br>7 | 0<br>4<br>5<br>4 | 0<br>7<br>2<br>9 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>8 | 0<br>7<br>2<br>8 | 0<br>7<br>1<br>8 | 0<br>7<br>2<br>8 | 0<br>7<br>2<br>8 | 0<br>7<br>2<br>9 | 0<br>5<br>2<br>9 |   |  |                      |
| 0 mg/l                  | ANIMAL ID        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |  |                      |
|                         | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0 |  |                      |
|                         | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0 |  |                      |
|                         | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2                | 2 |  |                      |
|                         | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0 |  |                      |
|                         | 1                | 2                | 3                | 4                | 5                | 6                | 7                | 8                | 9                | 0                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 2                | 2                | 2                | 2 |  |                      |

**NERVOUS SYSTEM**

Brain +  
 Glioma Benign

**RESPIRATORY SYSTEM**

Lung +  
 Carcinoma, Metastatic, Thyroid Gland  
 Leukemia Mononuclear X X X X X X

Nose +

Trachea +

**SPECIAL SENSES SYSTEM**

Eye +

Harderian Gland +

**URINARY SYSTEM**

Kidney + + + + + + + A + + + + + + + + + + + + + + + + + +  
 Leukemia Mononuclear X X X X

Urinary Bladder +  
 Leiomyosarcoma, Metastatic, Uterus  
 Leukemia Mononuclear

**SYSTEMIC LESIONS**

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
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P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

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 Lab: BAT

|                                |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                            |  |
|--------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------------|--|
| DAY ON TEST                    |  | 7 | 5 | 6 | 7 | 7 | 7 | 7 | 4 | 7 | 7 | 7 | 7 | 4 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 5                            |  |
| <b>FISCHER 344 RATS FEMALE</b> |  | 1 | 1 | 4 | 2 | 1 | 2 | 2 | 1 | 8 | 2 | 2 | 0 | 2 | 5 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 0                            |  |
| <b>0 mg/l</b>                  |  | 2 | 4 | 4 | 9 | 5 | 8 | 8 | 9 | 8 | 7 | 9 | 0 | 7 | 4 | 9 | 7 | 8 | 9 | 8 | 2 | 8 | 8 | 8 | 8 | 8 | 9 | 9                            |  |
| ANIMAL ID                      |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                            |  |
|                                |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                            |  |
|                                |  | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2                            |  |
|                                |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2                            |  |
|                                |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 5 | <b>females<br/>(cont...)</b> |  |
| Multiple Organ                 |  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |                              |  |
| Leukemia Mononuclear           |  |   |   |   |   |   |   |   |   |   |   | X |   | X | X | X |   | X |   | X |   |   |   |   |   |   |   |                              |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
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 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |      |
|-------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|
|                         | 0729        | 0729 | 0729 | 0531 | 0531 | 0531 | 0672 | 0672 | 0672 | 0672 | 0672 | 0672 | 0672 | 0672 | 0672 | 0672 | 0672 | 0672 | 0672 | 0672 | 0672 | 0672 | 0672 | 0672 |          | 0672 |
| 0 mg/l                  | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 50   |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 46   |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 47   |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 47   |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 47   |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 1    |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 50   |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 47   |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 48   |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 50   |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 2    |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 12   |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 4    |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 50   |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 3    |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 50   |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     | 50   |

**ALIMENTARY SYSTEM**

|                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Intestine Large, Colon             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Large, Rectum            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Leiomyosarcoma, Metastatic, Uterus |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Intestine Small, Duodenum          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Ileum             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Small, Jejunum           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Liver                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hepatocellular Adenoma             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   | 2  |
| Leukemia Mononuclear               |   |   |   |   |   |   |   |   | X |   | X | X | X |   |   | X | X |   |   |   |   |   |   |   |   | 12 |
| Mesentery                          |   |   |   | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + |   |   |   | 4  |
| Pancreas                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   | 3  |
| Salivary Glands                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Forestomach               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE      | DAY ON TEST |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | * TOTALS |  |
|------------------------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--|
|                              | 079         | 070    | 072    | 073    | 075    | 076    | 077    | 077    | 077    | 077    | 076    | 077    | 077    | 076    | 076    | 076    | 077    | 077    | 077    | 077    | 076    | 077    | 077    |        |          |  |
| 0 mg/l                       | ANIMAL ID   |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |  |
|                              | 002226      | 000222 | 000222 | 000222 | 000233 | 000233 | 000233 | 000233 | 000233 | 000233 | 000233 | 000234 | 000235 | 000236 | 000237 | 000238 | 000239 | 000240 | 000241 | 000242 | 000243 | 000244 | 000245 | 000246 |          |  |
| Stomach, Glandular           | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50       |  |
| <b>CARDIOVASCULAR SYSTEM</b> |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |  |
| Blood Vessel                 | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50       |  |
| Heart                        | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50       |  |
| Leukemia Mononuclear         |             |        |        |        |        |        |        |        | X      | X      | X      |        |        |        |        |        | X      |        |        |        |        |        |        | 8      |          |  |
| <b>ENDOCRINE SYSTEM</b>      |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |  |
| Adrenal Cortex               | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50     |          |  |
| Adenoma                      |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | X      |        |        |        |        |        |        | 2      |          |  |
| Leukemia Mononuclear         |             |        |        |        |        |        |        | X      |        |        | X      | X      |        |        | X      | X      |        |        |        |        |        |        |        | 9      |          |  |
| Adrenal Medulla              | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50     |          |  |
| Leukemia Mononuclear         |             |        |        |        |        |        |        | X      |        |        | X      | X      |        |        | X      | X      |        |        |        |        |        |        |        | 8      |          |  |
| Pheochromocytoma Benign      |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | 2      |          |  |
| Islets, Pancreatic           | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50     |          |  |
| Parathyroid Gland            | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | M      | +      | +      | 47     |          |  |
| Pituitary Gland              | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50     |          |  |
| Leukemia Mononuclear         |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | X      |        | X      | 4      |          |  |
| Pars Distalis, Adenoma       |             | X      | X      | X      | X      | X      | X      | X      |        |        |        | X      |        |        | X      |        | X      |        |        | X      | X      | X      | X      | 30     |          |  |
| Thyroid Gland                | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50     |          |  |
| Bilateral, C-cell, Adenoma   |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | 1      |          |  |
| C-cell, Adenoma              | X           |        | X      |        |        |        |        |        | X      |        |        |        | X      |        |        |        |        |        |        |        |        |        |        | 9      |          |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |     |
|-------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|-----|
|                         | 079         | 070  | 072  | 073  | 075  | 076  | 077  | 077  | 077  | 077  | 076  | 077  | 077  | 076  | 076  | 076  | 077  | 077  | 077  | 076  |          | 077 |
| 0 mg/l                  | 0029        | 0011 | 0029 | 0031 | 0059 | 0061 | 0077 | 0077 | 0077 | 0077 | 0068 | 0077 | 0077 | 0066 | 0066 | 0066 | 0077 | 0077 | 0077 | 0066 | 0077     | 1   |
|                         | 0022        | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022     |     |
|                         | 0022        | 0022 | 0022 | 0022 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044     |     |
|                         | 0066        | 0077 | 0088 | 0099 | 0000 | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0000 | 0001 | 0002 | 0003 | 0004 | 0005 | 0006     |     |

C-cell, Carcinoma

X

1

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

|                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Clitoral Gland         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenoma                |   |   |   |   |   |   |   |   | X |   |   | X |   | X |   |   |   |   |   |   | X | X |   | 7  |
| Sarcoma                |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   | 1  |
| Ovary                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Schwannoma Malignant   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Uterus                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leiomyosarcoma         |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Polyp Stromal          | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | X |   | X |   |   |   | 8  |
| Endometrium, Carcinoma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   | 1  |
| Vagina                 |   |   |   |   |   |   |   |   |   |   | + |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Leukemia Mononuclear   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Polyp                  |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

