

**Experiment Number:** 20614 - 01  
**Test Type:** CHRONIC  
**Route:** DOSED FEED  
**Species/Strain:** RATS/HSD

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Perfluorooctanoic Acid  
**CAS Number:** 335-67-1

**Date Report Requested:** 07/25/2018  
**Time Report Requested:** 12:58:26  
**First Dose M/F:** 10/27/08 / 10/28/08  
**Lab:** BAT

Final 1\_Core Only

<b>NTP Study Number:</b>	C20614		
<b>Lock Date:</b>	01/10/2012		
<b>Cage Range:</b>	ALL		
<b>Date Range:</b>	ALL		
<b>Reasons For Removal:</b>	25021 TSAC	25020 NATD	25019 MSAC
<b>Removal Date Range:</b>	ALL		
<b>Treatment Groups:</b>	Include ALL		
<b>Study Gender:</b>	Both		
<b>TDMSE Version:</b>	3.0.2.3_002		
<b>PWG Approval Date:</b>	07/25/2018		

Note: Animals arranged according to days on test.

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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
<b>HARLAN SPRAGUE DAWLEY RATS</b> <b>FEMALE</b> <b>0/0 ppm</b>	DAY ON TEST	2	3	3	3	4	4	4	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7
	ANIMAL ID	7	1	2	8	1	3	5	3	4	4	7	8	9	2	2	3	4	4	6	6	7	7	8	9
		4	2	3	2	1	5	2	3	3	7	4	9	2	1	5	8	5	7	1	7	3	6	8	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	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	
	4	4	4	4	4	5	0	3	1	1	2	2	2	3	3	5	1	2	5	4	4	1	0	6	
	7	5	3	8	9	4	0	1	1	8	2	0	6	4	1	3	4	6	8	5	4	1	3	0	

females  
(cont...)

**ALIMENTARY SYSTEM**

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Jejunum Adenocarcinoma	+	+	+	+	+	+	+	+	+	X	+	+	+	+	+	+	+	+	+	+	+	+	+	
Liver Cholangioma, Multiple Hepatocellular Adenoma Hepatocellular Carcinoma	+	+	+	+	+	+	+	+	+	X	+	+	+	+	+	+	+	+	+	+	+	+	+	
Mesentery										+						+								
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Salivary Glands	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

\* .. 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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Species/Strain: RATS/HSD

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
HARLAN SPRAGUE DAWLEY RATS FEMALE		2	3	3	3	4	4	4	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6
		7	1	2	8	1	3	5	3	4	4	7	8	9	2	2	3	4	4	6	6	7	7
0/0 ppm		4	2	3	2	1	5	2	3	3	7	4	9	2	1	5	8	5	7	1	7	3	6
		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
		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		4	4	4	4	5	0	3	1	1	2	2	2	2	3	3	5	1	2	5	4	4	1
		7	5	3	8	9	4	0	1	8	9	0	6	4	1	3	4	6		8	5		
																						females (cont...)	

CARDIOVASCULAR SYSTEM

Blood Vessel	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma																					X		
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pheochromocytoma Benign																							
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma																							
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pars Distalis, Adenoma														X		X		X	X	X		X	X
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Bilateral, C-cell, Adenoma																						X	
C-cell, Adenoma														X									
C-cell, Adenoma, Multiple																							
C-cell, Carcinoma																							

GENERAL BODY SYSTEM

NONE

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

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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
<b>HARLAN SPRAGUE DAWLEY RATS FEMALE</b> <b>0/0 ppm</b>		2	3	3	3	4	4	4	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	
		7	1	2	8	1	3	5	3	4	4	7	8	9	2	2	3	4	4	6	6	7	7	8	9
		4	2	3	2	1	5	2	3	3	7	4	9	2	1	5	8	5	7	1	7	3	6	8	2
	ANIMAL ID	00347	00347	00347	00347	00347	00347	00347	00347	00347	00347	00347	00347	00347	00347	00347	00347	00347	00347	00347	00347	00347	00347	00347	00347

females  
(cont...)