**HEMATOPOIETIC SYSTEM**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear |   |   |   |   |   |   | X |   | X | X | X |   |   | X |   | X |   |   |   |   |   |   |   | 12 |
| Lymph Node           |   |   |   |   |   |   |   |   |   | + |   |   |   |   |   | + |   |   |   |   |   |   |   | 5  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE                       | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |  | * TOTALS |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|--|----------|
|   | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0         |  |          |
|   | 7           | 7 | 7 | 5 | 5 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 6 | 6 | 7 | 7 | 7 | 6 | 7 | 7         |  |          |
| 0 mg/l  | 2           | 0 | 2 | 3 | 7 | 2 | 2 | 2 | 2 | 0 | 0 | 2 | 2 | 9 | 8 | 2 | 5 | 9 | 8 | 8 | 2 | 2 | 2         |  |          |
| ANIMAL ID                                     | 9           | 1 | 9 | 1 | 9 | 1 | 8 | 7 | 8 | 8 | 1 | 9 | 7 | 1 | 2 | 5 | 9 | 8 | 8 | 9 | 9 | 3 | 8         |  |          |
|   | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0         |  |          |
|   | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0         |  |          |
|   | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2         |  |          |
|   | 2           | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4         |  |          |
|   | 6           | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8         |  |          |
| Mediastinal, Leukemia Mononuclear             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>2</b>  |  |          |
| Mediastinal, Pancreatic, Leukemia Mononuclear |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   | <b>1</b>  |  |          |
| Pancreatic, Leukemia Mononuclear              |             |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   | <b>1</b>  |  |          |
| Lymph Node, Mandibular                        | M           | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | <b>0</b>  |  |          |
| Lymph Node, Mesenteric                        | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>50</b> |  |          |
| Leukemia Mononuclear                          |             |   |   |   |   |   |   |   |   | X |   |   |   |   | X |   |   |   |   |   |   |   | <b>5</b>  |  |          |
| Spleen  | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>50</b> |  |          |
| Leukemia Mononuclear                          |             |   |   |   |   |   |   | X | X | X | X |   |   |   | X | X |   |   |   |   |   |   | <b>12</b> |  |          |
| Thymus  | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>49</b> |  |          |
| Leukemia Mononuclear                          |             |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   | <b>3</b>  |  |          |
| <b>INTEGUMENTARY SYSTEM</b>                   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |  |          |
| Mammary Gland                                 | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>50</b> |  |          |
| Carcinoma                                     |             |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   | <b>2</b>  |  |          |
| Fibroadenoma                                  |             |   |   | X |   | X | X | X |   |   |   | X |   | X | X | X | X | X | X | X | X | X | <b>22</b> |  |          |
| Fibroadenoma, Multiple                        | X           | X |   |   |   |   |   | X |   |   |   |   |   |   |   | X |   |   |   | X |   |   | <b>12</b> |  |          |
| Skin  | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>50</b> |  |          |
| Basal Cell Adenoma                            |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   | <b>1</b>  |  |          |
| Subcutaneous Tissue, Fibroma                  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>2</b>  |  |          |
| <b>MUSCULOSKELETAL SYSTEM</b>                 |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |  |          |
| Bone  | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>50</b> |  |          |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
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TDMS No. 20009 - 03  
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P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |  |
|-------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|--|
|                         | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |  |
| 0 mg/l                  | 7           | 7 | 7 | 5 | 5 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 6 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7        |  |
|                         | 2           | 0 | 2 | 3 | 7 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 2 | 2 | 9 | 8 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2        |  |
|                         | 9           | 1 | 9 | 1 | 9 | 1 | 8 | 7 | 9 | 8 | 8 | 1 | 9 | 7 | 1 | 2 | 5 | 9 | 8 | 8 | 9 | 9 | 9 | 3 | 8        |  |
|                         | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        |  |
|                         | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        |  |
|                         | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2        |  |
|                         | 2           | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5        |  |
|                         | 6           | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0        |  |

**NERVOUS SYSTEM**

|               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Brain         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Glioma Benign |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   | 1  |

**RESPIRATORY SYSTEM**

|                                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Lung                                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |    |
| Carcinoma, Metastatic, Thyroid Gland |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |    | 1  |
| Leukemia Mononuclear                 |   |   |   |   |   |   |   | X | X | X | X |   |   | X | X |   |   |   |   |   |   |   |    | 12 |

|      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

|         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

**SPECIAL SENSES SYSTEM**

|     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

|                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

**URINARY SYSTEM**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Kidney               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Leukemia Mononuclear |   |   |   |   |   |   |   | X | X | X | X |   |   | X | X |   |   |   |   |   |   |   |   | 10 |

|                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Urinary Bladder                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leiomyosarcoma, Metastatic, Uterus |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Leukemia Mononuclear               |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

**SYSTEMIC LESIONS**

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P04: NEOPLASMS BY INDIVIDUAL ANIMAL**  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE                | DAY ON TEST          |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      | * TOTALS             |                      |                      |                      |                      |                      |  |          |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--|----------|
|  | 07<br>29             | 07<br>01             | 07<br>02             | 05<br>03             | 05<br>07             | 06<br>01             | 07<br>02             | 07<br>02             | 07<br>02             | 07<br>02             | 07<br>02             | 07<br>02             | 07<br>02             | 07<br>02             | 06<br>00             | 06<br>00             | 06<br>02             | 06<br>02             | 06<br>02             | 06<br>02             | 07<br>02             | 07<br>02             | 07<br>02             | 06<br>03             | 07<br>02             |                      | 07<br>02             | 07<br>02             | 06<br>03             | 07<br>02             | 07<br>02             |  |          |
| <b>0 mg/l</b>                          | ANIMAL ID            |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |  |          |
|  | 00<br>22<br>22<br>67 | 00<br>00<br>22<br>22 | 00<br>00<br>22<br>22 | 00<br>00<br>22<br>22 | 00<br>00<br>22<br>33 | 00<br>00<br>22<br>33 | 00<br>00<br>22<br>33 | 00<br>00<br>22<br>33 | 00<br>00<br>22<br>33 | 00<br>00<br>22<br>33 | 00<br>00<br>22<br>33 | 00<br>00<br>22<br>33 | 00<br>00<br>22<br>33 | 00<br>00<br>22<br>33 | 00<br>00<br>22<br>33 | 00<br>00<br>22<br>44 | 00<br>00<br>22<br>44 | 00<br>00<br>22<br>44 | 00<br>00<br>22<br>44 | 00<br>00<br>22<br>44 | 00<br>00<br>22<br>44 | 00<br>00<br>22<br>44 | 00<br>00<br>22<br>44 | 00<br>00<br>22<br>44 | 00<br>00<br>22<br>44 | 00<br>00<br>22<br>44 | 00<br>00<br>22<br>44 | 00<br>00<br>22<br>44 | 00<br>00<br>22<br>44 | 00<br>00<br>22<br>44 | 00<br>00<br>22<br>44 |  |          |
| Multiple Organ<br>Leukemia Mononuclear | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    | +                    |  |          |
|  |                      |                      |                      |                      |                      |                      |                      |                      |                      | X                    | X                    | X                    | X                    |                      |                      | X                    | X                    |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |  | 50<br>12 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
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 BLANK .. Not examined microscopically

|                                |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>FISCHER 344 RATS FEMALE</b> | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
|                                |             | 6 | 7 | 5 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
|                                |             | 1 | 0 | 3 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| <b>156.25 mg/l</b>             | ANIMAL ID   | 4 | 6 | 1 | 9 | 9 | 6 | 9 | 7 | 7 | 8 | 8 | 9 | 6 | 2 | 9 | 8 | 8 | 7 | 6 | 7 | 8 | 8 | 7 | 8 | 8 | 7 | 8 | 8 |   |
|                                |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                                |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                                |             | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
|                                |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
|                                |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |   |   |   |   |

females  
(cont...)

**ALIMENTARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Large, Cecum<br>Mesothelioma Malignant            | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + |   |   |   |   |   |
| Intestine Large, Colon<br>Mesothelioma Malignant            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + |   |   |   |   |   |
| Intestine Large, Rectum                                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + |   |   |   |   |   |
| Intestine Small, Duodenum<br>Mesothelioma Malignant         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + |   |   |   |   |   |   |
| Intestine Small, Ileum<br>Mesothelioma Malignant            | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + |   |   |   |   |   |   |
| Intestine Small, Jejunum<br>Mesothelioma Malignant          | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + |   |   |   |   |   |   |
| Liver<br>Leukemia Mononuclear                               | + | + | + | + | + | + | + | + | + | + | X | X | X | X | + | + | + | + | + | + | + | + | X |   |   |   |   |   |   |   |
| Mesentery<br>Leukemia Mononuclear<br>Mesothelioma Malignant | + |   |   | + |   |   |   |   |   |   |   |   | + | + |   |   |   |   |   |   | + | X |   |   |   |   |   |   |   |   |
| Pancreas<br>Leukemia Mononuclear                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | females<br>(cont...)  |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                         | 0<br>6<br>1<br>4      | 0<br>7<br>0<br>6      | 0<br>5<br>3<br>1      | 0<br>7<br>2<br>9      | 0<br>7<br>2<br>9      | 0<br>6<br>1<br>6      | 0<br>7<br>2<br>9      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>9      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>2      | 0<br>7<br>2<br>9      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>8      | 0<br>6<br>1<br>6      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>7      | 0<br>6<br>4<br>2      | 0<br>7<br>2<br>8      |                       |
| 156.25 mg/l             | 0<br>0<br>2<br>5<br>1 | 0<br>0<br>2<br>5<br>2 | 0<br>0<br>2<br>5<br>3 | 0<br>0<br>2<br>5<br>4 | 0<br>0<br>2<br>5<br>5 | 0<br>0<br>2<br>5<br>6 | 0<br>0<br>2<br>5<br>7 | 0<br>0<br>2<br>5<br>8 | 0<br>0<br>2<br>5<br>9 | 0<br>0<br>2<br>6<br>0 | 0<br>0<br>2<br>6<br>1 | 0<br>0<br>2<br>6<br>2 | 0<br>0<br>2<br>6<br>3 | 0<br>0<br>2<br>6<br>4 | 0<br>0<br>2<br>6<br>5 | 0<br>0<br>2<br>6<br>6 | 0<br>0<br>2<br>6<br>7 | 0<br>0<br>2<br>6<br>8 | 0<br>0<br>2<br>6<br>9 | 0<br>0<br>2<br>7<br>0 | 0<br>0<br>2<br>7<br>1 | 0<br>0<br>2<br>7<br>2 | 0<br>0<br>2<br>7<br>3 | 0<br>0<br>2<br>7<br>4 | 0<br>0<br>2<br>7<br>5 |

Mesothelioma Malignant

Salivary Glands

Stomach, Forestomach

Stomach, Glandular

### CARDIOVASCULAR SYSTEM

Blood Vessel

Heart

Leukemia Mononuclear

### ENDOCRINE SYSTEM

Adrenal Cortex

Adenoma

Leukemia Mononuclear

Mesothelioma Malignant

Adrenal Medulla

Leukemia Mononuclear

Islets, Pancreatic

Adenoma

Leukemia Mononuclear

Parathyroid Gland

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br>156.25 mg/l                                    | DAY ON TEST      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                       | ANIMAL ID             | females<br>(cont...) |                      |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------------|-----------------------|----------------------|----------------------|
|   | 0<br>6<br>1<br>4 | 0<br>7<br>0<br>6 | 0<br>5<br>3<br>1 | 0<br>7<br>2<br>9 | 0<br>7<br>2<br>9 | 0<br>6<br>1<br>6 | 0<br>7<br>2<br>9 | 0<br>7<br>2<br>9 | 0<br>7<br>2<br>9 | 0<br>7<br>2<br>9 | 0<br>7<br>2<br>9 | 0<br>7<br>2<br>9 | 0<br>7<br>2<br>9 | 0<br>7<br>2<br>9 | 0<br>7<br>2<br>9 | 0<br>7<br>2<br>9 | 0<br>7<br>2<br>9 | 0<br>7<br>2<br>9 | 0<br>6<br>1<br>6 | 0<br>7<br>2<br>9 | 0<br>7<br>2<br>8 | 0<br>7<br>2<br>8 | 0<br>7<br>2<br>7 | 0<br>6<br>4<br>2 | 0<br>7<br>2<br>8      |                       |                      |                      |
| Pituitary Gland   | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                     | 0<br>0<br>2<br>5<br>1 | females<br>(cont...) |                      |
| Leukemia Mononuclear<br>Pars Distalis, Adenoma                            | X                |                  |                  | X                | X                | X                | X                | X                |                  |                  | X                |                  | X                | X                |                  | X                |                  | X                |                  | X                |                  |                  |                  |                  | 0<br>0<br>2<br>5<br>1 | females<br>(cont...)  |                      |                      |
| Thyroid Gland   | +                | +                | +                | +                | +                | A                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 0<br>0<br>2<br>5<br>1 |                       |                      | females<br>(cont...) |
| C-cell, Adenoma<br>C-cell, Carcinoma                                      |                  |                  |                  |                  |                  |                  |                  |                  |                  | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  | X                |                  |                  |                  |                  | 0<br>0<br>2<br>5<br>1 |                       | females<br>(cont...) |                      |
| <b>GENERAL BODY SYSTEM</b>  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                       |                       |                      |                      |
| Peritoneum<br>Mesothelioma Malignant                                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                       |                       |                      | females<br>(cont...) |
| <b>GENITAL SYSTEM</b>   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                       |                       |                      |                      |
| Clitoral Gland<br>Adenoma<br>Carcinoma<br>Bilateral, Adenoma              | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                     | 0<br>0<br>2<br>5<br>1 | females<br>(cont...) |                      |
| Ovary<br>Granulosa Cell Tumor Malignant<br>Mesothelioma Malignant         | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                     | 0<br>0<br>2<br>5<br>1 |                      | females<br>(cont...) |
| Uterus<br>Leukemia Mononuclear<br>Mesothelioma Malignant<br>Polyp Stromal | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                     | 0<br>0<br>2<br>5<br>1 |                      |                      |
| Vagina  | +                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                       |                       | females<br>(cont...) |                      |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P04: NEOPLASMS BY INDIVIDUAL ANIMAL**  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| <b>FISCHER 344 RATS FEMALE</b><br><br><b>156.25 mg/l</b> | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |   |  |
|  | ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   | 0 |  |
|  |             | 6 | 7 | 5 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 |   |  |
|  |             | 1 | 0 | 3 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 4 | 2 |   |  |
|  |             | 4 | 6 | 1 | 9 | 9 | 6 | 9 | 7 | 7 | 8 | 8 | 9 | 6 | 2 | 9 | 8 | 8 | 7 | 6 | 7 | 7 | 8 | 7 | 8 |   |  |
|  |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |  |
|  |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |  |
|  |             | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |   |  |
|  |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 |   |   |  |
|  |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |  |

**females (cont...)**

Polyp X

**HEMATOPOIETIC SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow                                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear                          | X |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   | X |
| Lymph Node                                    | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + |   |   |   | + |
| Mediastinal, Leukemia Mononuclear             | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mediastinal, Pancreatic, Leukemia Mononuclear |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pancreatic, Leukemia Mononuclear              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |
| Lymph Node, Mandibular                        | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M |
| Lymph Node, Mesenteric                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear                          | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |
| Mesothelioma Malignant                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Spleen  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear                          | X |   |   |   |   |   |   |   |   | X | X |   | X | X |   |   |   |   | X | X |   | X |   | X |
| Mesothelioma Malignant                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Thymus  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |

**INTEGUMENTARY SYSTEM**

|                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Fibroadenoma           |   |   |   | X |   |   |   |   | X |   | X |   |   | X | X | X |   |   |   |   | X |   |   |   |
| Fibroadenoma, Multiple |   |   | X | X |   | X | X | X |   |   |   |   |   | X |   |   |   |   |   |   | X |   | X | X |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| DAY ON TEST                       | FISCHER 344 RATS FEMALE |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | ANIMAL ID | females<br>(cont...) |
|-----------------------------------|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|----------------------|
|                                   | 0614                    | 0706 | 0503 | 0702 | 0702 | 0601 | 0702 | 0702 | 0702 | 0702 | 0702 | 0702 | 0702 | 0702 | 0702 | 0702 | 0702 | 0702 | 0702 | 0702 | 0702 | 0702 | 0702 | 0702 | 0702 |           |                      |
| 156.25 mg/l                       | 0054                    | 0006 | 0003 | 0002 | 0002 | 0001 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0001      |                      |
| Skin                              | +                       | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |           |                      |
| Subcutaneous Tissue, Fibroma      |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           | X                    |
| Subcutaneous Tissue, Fibrosarcoma |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           | X                    |
| <b>MUSCULOSKELETAL SYSTEM</b>     |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                      |
| Bone                              | +                       | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |           |                      |
| Skeletal Muscle                   |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                      |
| Mesothelioma Malignant            |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                      |
| <b>NERVOUS SYSTEM</b>             |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                      |
| Brain                             | +                       | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |           |                      |
| Leukemia Mononuclear              | X                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           | X                    |
| <b>RESPIRATORY SYSTEM</b>         |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                      |
| Lung                              | +                       | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |           |                      |
| Alveolar/Bronchiolar Adenoma      |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           | X                    |
| Alveolar/Bronchiolar Carcinoma    |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           | X                    |
| Leukemia Mononuclear              | X                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           | X                    |
| Nose                              | +                       | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |           |                      |
| Trachea                           | +                       | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |           |                      |
| <b>SPECIAL SENSES SYSTEM</b>      |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                      |
| Eye                               | +                       | +    | A    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |           |                      |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | females<br>(cont...) |  |
|-------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------|--|
|                         | 0614        | 0706 | 0531 | 0729 | 0779 | 0676 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0676 | 0777 | 0722 | 0722 | 0722 | 0722 | 0722 |                      |  |
| 156.25 mg/l             | ANIMAL ID   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                      |  |
|                         | 0051        | 0002 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000                 |  |
| Harderian Gland         | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +                    |  |
| <b>URINARY SYSTEM</b>   |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                      |  |
| Kidney                  | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +                    |  |
| Leukemia Mononuclear    | X           |      |      |      |      |      |      |      |      |      |      |      | X    |      |      |      |      |      | X    |      |      |      |      |      | X    |                      |  |
| Mesothelioma Malignant  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                      |  |
| Renal Tubule, Adenoma   |             |      |      |      |      |      |      |      |      |      |      |      |      |      | X    |      |      |      |      |      |      |      |      |      |      |                      |  |
| Urinary Bladder         | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +                    |  |
| Leukemia Mononuclear    | X           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                      |  |
| Mesothelioma Malignant  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                      |  |
| <b>SYSTEMIC LESIONS</b> |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                      |  |
| Multiple Organ          | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +                    |  |
| Leukemia Mononuclear    | X           |      |      |      |      |      |      |      |      | X    | X    |      | X    | X    |      |      |      | X    | X    |      | X    |      |      |      | X    |                      |  |
| Mesothelioma Malignant  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                      |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
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 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |
|-------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
|                         | 0526        | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 |          |
| 156.25 mg/l             | 0076        | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 |          |
|                         | 0076        | 0077 | 0078 | 0079 | 0080 | 0081 | 0082 | 0083 | 0084 | 0085 | 0086 | 0087 | 0088 | 0089 | 0090 | 0091 | 0092 | 0093 | 0094 | 0095 | 0096 | 0097 | 0098 | 0099 |          |

**ALIMENTARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |             |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------------|
| Esophagus   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50          |
| Intestine Large, Cecum<br>Mesothelioma Malignant            | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | 45<br>1     |
| Intestine Large, Colon<br>Mesothelioma Malignant            | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | 48<br>1     |
| Intestine Large, Rectum                                     | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48          |
| Intestine Small, Duodenum<br>Mesothelioma Malignant         | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | 47<br>1     |
| Intestine Small, Ileum<br>Mesothelioma Malignant            | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | 46<br>1     |
| Intestine Small, Jejunum<br>Mesothelioma Malignant          | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | 46<br>1     |
| Liver<br>Leukemia Mononuclear                               | + | + | + | + | + | X | + | X | + | X | + | + | + | + | + | + | + | X | + | X | + | + | + | 50<br>13    |
| Mesentery<br>Leukemia Mononuclear<br>Mesothelioma Malignant |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + | + | 7<br>1<br>1 |
| Pancreas<br>Leukemia Mononuclear                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | + | + | + | + | 50<br>2     |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
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TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE      | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |      |  |  |
|------------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|--|--|
|                              | 0526        | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 | 0727 |          |      |  |  |
| 156.25 mg/l                  | ANIMAL ID   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |      |  |  |
|                              | 0076        | 0077 | 0078 | 0079 | 0080 | 0081 | 0082 | 0083 | 0084 | 0085 | 0086 | 0087 | 0088 | 0089 | 0090 | 0091 | 0092 | 0093 | 0094 | 0095 | 0096 | 0097 | 0098 | 0099     | 0100 |  |  |
| Mesothelioma Malignant       |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X        | 1    |  |  |
| Salivary Glands              | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50   |  |  |
| Stomach, Forestomach         | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50   |  |  |
| Stomach, Glandular           | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50   |  |  |
| <b>CARDIOVASCULAR SYSTEM</b> |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |      |  |  |
| Blood Vessel                 | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50   |  |  |
| Heart                        | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50   |  |  |
| Leukemia Mononuclear         |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X    | X    |      |      |      |          | 4    |  |  |
| <b>ENDOCRINE SYSTEM</b>      |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |      |  |  |
| Adrenal Cortex               | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50   |  |  |
| Adenoma                      |             |      | X    |      |      |      |      |      |      |      |      |      |      |      | X    | X    |      |      |      |      |      |      |      |          | 4    |  |  |
| Leukemia Mononuclear         |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X    | X    |      |      |      |          | 6    |  |  |
| Mesothelioma Malignant       |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X    |          | 1    |  |  |
| Adrenal Medulla              | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50   |  |  |
| Leukemia Mononuclear         |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X    | X    |      |      |      |          | 6    |  |  |
| Islets, Pancreatic           | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 49   |  |  |
| Adenoma                      |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | M    | +        | 1    |  |  |
| Leukemia Mononuclear         |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          | 1    |  |  |
| Parathyroid Gland            | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | M    | +    | +    | +    | +    | +    | +        | 49   |  |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically



TDMS No. 20009 - 03  
Test Type: CHRONIC  
Route: DOSED WATER  
Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

beta-Picoline  
CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
Time Report Requested: 10:09:56  
First Dose M/F: 11/18/04 / 11/19/04  
Lab: BAT

|                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |                 |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|-----------------|--|
| DAY ON TEST             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        | 0               |  |
| FISCHER 344 RATS FEMALE | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 7 | 4 | 4 | 4 | 5 |          |                 |  |
| 156.25 mg/l             | 2 | 7 | 2 | 2 | 2 | 1 | 2 | 8 | 2 | 2 | 2 | 2 | 2 | 7 | 2 | 2 | 2 | 4 | 0 | 2 | 4 | 2 | 7 | 8 | 8 | 2 |          |                 |  |
| ANIMAL ID               | 6 | 7 | 7 | 9 | 9 | 5 | 9 | 8 | 8 | 8 | 9 | 7 | 8 | 0 | 7 | 8 | 8 | 5 | 6 | 8 | 5 | 4 | 8 | 4 | 8 | 6 |          |                 |  |
|                         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        | <b>* TOTALS</b> |  |
|                         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |                 |  |
|                         | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 |   |          |                 |  |
|                         | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 |          |                 |  |
|                         | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |   | <b>1</b> |                 |  |
| Polyp                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | <b>1</b>        |  |

HEMATOPOIETIC SYSTEM

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |           |           |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|-----------|-----------|
| Bone Marrow                                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         | +         | <b>50</b> |
| Leukemia Mononuclear                          |   |   |   |   |   | X |   |   |   |   | X |   |   |   |   |   |   |   | X |   | X | X |   |   |   |   |   |   |   |   |   |   | <b>9</b>  |           |           |
| Lymph Node                                    |   | + |   |   |   |   |   |   |   |   |   |   | + | + |   |   |   |   |   |   |   |   |   | + |   |   |   |   |   |   |   |   | <b>7</b>  |           |           |
| Mediastinal, Leukemia Mononuclear             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           | <b>1</b>  |           |
| Mediastinal, Pancreatic, Leukemia Mononuclear |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           | <b>1</b>  |           |
| Pancreatic, Leukemia Mononuclear              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           | <b>1</b>  |           |
| Lymph Node, Mandibular                        | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | <b>0</b>  |           |           |
| Lymph Node, Mesenteric                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         | <b>50</b> |           |
| Leukemia Mononuclear                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           | <b>3</b>  |           |
| Mesothelioma Malignant                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |           | <b>1</b>  |           |
| Spleen  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         | <b>50</b> |           |
| Leukemia Mononuclear                          |   |   |   |   |   | X |   |   | X | X |   |   |   |   |   |   |   |   | X |   | X | X |   |   |   |   |   |   |   |   |   |   | <b>15</b> |           |           |
| Mesothelioma Malignant                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |           | <b>1</b>  |           |
| Thymus  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         | <b>50</b> |           |
| Leukemia Mononuclear                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           | <b>1</b>  |           |

INTEGUMENTARY SYSTEM

|                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |           |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|-----------|
| Mammary Gland          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         | <b>50</b> |
| Fibroadenoma           |   |   |   | X |   |   | X |   |   | X | X |   |   | X |   |   | X |   |   |   | X |   |   |   | X |   |   |   |   | X |   |   | <b>15</b> |           |
| Fibroadenoma, Multiple |   |   |   |   |   |   | X |   |   | X |   |   |   | X | X |   | X |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>16</b> |           |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| DAY ON TEST                       | FISCHER 344 RATS FEMALE |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |      |
|-----------------------------------|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|
|                                   | 0526                    | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 |          | 0772 |
| 156.25 mg/l                       | ANIMAL ID               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |      |
|                                   | 0000                    | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 |          | 0000 |
| Skin                              | +                       | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50   |
| Subcutaneous Tissue, Fibroma      |                         |      |      |      |      |      | X    |      |      |      |      |      |      |      |      |      |      |      |      |      |          | 2    |
| Subcutaneous Tissue, Fibrosarcoma |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          | 1    |
| <b>MUSCULOSKELETAL SYSTEM</b>     |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |      |
| Bone                              | +                       | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50   |
| Skeletal Muscle                   |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | +        | 1    |
| Mesothelioma Malignant            |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X        | 1    |
| <b>NERVOUS SYSTEM</b>             |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |      |
| Brain                             | +                       | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50   |
| Leukemia Mononuclear              |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          | 2    |
| <b>RESPIRATORY SYSTEM</b>         |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |      |
| Lung                              | +                       | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50   |
| Alveolar/Bronchiolar Adenoma      |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X        | 3    |
| Alveolar/Bronchiolar Carcinoma    |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          | 1    |
| Leukemia Mononuclear              |                         |      |      |      | X    |      |      | X    |      | X    |      |      |      |      |      | X    |      | X    |      |      |          | 11   |
| Nose                              | +                       | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50   |
| Trachea                           | +                       | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50   |
| <b>SPECIAL SENSES SYSTEM</b>      |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |      |
| Eye                               | +                       | +    | +    | +    | +    | +    | A    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 48   |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| DAY ON TEST             | FISCHER 344 RATS FEMALE |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |
|-------------------------|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
|                         | 0526                    | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 |          |
| 156.25 mg/l             | ANIMAL ID               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |
|                         | 0076                    | 0077 | 0078 | 0079 | 0080 | 0081 | 0082 | 0083 | 0084 | 0085 | 0086 | 0087 | 0088 | 0089 | 0090 | 0091 | 0092 | 0093 | 0094 | 0095 | 0096 | 0097 | 0098 | 0099 | 0100 |          |
| Harderian Gland         | +                       | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50       |
| <b>URINARY SYSTEM</b>   |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |
| Kidney                  | +                       | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50       |
| Leukemia Mononuclear    |                         |      |      |      |      | X    |      |      | X    |      |      |      |      |      |      |      |      | X    |      |      |      |      |      |      |      | 7        |
| Mesothelioma Malignant  |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X    |      |      | 1        |
| Renal Tubule, Adenoma   |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 1        |
| Urinary Bladder         | +                       | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50       |
| Leukemia Mononuclear    |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 1        |
| Mesothelioma Malignant  |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X    |      |      | 1        |
| <b>SYSTEMIC LESIONS</b> |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |
| Multiple Organ          | +                       | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50       |
| Leukemia Mononuclear    |                         |      |      |      |      | X    |      |      | X    |      | X    |      |      |      |      |      |      | X    |      | X    | X    |      |      |      |      | 15       |
| Mesothelioma Malignant  |                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X    |      |      | 1        |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|                                |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      |
|--------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------|
|                                | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      |
| <b>FISCHER 344 RATS FEMALE</b> | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |                      |
|                                | 6           | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 7 | 5 | 7 | 7 | 6 | 7 | 7 |   |                      |
|                                | 9           | 2 | 9 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 2 | 7 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 5 |                      |
| <b>312.5 mg/l</b>              | 1           | 9 | 0 | 9 | 7 | 9 | 7 | 9 | 7 | 1 | 8 | 2 | 6 | 7 | 8 | 6 | 8 | 8 | 3 | 9 | 9 | 2 |                      |
|                                | ANIMAL ID   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      |
|                                | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | females<br>(cont...) |
|                                | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                      |
|                                | 3           | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |                      |
|                                | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |                      |
|                                | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 |                      |