**GENITAL SYSTEM**

Clitoral Gland Carcinoma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Ovary Granulosa Cell Tumor Benign	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Uterus Polyp Stromal Polyp Stromal, Multiple	+	+	+	+	+	+	+	+	+	+	X	+	+	+	+	+	+	+	+	+	+	+	+	

**HEMATOPOIETIC SYSTEM**

Bone Marrow Carcinoma, Metastatic, Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymph Node									+															
Lymph Node, Mandibular	M	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymph Node, Mesenteric	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

**INTEGUMENTARY SYSTEM**

Mammary Gland Adenocarcinoma Adenoma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			X																					

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HARLAN SPRAGUE DAWLEY RATS FEMALE 0/0 ppm	DAY ON TEST																								females (cont...)
	0 2 7 4	0 3 1 2	0 3 2 3	0 3 8 2	0 4 1 5	0 4 3 2	0 4 5 3	0 5 3 3	0 5 4 7	0 5 8 9	0 5 2 1	0 6 2 5	0 6 3 8	0 6 4 5	0 6 4 7	0 6 6 1	0 6 6 7	0 6 7 3	0 6 7 6	0 6 8 8	0 6 9 2	0 7 0 5			
ANIMAL ID	0 0 3 4 7	0 0 3 4 5	0 0 3 4 3	0 0 3 5 8	0 0 3 0 9	0 0 3 3 4	0 0 3 1 0	0 0 3 1 8	0 0 3 2 9	0 0 3 2 0	0 0 3 2 6	0 0 3 3 4	0 0 3 3 1	0 0 3 5 4	0 0 3 1 6	0 0 3 2 8	0 0 3 4 5	0 0 3 5 4	0 0 3 0 1	0 0 3 0 3	0 0 6 6 0	0 0 3 3 8	0 0 3 3 0		
Fibroadenoma		X				X									X	X					X	X	X		
Fibroadenoma, Multiple									X		X					X					X				
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Subcutaneous Tissue, Sarcoma												X													
<b>MUSCULOSKELETAL SYSTEM</b>																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Femur, Osteosarcoma				X																					
<b>NERVOUS SYSTEM</b>																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Spinal Cord																									
Astrocytoma Malignant																									
<b>RESPIRATORY SYSTEM</b>																									
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Adenocarcinoma, Metastatic, Mammary Gland			X																						
Astrocytoma Malignant, Metastatic, Spinal Cord											X														
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Glands, Carcinoma	X																								
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
<b>SPECIAL SENSES SYSTEM</b>																									
Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		

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DAY ON TEST	ANIMAL ID																								females (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																	
<b>HARLAN SPRAGUE DAWLEY RATS FEMALE</b>	2	3	3	3	4	4	4	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	7																		
<b>0/0 ppm</b>	7	1	2	8	1	3	5	3	4	4	7	8	9	2	2	3	4	4	6	6	7	7	8	9	0																		
	4	2	3	2	1	5	2	3	3	7	4	9	2	1	5	8	5	7	1	7	3	6	8	2	5																		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																		
	0	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																		
	4	4	4	4	5	0	3	1	1	2	2	2	2	3	3	5	1	2	5	4	5	0	6	3	4																		
	7	5	3	8	9	4	0	1	8	9	0	6	4	1	3	4	6	8	5	4	1	3	0	8	0																		
Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+																		
<b>URINARY SYSTEM</b>																																											
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+																		
Adenocarcinoma, Metastatic, Mammary Gland																																											
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+																		
<b>SYSTEMIC LESIONS</b>																																											
Multiple Organ	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+																		
Leukemia Mononuclear																					X																						
Lymphoma Malignant																																											

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HARLAN SPRAGUE DAWLEY RATS FEMALE 0/0 ppm	DAY ON TEST																								* TOTALS
	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	
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	
	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	
	25	44	10	15	21	23	36	37	56	75	76	77	78	93	101	107	109	133	137	142	145	150	152	158	

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Adenocarcinoma																								1
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Cholangioma, Multiple																								1
Hepatocellular Adenoma												X									X			2
Hepatocellular Carcinoma						X																		1
Mesentery																								2
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50