**ALIMENTARY SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Large, Cecum   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + |
| Intestine Large, Colon   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum<br>Sarcoma, Metastatic, Uncertain Primary Site | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + |
| Intestine Small, Jejunum   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + |
| Liver<br>Leukemia Mononuclear  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|  | X |   |   | X |   |   |   | X | X |   |   |   | X |   |   |   |   |   |   |   | X | X |   |
| Mesentery<br>Sarcoma, Metastatic, Uncertain Primary Site               |   |   |   |   |   |   |   | + |   |   |   | + |   |   | + |   |   |   |   |   | + | + |   |
| Oral Mucosa<br>Squamous Cell Papilloma                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pancreas<br>Sarcoma, Metastatic, Uncertain Primary Site                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + |
| Salivary Glands  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br>312.5 mg/l | DAY ON TEST | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | ANIMAL ID | females<br>(cont...) |
|---------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------|----------------------|
|                                       | 6<br>9<br>1 | 7<br>2<br>9 | 6<br>9<br>0 | 7<br>2<br>9 | 7<br>2<br>7 | 7<br>2<br>9 | 7<br>2<br>7 | 7<br>2<br>9 | 7<br>2<br>7 | 7<br>2<br>1 | 7<br>2<br>8 | 6<br>2<br>8 | 7<br>2<br>8 | 7<br>2<br>8 | 7<br>2<br>8 | 5<br>2<br>6 | 7<br>2<br>8 | 7<br>2<br>8 | 6<br>0<br>3 | 7<br>2<br>9 | 7<br>2<br>9 | 7<br>2<br>7 | 5<br>8<br>2 | 7<br>2<br>2 | 0<br>8<br>2 | 0<br>0<br>0 | 0<br>0<br>0 |           |                      |
| Stomach, Forestomach                  |             | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |             |           |                      |
| Stomach, Glandular                    |             | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | A           |             | +           |             |           |                      |
| <b>CARDIOVASCULAR SYSTEM</b>          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |           |                      |
| Blood Vessel                          |             | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |             |           |                      |
| Heart                                 |             | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |             |           |                      |
| Leukemia Mononuclear                  |             | X           |             |             |             |             |             |             |             | X           |             |             |             | X           |             |             |             |             |             |             |             |             |             |             |             |             |             |           |                      |
| <b>ENDOCRINE SYSTEM</b>               |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |           |                      |
| Adrenal Cortex                        |             | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |             |           |                      |
| Adenoma                               |             |             |             |             | X           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |           |                      |
| Leukemia Mononuclear                  |             | X           |             |             |             |             |             | X           | X           |             |             |             | X           |             |             |             |             |             |             |             |             |             |             |             |             | X           |             |           |                      |
| Adrenal Medulla                       |             | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |             |           |                      |
| Leukemia Mononuclear                  |             | X           |             |             |             |             | X           | X           |             |             |             | X           |             |             |             |             |             |             |             |             |             |             |             |             |             | X           |             |           |                      |
| Pheochromocytoma Benign               |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | X           |             |           |                      |
| Islets, Pancreatic                    |             | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |             |           |                      |
| Parathyroid Gland                     |             | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |             |           |                      |
| Pituitary Gland                       |             | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |             |           |                      |
| Leukemia Mononuclear                  |             |             |             |             |             |             |             |             |             | X           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |           |                      |
| Pars Distalis, Adenoma                |             |             | X           | X           |             | X           | X           |             |             |             | X           | X           | X           |             | X           | X           |             | X           | X           |             |             | X           |             |             |             | X           |             |           |                      |
| Thyroid Gland                         |             | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |             |           |                      |
| Carcinoma                             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | X           |             |           |                      |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | ANIMAL ID | females<br>(cont...) |      |      |      |
|-------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|----------------------|------|------|------|
|                         | 0691        | 0729 | 0679 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0672 | 0772 | 0672 | 0772 | 0772 | 0572 | 0772 | 0672 | 0772 |           |                      | 0772 | 0572 | 0772 |
| 312.5 mg/l              | 0           | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0                    | 0    | 0030 |      |
|                         | 0           | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0                    | 0    | 0030 |      |
|                         | 3           | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3         | 3                    | 3    | 0030 |      |
|                         | 0           | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 2    | 2    | 2         | 2                    | 2    | 0030 |      |
|                         | 1           | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 0    | 1         | 2                    | 3    | 0030 |      |

Bilateral, C-cell, Adenoma  
 C-cell, Adenoma  
 C-cell, Carcinoma

X  
 X

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland                                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoma   |   |   |   |   |   |   |   |   | X | X | X |   | X |   |   |   |   | X |   |   |   |   |   |
| Carcinoma   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sarcoma   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ovary   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Granulosa Cell Tumor Benign                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leukemia Mononuclear                                |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Uterus  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leiomyosarcoma                                      |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Polyp Stromal                                       |   |   |   | X |   |   |   |   | X |   | X | X |   | X | X |   |   |   |   |   |   |   |   |
| Cervix, Sarcoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Endometrium, Adenoma                                |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**HEMATOPOIETIC SYSTEM**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear | X |   |   |   |   |   |   | X |   | X |   |   |   | X |   |   |   |   |   |   |   |   | X |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br><br>312.5 mg/l   | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                      |  |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------|--|
|   | 0691        | 0729 | 0679 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0672 | 0772 | 0672 | 0772 | 0772 | 0572 | 0772 | 0672 | 0772 |                      |  |
| ANIMAL ID   | 0001        | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0010 | 0011 | 0012 | 0013 | 0014 | 0015 | 0016 | 0017 | 0018 | 0019 | 0020 | 0021 | 0022 | 0023 | females<br>(cont...) |  |
| Lymph Node<br>Mediastinal, Leukemia Mononuclear<br>Pancreatic, Leukemia Mononuclear   |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                      |  |
| Lymph Node, Mandibular  | M           | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M                    |  |
| Lymph Node, Mesenteric<br>Leukemia Mononuclear  | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +                    |  |
| Spleen<br>Leukemia Mononuclear  | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +                    |  |
| Thymus<br>Leukemia Mononuclear  | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +                    |  |
| <b>INTEGUMENTARY SYSTEM</b>   |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                      |  |
| Mammary Gland<br>Adenoma<br>Carcinoma<br>Fibroadenoma<br>Fibroadenoma, Multiple   | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +                    |  |
| Skin<br>Subcutaneous Tissue, Fibroma<br>Subcutaneous Tissue, Fibrosarcoma<br>Subcutaneous Tissue, Hemangiosarcoma<br>Subcutaneous Tissue, Histiocytic Sarcoma | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +                    |  |

**MUSCULOSKELETAL SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br>312.5 mg/l | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | ANIMAL ID | females<br>(cont...) |      |
|---------------------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|----------------------|------|
|                                       | 0691        | 0729 | 0690 | 0729 | 0779 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0676 | 0776 | 0777 | 0777 | 0575 | 0777 | 0772 | 0676 | 0777 |           |                      | 0575 |
| Bone                                  | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +         | +                    |      |
| <b>NERVOUS SYSTEM</b>                 |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                      |      |
| Brain                                 | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +         | +                    |      |
| <b>RESPIRATORY SYSTEM</b>             |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                      |      |
| Lung                                  | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +         | +                    |      |
| Alveolar/Bronchiolar Adenoma          |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                      |      |
| Carcinoma, Metastatic, Thyroid Gland  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X    |      |      |      |      |           |                      |      |
| Hemangiosarcoma, Metastatic, Skin     |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                      |      |
| Leukemia Mononuclear                  | X           |      |      | X    |      |      |      | X    | X    |      |      |      | X    |      |      |      |      |      |      |      | X         | X                    |      |
| Nose                                  | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +         | +                    |      |
| Respiratory Epithelium, Adenoma       |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X    |      |      |      |      |           |                      |      |
| Trachea                               | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +         | +                    |      |
| <b>SPECIAL SENSES SYSTEM</b>          |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                      |      |
| Eye                                   | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +         | A                    |      |
| Harderian Gland                       | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +         | +                    |      |
| Zymbal's Gland                        |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                      |      |
| Carcinoma                             |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                      |      |
| <b>URINARY SYSTEM</b>                 |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                      |      |
| Kidney                                | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +         | +                    |      |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
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TDMS No. 20009 - 03  
Test Type: CHRONIC  
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P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
beta-Picoline  
CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
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Lab: BAT

| DAY ON TEST             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | ANIMAL ID | females<br>(cont...) |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|----------------------|
|                         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |           |                      |
| FISCHER 344 RATS FEMALE | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 7 | 5 | 7 | 7 | 6 | 7         | 7                    |
| 312.5 mg/l              | 9 | 2 | 9 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 2         | 2                    |
|                         | 1 | 9 | 0 | 9 | 7 | 9 | 7 | 9 | 7 | 1 | 8 | 2 | 8 | 6 | 7 | 8 | 6 | 8 | 8 | 3 | 9         | 7                    |
|                         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0         | 0                    |
|                         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0         | 0                    |
|                         | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3         | 3                    |
|                         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2         | 2                    |
|                         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1         | 2                    |
| Leukemia Mononuclear    | X |   |   |   |   |   |   | X | X |   |   |   | X |   |   |   |   |   |   |   |           |                      |
| Renal Tubule, Adenoma   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |                      |
| Urinary Bladder         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         | +                    |
| Leukemia Mononuclear    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |                      |
| <b>SYSTEMIC LESIONS</b> |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |                      |
| Multiple Organ          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         | +                    |
| Histiocytic Sarcoma     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |           |                      |
| Leukemia Mononuclear    | X |   |   | X |   |   |   | X | X |   |   |   | X |   |   |   |   |   |   |   | X         | X                    |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
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TDMS No. 20009 - 03  
 Test Type: CHRONIC  
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 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br>312.5 mg/l | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |      |      |      |
|---------------------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|------|------|
|                                       | 078         | 077  | 066  | 072  | 077  | 057  | 077  | 076  | 066  | 066  | 077  | 077  | 055  | 077  | 066  | 077  | 077  | 066  | 077  | 077  |          | 077  | 077  |      |
| ANIMAL ID                             | 0026        | 0007 | 0008 | 0009 | 0000 | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0000 | 0001 | 0002 | 0003 | 0004 | 0005 | 0006     | 0007 | 0008 | 0009 |

ALIMENTARY SYSTEM

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum                      | + | + | + | + | + | + | + | + | + | + | + | + | A | + | A | + | + | + | + | + | + | + | + | 47 |
| Intestine Large, Colon                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Rectum                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Sarcoma, Metastatic, Uncertain Primary Site |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Intestine Small, Duodenum                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Ileum                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Jejunum                    | + | + | + | + | + | + | + | + | + | + | + | + | A | + | A | + | + | + | + | + | + | + | + | 47 |
| Liver                                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear                        |   |   |   | X | X |   |   | X | X |   | X |   |   | X | X |   |   | X | X | X |   |   | X | 18 |
| Mesentery                                   |   |   | + |   |   |   |   |   |   |   |   |   |   | + |   |   |   |   |   |   |   |   |   | 7  |
| Sarcoma, Metastatic, Uncertain Primary Site |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Oral Mucosa                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Squamous Cell Papilloma                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Pancreas                                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Sarcoma, Metastatic, Uncertain Primary Site |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Salivary Glands                             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
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| DAY ON TEST                  | FISCHER 344 RATS FEMALE |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |     |
|------------------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-----|
|                              | 078                     | 077   | 066   | 072   | 077   | 057   | 077   | 076   | 066   | 066   | 077   | 077   | 055   | 077   | 066   | 077   | 077   | 066   | 077   | 077   |          | 077 |
| ANIMAL ID                    | 00326                   | 00332 | 00332 | 00332 | 00333 | 00333 | 00333 | 00333 | 00333 | 00333 | 00333 | 00333 | 00333 | 00333 | 00333 | 00333 | 00333 | 00333 | 00333 | 00333 | 00333    |     |
| Stomach, Forestomach         | +                       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | 50  |
| Stomach, Glandular           | +                       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | 49  |
| <b>CARDIOVASCULAR SYSTEM</b> |                         |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |     |
| Blood Vessel                 | +                       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | 50  |
| Heart                        | +                       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | 50  |
| Leukemia Mononuclear         |                         |       |       |       |       |       |       | X     |       |       | X     |       |       | X     |       |       | X     |       |       |       |          | 7   |
| <b>ENDOCRINE SYSTEM</b>      |                         |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |     |
| Adrenal Cortex               | +                       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | 50  |
| Adenoma                      |                         |       | X     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          | 2   |
| Leukemia Mononuclear         |                         |       |       |       |       |       |       | X     |       | X     |       |       | X     |       |       | X     |       |       |       |       |          | 9   |
| Adrenal Medulla              | +                       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | 50  |
| Leukemia Mononuclear         |                         |       |       |       |       |       |       | X     |       | X     |       |       | X     |       |       | X     |       |       |       |       |          | 9   |
| Pheochromocytoma Benign      |                         |       |       |       |       |       |       |       |       | X     |       |       |       |       | X     |       |       |       |       |       |          | 3   |
| Islets, Pancreatic           | +                       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | 50  |
| Parathyroid Gland            | +                       | +     | +     | +     | +     | +     | +     | M     | +     | +     | +     | +     | +     | M     | +     | +     | +     | +     | +     | +     | +        | 48  |
| Pituitary Gland              | +                       | +     | +     | +     | +     | +     | +     | +     | I     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | 49  |
| Leukemia Mononuclear         |                         |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       |       | X     |       |       |          | 4   |
| Pars Distalis, Adenoma       |                         |       |       | X     | X     |       |       | X     | X     |       |       | X     |       | X     | X     |       | X     |       | X     | X     | X        | 29  |
| Thyroid Gland                | +                       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | 50  |
| Carcinoma                    |                         |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          | 1   |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
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| FISCHER 344 RATS FEMALE | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  | * TOTALS |
|-------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|----------|
|                         | 078         | 077  | 066  | 077  | 077  | 057  | 077  | 077  | 066  | 066  | 066  | 077  | 077  | 057  | 077  | 066  | 077  | 077  | 066  | 077  | 077  | 077  | 077  |  |          |
| 312.5 mg/l              | 0026        | 0027 | 0026 | 0022 | 0022 | 0027 | 0022 | 0029 | 0029 | 0003 | 0006 | 0001 | 0009 | 0002 | 0002 | 0002 | 0000 | 0007 | 0002 | 0008 | 0006 | 0008 | 0008 |  |          |
| ANIMAL ID               | 0032        | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 |  |          |
|                         | 67          | 8    | 9    | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    |  |          |

|                            |   |   |   |
|----------------------------|---|---|---|
| Bilateral, C-cell, Adenoma | X | X | 2 |
| C-cell, Adenoma            |   |   | 1 |
| C-cell, Carcinoma          | X |   | 2 |

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Clitoral Gland                                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenoma   | X | X |   | X |   |   |   |   |   |   |   |   |   |   | X |   | X | X |   |   |   |   | 12 |
| Carcinoma   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   | 1  |
| Sarcoma   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Ovary   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Granulosa Cell Tumor Benign                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 1  |
| Leukemia Mononuclear                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Uterus  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leiomyosarcoma                                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Polyp Stromal                                       |   |   | X | X |   |   | X |   |   |   |   | X |   |   | X | X | X |   |   |   |   |   | 13 |
| Cervix, Sarcoma, Metastatic, Uncertain Primary Site |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Endometrium, Adenoma                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

**HEMATOPOIETIC SYSTEM**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear |   |   |   | X |   | X | X | X |   |   |   | X |   |   | X | X |   |   |   |   |   |   | 12 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically



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|---------------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-----|
|                                       | 078         | 077   | 066   | 072   | 077   | 057   | 077   | 066   | 066   | 066   | 077   | 077   | 055   | 077   | 066   | 077   | 077   | 066   | 077   | 077   |          | 077   | 077 |
| ANIMAL ID                             | 00326       | 00033 | 00033 | 00033 | 00033 | 00033 | 00033 | 00033 | 00033 | 00033 | 00033 | 00033 | 00033 | 00033 | 00033 | 00033 | 00033 | 00033 | 00033 | 00033 | 00033    | 00033 |     |
| Bone                                  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | 50  |
| <b>NERVOUS SYSTEM</b>                 |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |     |
| Brain                                 | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | 50  |
| <b>RESPIRATORY SYSTEM</b>             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |     |
| Lung                                  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | 50  |
| Alveolar/Bronchiolar Adenoma          |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       |       |       | X     |          |       | 2   |
| Carcinoma, Metastatic, Thyroid Gland  |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       | 1   |
| Hemangiosarcoma, Metastatic, Skin     | X           |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       | 1   |
| Leukemia Mononuclear                  |             |       | X     | X     |       |       | X     | X     |       | X     |       |       | X     | X     |       |       |       | X     |       |       |          |       | 15  |
| Nose                                  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | 50  |
| Respiratory Epithelium, Adenoma       |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       | 1   |
| Trachea                               | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | 50  |
| <b>SPECIAL SENSES SYSTEM</b>          |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |     |
| Eye                                   | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | A     | +     | +     | +     | +     | +        | +     | 48  |
| Harderian Gland                       | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | 50  |
| Zymbal's Gland                        |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       | 2   |
| Carcinoma                             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       | 2   |
| <b>URINARY SYSTEM</b>                 |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |     |
| Kidney                                | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | 50  |