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DAY ON TEST	HARLAN SPRAGUE DAWLEY RATS FEMALE																				ANIMAL ID	* TOTALS	
	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	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	0	
1	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0	
2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	
	2	1	1	1	2	3	3	3	5	5	0	2	3	4	5	0	1	1	2	4	5	5	
	5	4	0	5	1	2	3	6	7	6	7	5	9	3	1	7	9	3	2	2	0	8	

**CARDIOVASCULAR SYSTEM**

Blood Vessel	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Adenoma										X														2
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Pheochromocytoma Benign							X																	1
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Adenoma			X																					1
Parathyroid Gland	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	47
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Pars Distalis, Adenoma	X	X	X		X			X	X			X	X		X	X		X	X			X		22
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Bilateral, C-cell, Adenoma							X																	2
C-cell, Adenoma				X				X							X			X						6
C-cell, Adenoma, Multiple						X																		1
C-cell, Carcinoma								X																1

**GENERAL BODY SYSTEM**

NONE

\* .. 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



Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

DAY ON TEST	HARLAN SPRAGUE DAWLEY RATS FEMALE																								* 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	
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
1	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
2	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	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	
	2	1	1	1	1	2	2	3	3	5	5	0	2	3	4	5	0	1	1	1	2	4	5	5	
	5	4	0	5	1	3	6	7	6	7	6	7	5	9	3	1	7	9	3	7	2	2	5	8	

**GENITAL SYSTEM**

Clitoral Gland Carcinoma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50 1
Ovary Granulosa Cell Tumor Benign	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50 1
Uterus Polyp Stromal	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50 5
Uterus Polyp Stromal, Multiple		X	X							X											X				1

**HEMATOPOIETIC SYSTEM**

Bone Marrow Carcinoma, Metastatic, Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50 1
Lymph Node																									1
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	48
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	49

**INTEGUMENTARY SYSTEM**

Mammary Gland Adenocarcinoma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50 3
Mammary Gland Adenoma				X					X													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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 0/0 ppm	DAY ON TEST																								* TOTALS
	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07		
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		
Fibroadenoma					X		X			X		X											X	12	
Fibroadenoma, Multiple													X	X	X						X		X	9	
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Subcutaneous Tissue, Sarcoma																								1	
<b>MUSCULOSKELETAL SYSTEM</b>																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Femur, Osteosarcoma																								1	
<b>NERVOUS SYSTEM</b>																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Spinal Cord																								1	
Astrocytoma Malignant																								1	
<b>RESPIRATORY SYSTEM</b>																									
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Adenocarcinoma, Metastatic, Mammary Gland																								1	
Astrocytoma Malignant, Metastatic, Spinal Cord																								1	
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Glands, Carcinoma																								1	
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
<b>SPECIAL SENSES SYSTEM</b>																									
Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 0/0 ppm	DAY ON TEST		ANIMAL ID																				* TOTALS	
	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7		0
	1	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	2	2	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	6	6	6	6	6	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	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	
	2	1	1	1	2	2	3	3	5	5	0	2	3	4	5	0	0	1	1	2	4	5	5	
	5	4	0	5	1	3	6	7	6	7	6	7	5	9	3	1	7	9	3	7	2	0	2	
Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
<b>URINARY SYSTEM</b>																								
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Adenocarcinoma, Metastatic, Mammary Gland																					X		1	
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
<b>SYSTEMIC LESIONS</b>																								
Multiple Organ	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Leukemia Mononuclear																							1	
Lymphoma 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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

<b>HARLAN SPRAGUE DAWLEY RATS</b> <b>FEMALE</b> <b>0/300 ppm</b>	DAY ON TEST	0250	0470	0470	0484	0533	0574	0574	0589	0668	0668	0669	0667	0668	0669	0669	0669	0677	0677	0677	0677	0677	0677	0677	0677
	ANIMAL ID	00390	00334	00333	00337	00340	00333	00343	00334	00333	00343	00333	00333	00333	00333	00344	00344	00334	00344	00344	00344	00333	00333	00333	00333
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

females (cont...)

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cholangiocarcinoma																								
Hepatocellular Carcinoma																								
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

CARDIOVASCULAR SYSTEM

Blood Vessel	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
--------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

\* .. 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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 0/300 ppm	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	2	4	4	4	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7
		5	7	7	8	3	7	7	8	3	4	5	7	8	9	9	9	9	0	1	3	3