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|---------------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|-----------|--|
|                                       | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |           |  |
|                                       | 7           | 7 | 6 | 7 | 7 | 5 | 7 | 7 | 6 | 6 | 6 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 |          | 7         |  |
| ANIMAL ID                             | 2           | 2 | 6 | 2 | 2 | 7 | 2 | 2 | 7 | 8 | 9 | 2 | 2 | 2 | 0 | 7 | 2 | 2 | 6 | 6 | 2 | 2 | 2 | 2 | 2        |           |  |
|                                       | 8           | 7 | 6 | 9 | 7 | 9 | 9 | 9 | 0 | 3 | 1 | 9 | 9 | 7 | 1 | 7 | 7 | 8 | 6 | 8 | 8 | 8 | 9 | 8 | 8        |           |  |
|                                       | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        |           |  |
|                                       | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        |           |  |
|                                       | 3           | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3        |           |  |
|                                       | 2           | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4        |           |  |
|                                       | 6           | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0        |           |  |
| Leukemia Mononuclear                  |             |   |   | X |   |   |   | X | X |   | X |   |   |   |   |   |   |   | X |   |   |   |   |   |          | <b>9</b>  |  |
| Renal Tubule, Adenoma                 |             |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | <b>1</b>  |  |
| Urinary Bladder                       | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +        | <b>50</b> |  |
| Leukemia Mononuclear                  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |          | <b>1</b>  |  |
| <b>SYSTEMIC LESIONS</b>               |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |           |  |
| Multiple Organ                        | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +        | <b>50</b> |  |
| Histiocytic Sarcoma                   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | <b>1</b>  |  |
| Leukemia Mononuclear                  |             |   |   | X | X |   |   | X | X |   | X |   |   | X | X |   |   | X | X | X |   |   |   | X |          | <b>18</b> |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br>625 mg/l | DAY ON TEST      |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | ANIMAL ID             | females<br>(cont...)  |                       |                       |                       |
|-------------------------------------|------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                                     | 0<br>7<br>2<br>8 | 0<br>7<br>2<br>8      | 0<br>6<br>6<br>6      | 0<br>5<br>7<br>9      | 0<br>5<br>2<br>8      | 0<br>7<br>6<br>2      | 0<br>6<br>8<br>2      | 0<br>7<br>7<br>2      | 0<br>7<br>7<br>2      | 0<br>7<br>7<br>2      | 0<br>7<br>7<br>2      | 0<br>7<br>7<br>2      | 0<br>5<br>4<br>0      | 0<br>6<br>3<br>2      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>2      | 0<br>5<br>2<br>1      | 0<br>7<br>2<br>2      | 0<br>6<br>5<br>6      | 0<br>7<br>1<br>9      |                       |                       | 0<br>7<br>2<br>8      | 0<br>5<br>1<br>5      |                       |
|                                     | 0<br>3<br>5<br>1 | 0<br>0<br>3<br>5<br>2 | 0<br>0<br>3<br>5<br>3 | 0<br>0<br>3<br>5<br>4 | 0<br>0<br>3<br>5<br>5 | 0<br>0<br>3<br>5<br>6 | 0<br>0<br>3<br>5<br>7 | 0<br>0<br>3<br>5<br>8 | 0<br>0<br>3<br>5<br>9 | 0<br>0<br>3<br>5<br>0 | 0<br>0<br>3<br>5<br>1 | 0<br>0<br>3<br>5<br>2 | 0<br>0<br>3<br>5<br>3 | 0<br>0<br>3<br>5<br>4 | 0<br>0<br>3<br>5<br>5 | 0<br>0<br>3<br>5<br>6 | 0<br>0<br>3<br>5<br>7 | 0<br>0<br>3<br>5<br>8 | 0<br>0<br>3<br>5<br>9 | 0<br>0<br>3<br>5<br>0 | 0<br>0<br>3<br>5<br>1 | 0<br>0<br>3<br>5<br>2 | 0<br>0<br>3<br>5<br>3 | 0<br>0<br>3<br>5<br>4 | 0<br>0<br>3<br>5<br>5 |

**ALIMENTARY SYSTEM**

|                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum    | + | + | + | + | A | + | A | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | A |   |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + |   |   |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + |   |   |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |   |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |   |
| Intestine Small, Jejunum  | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + |   |   |
| Liver                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |   |
| Histiocytic Sarcoma       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leukemia Mononuclear      | X |   |   | X |   |   |   | X |   |   |   |   |   | X |   |   |   |   |   |   | X | X |   |   |   |
| Mesentery                 |   | + | + |   |   |   |   |   |   |   |   | + |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Oral Mucosa               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Squamous Cell Papilloma   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |   |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |   |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |   |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | females<br>(cont...) |      |      |      |
|-------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------|------|------|------|
|                         | 078         | 078  | 066  | 057  | 059  | 072  | 068  | 077  | 077  | 077  | 077  | 077  | 054  | 063  | 072  | 072  | 075  | 077  | 077  | 066  | 077  | 077  | 055  | 071  | 078  |                      | 051  | 075  |      |
| 625 mg/l                | 0051        | 0032 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0000 | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0000 | 0001 | 0002 | 0003 | 0004 | 0005 | 0006                 | 0007 | 0008 | 0009 |

|                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Thyroid Gland            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Carcinoma                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| C-cell, Adenoma          |   |   |   | X |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| C-cell, Carcinoma        |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Follicular Cell, Adenoma |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

|                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Adenoma                         |   |   |   |   |   |   |   |   | X | X |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   | X |
| Carcinoma                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |
| Ovary                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Granulosa-Theca Tumor Malignant |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leukemia Mononuclear            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Uterus                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Polyp Stromal                   |   |   |   |   |   |   | X |   |   |   | X | X |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |
| Vagina                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Polyp                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**HEMATOPOIETIC SYSTEM**

|             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically





TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|                         |  | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | females<br>(cont...) |
|-------------------------|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------|
| FISCHER 344 RATS FEMALE |  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                      |
| 625 mg/l                |  | 7           | 7 | 6 | 5 | 5 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 5 | 7 | 7                    |
|                         |  | 2           | 2 | 6 | 7 | 9 | 2 | 8 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 3 | 2 | 2 | 1 | 2 | 2 | 5                    |
|                         |  | 8           | 8 | 6 | 9 | 8 | 7 | 5 | 8 | 9 | 9 | 8 | 9 | 0 | 0 | 2 | 7 | 8 | 9 | 7 | 9 | 6                    |
| ANIMAL ID               |  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                    |
|                         |  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                    |
|                         |  | 3           | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3                    |
|                         |  | 5           | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7                    |
|                         |  | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1                    |

Osteosarcoma

**NERVOUS SYSTEM**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |

**RESPIRATORY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lung  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Alveolar/Bronchiolar Adenoma                            |   |   |   |   |   |   |   |   | X |   |   |   |   |   | X |   |   |   |   |   |   |   |
| Carcinoma, Metastatic, Thyroid Gland                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |
| Histiocytic Sarcoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Leukemia Mononuclear                                    | X |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   | X |
| Nose  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Trachea   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

**SPECIAL SENSES SYSTEM**

|                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Zymbal's Gland  |   |   |   |   | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**URINARY SYSTEM**

|        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P04: NEOPLASMS BY INDIVIDUAL ANIMAL**  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| DAY ON TEST                    | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                              |   |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------------|---|
|                                | 7 | 7 | 6 | 5 | 5 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 5 | 7 | 7 | 6 | 7 | 7 |                              | 5 |
| <b>FISCHER 344 RATS FEMALE</b> | 2 | 2 | 6 | 7 | 9 | 2 | 8 | 2 | 2 | 2 | 2 | 2 | 4 | 3 | 2 | 2 | 1 | 2 | 2 | 2 | 5 | 1 | 2 | 1 |                              |   |
|                                | 8 | 8 | 6 | 9 | 8 | 7 | 5 | 8 | 9 | 9 | 8 | 9 | 7 | 0 | 2 | 7 | 8 | 9 | 7 | 9 | 7 | 6 | 9 | 8 | 5                            |   |
| <b>625 mg/l</b>                | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | <b>females<br/>(cont...)</b> |   |
|                                | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                              |   |
| ANIMAL ID                      | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |                              |   |
|                                | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 |                              |   |
|                                | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 |                              | 5 |

|                      |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |
|----------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|---|
| Leukemia Mononuclear | X |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  | X |
|----------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|---|

|                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**SYSTEMIC LESIONS**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Multiple Organ       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Histiocytic Sarcoma  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Leukemia Mononuclear | X |   |   | X |   |   |   | X |   |   |   |   |   | X |   |   |   |   |   |   |   |   | X | X |  |
| Lymphoma Malignant   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
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TDMS No. 20009 - 03  
Test Type: CHRONIC  
Route: DOSED WATER  
Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
beta-Picoline  
CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
Time Report Requested: 10:09:56  
First Dose M/F: 11/18/04 / 11/19/04  
Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |       |       |       |       |  |
|-------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|--|
|                         | 0728        | 0678  | 0759  | 0778  | 0570  | 0751  | 0672  | 0764  | 0769  | 0772  | 0778  | 0778  | 0778  | 0778  | 0675  | 0729  | 0729  | 0729  | 0474  | 0729  |          | 0678  | 0778  | 0778  | 0728  |  |
| 625 mg/l                | 00376       | 00377 | 00378 | 00379 | 00000 | 00001 | 00002 | 00003 | 00004 | 00005 | 00006 | 00007 | 00008 | 00009 | 00010 | 00011 | 00012 | 00013 | 00014 | 00015 | 00016    | 00017 | 00018 | 00019 | 00020 |  |

ALIMENTARY SYSTEM

|                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum    | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Jejunum  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Liver                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic Sarcoma       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   | 1  |
| Leukemia Mononuclear      |   |   |   |   |   |   |   | X |   |   | X |   |   |   |   | X |   |   | X |   |   |   |   |   |   | 10 |
| Mesentery                 | + |   |   |   |   |   |   |   |   |   |   |   |   | + |   |   |   | + |   |   |   | + |   | + |   | 8  |
| Oral Mucosa               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Squamous Cell Papilloma   |   |   |   |   |   |   |   |   |   |   |   |   |   | + |   |   |   |   |   |   |   |   |   | X |   | 1  |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br>625 mg/l | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |       |       |       |       |  |
|-------------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|--|
|                                     | 078         | 067   | 075   | 082   | 070   | 075   | 072   | 069   | 076   | 073   | 070   | 077   | 074   | 071   | 078   | 075   | 072   | 079   | 076   | 073   |          | 070   |       |       |       |  |
| ANIMAL ID                           | 00376       | 00033 | 00077 | 00077 | 00088 | 00088 | 00012 | 00003 | 00004 | 00005 | 00006 | 00007 | 00008 | 00009 | 00010 | 00011 | 00012 | 00013 | 00014 | 00015 | 00016    | 00017 | 00018 | 00019 | 00020 |  |
| Stomach, Glandular                  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | 50    |  |
| Tongue                              |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       | 1     |  |
| Squamous Cell Papilloma             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       | 1     |  |
| <b>CARDIOVASCULAR SYSTEM</b>        |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       |       |  |
| Blood Vessel                        | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | 50    |  |
| Heart                               | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | 50    |  |
| Leukemia Mononuclear                |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       | 2     |  |
| <b>ENDOCRINE SYSTEM</b>             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       |       |  |
| Adrenal Cortex                      | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | 50    |  |
| Adenoma                             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       | 3     |  |
| Leukemia Mononuclear                |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       | 3     |  |
| Adrenal Medulla                     | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | 50    |  |
| Leukemia Mononuclear                |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       | 3     |  |
| Pheochromocytoma Malignant          |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       | 1     |  |
| Islets, Pancreatic                  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | 50    |  |
| Adenoma                             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       | 1     |  |
| Parathyroid Gland                   | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | 48    |  |
| Pituitary Gland                     | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | 50    |  |
| Pars Distalis, Adenoma              |             | X     | X     |       |       | X     | X     |       | X     | X     |       |       |       |       |       | X     |       | X     | X     | X     | X        | X     | X     | X     | 26    |  |
| Pars Nervosa, Craniopharyngioma     | X           |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       | 1     |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br>625 mg/l | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    | * TOTALS |
|-------------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|----------|
|                                     | 078         | 067   | 075   | 077   | 075   | 077   | 057   | 076   | 076   | 077   | 077   | 077   | 077   | 077   | 067   | 077   | 077   | 047   | 077   | 067   | 077   | 077   | 077   |    |          |
| ANIMAL ID                           | 00376       | 00377 | 00378 | 00379 | 00380 | 00381 | 00382 | 00383 | 00384 | 00385 | 00386 | 00387 | 00388 | 00389 | 00390 | 00391 | 00392 | 00393 | 00394 | 00395 | 00396 | 00397 | 00398 |    |          |
| Thyroid Gland                       | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50 |          |
| Carcinoma                           |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1  |          |
| C-cell, Adenoma                     |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 6  |          |
| C-cell, Carcinoma                   |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1  |          |
| Follicular Cell, Adenoma            |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1  |          |

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

|                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Clitoral Gland                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenoma                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8  |
| Carcinoma                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Ovary                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Granulosa-Theca Tumor Malignant |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Leukemia Mononuclear            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Uterus                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Polyp Stromal                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6  |
| Vagina                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Polyp                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |

**HEMATOPOIETIC SYSTEM**

|             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
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 Test Type: CHRONIC  
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 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
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 Lab: BAT

| FISCHER 344 RATS FEMALE<br>625 mg/l  | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |       |       |       |       |   |                    |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|---|--------------------|
|  | 078         | 067   | 075   | 077   | 057   | 075   | 077   | 067   | 076   | 077   | 077   | 077   | 077   | 077   | 067   | 077   | 077   | 047   | 076   | 077   |          | 077   | 077   |       |       |   |                    |
| ANIMAL ID  | 00376       | 00377 | 00378 | 00379 | 00380 | 00381 | 00382 | 00383 | 00384 | 00385 | 00386 | 00387 | 00388 | 00389 | 00390 | 00391 | 00392 | 00393 | 00394 | 00395 | 00396    | 00397 | 00398 | 00399 | 00400 |   |                    |
| Leukemia Mononuclear   |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       | X     | 7 |                    |
| Lymph Node   |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       |       | + | 2                  |
| Lymph Node, Mandibular   | M           | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M     | M        | M     | M     | M     | M     | M | 0                  |
| Lymph Node, Mesenteric<br>Leukemia Mononuclear   | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | +     | X | 50<br>2            |
| Spleen<br>Histiocytic Sarcoma<br>Leukemia Mononuclear                                  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | +     | X | 50<br>1<br>10      |
| Thymus<br>Lymphoma Malignant   | +           | +     | +     | +     | +     | +     | +     | M     | +     | M     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | +     | + | 47<br>1            |
| <b>INTEGUMENTARY SYSTEM</b>  |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       |       |   |                    |
| Mammary Gland<br>Adenoma<br>Fibroadenoma<br>Fibroadenoma, Multiple                     | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | +     | X | 50<br>1<br>17<br>6 |
| Skin<br>Keratoacanthoma<br>Subcutaneous Tissue, Lipoma<br>Subcutaneous Tissue, Sarcoma | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | +     | X | 50<br>1<br>1<br>1  |
| <b>MUSCULOSKELETAL SYSTEM</b>  |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |       |       |       |       |   |                    |
| Bone   | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | +     | +     | +     | +     | + | 50                 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
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| FISCHER 344 RATS FEMALE<br>625 mg/l                     | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS              |                       |                       |                       |   |    |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---|----|
|   | 0<br>7<br>2<br>8      | 0<br>6<br>0<br>7      | 0<br>7<br>2<br>8      | 0<br>5<br>8<br>9      | 0<br>7<br>2<br>8      | 0<br>7<br>0<br>0      | 0<br>5<br>5<br>1      | 0<br>7<br>2<br>9      | 0<br>6<br>8<br>4      | 0<br>7<br>2<br>9      | 0<br>6<br>7<br>3      | 0<br>7<br>2<br>9      | 0<br>7<br>2<br>8      | 0<br>7<br>2<br>8      | 0<br>6<br>2<br>9      | 0<br>7<br>2<br>9      | 0<br>7<br>2<br>7      | 0<br>4<br>7<br>4      | 0<br>6<br>3<br>8      | 0<br>7<br>2<br>8      |                       | 0<br>7<br>2<br>9      |                       |                       |   |    |
| ANIMAL ID   | 0<br>0<br>3<br>7<br>6 | 0<br>0<br>3<br>7<br>7 | 0<br>0<br>3<br>7<br>8 | 0<br>0<br>3<br>7<br>9 | 0<br>0<br>3<br>8<br>0 | 0<br>0<br>3<br>8<br>1 | 0<br>0<br>3<br>8<br>2 | 0<br>0<br>3<br>8<br>3 | 0<br>0<br>3<br>8<br>4 | 0<br>0<br>3<br>8<br>5 | 0<br>0<br>3<br>8<br>6 | 0<br>0<br>3<br>8<br>7 | 0<br>0<br>3<br>8<br>8 | 0<br>0<br>3<br>8<br>9 | 0<br>0<br>3<br>9<br>0 | 0<br>0<br>3<br>9<br>1 | 0<br>0<br>3<br>9<br>2 | 0<br>0<br>3<br>9<br>3 | 0<br>0<br>3<br>9<br>4 | 0<br>0<br>3<br>9<br>5 | 0<br>0<br>3<br>9<br>6 | 0<br>0<br>3<br>9<br>7 | 0<br>0<br>3<br>9<br>8 | 0<br>0<br>3<br>9<br>9 |   |    |
| Osteosarcoma  |                       |                       |                       |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   | 1  |
| <b>NERVOUS SYSTEM</b>                                   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |    |
| Brain   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50 |
| Leukemia Mononuclear                                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   | 1  |
| <b>RESPIRATORY SYSTEM</b>                               |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |    |
| Lung  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50 |
| Alveolar/Bronchiolar Adenoma                            |                       |                       |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       | X                     |                       |                       | X                     |                       |                       |                       |   | 5  |
| Carcinoma, Metastatic, Thyroid Gland                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   | 1  |
| Histiocytic Sarcoma, Metastatic, Uncertain Primary Site |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |   | 1  |
| Leukemia Mononuclear                                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |   | 4  |
| Nose  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50 |
| Trachea   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50 |
| <b>SPECIAL SENSES SYSTEM</b>                            |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |    |
| Eye   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50 |
| Harderian Gland   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50 |
| Zymbal's Gland  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   | 1  |
| <b>URINARY SYSTEM</b>                                   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |    |
| Kidney  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br>625 mg/l | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |
|-------------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
|                                     | 078         | 067   | 075   | 077   | 057   | 075   | 076   | 076   | 077   | 077   | 077   | 077   | 077   | 076   | 072   | 072   | 072   | 072   | 074   | 074   | 076   | 077   | 077   | 077   |          |
| ANIMAL ID                           | 00376       | 00377 | 00378 | 00379 | 00380 | 00381 | 00382 | 00383 | 00384 | 00385 | 00386 | 00387 | 00388 | 00389 | 00390 | 00391 | 00392 | 00393 | 00394 | 00395 | 00396 | 00397 | 00398 | 00399 |          |
| Leukemia Mononuclear                |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       | 4        |
| Urinary Bladder                     | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |
| <b>SYSTEMIC LESIONS</b>             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
| Multiple Organ                      | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50    |          |
| Histiocytic Sarcoma                 |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       | 1     |          |
| Leukemia Mononuclear                |             |       |       |       |       |       |       |       | X     |       |       |       | X     |       |       |       |       |       | X     |       |       | X     |       | 10    |          |
| Lymphoma Malignant                  |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1     |          |

\*\*\* END OF REPORT \*\*\*

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
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 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically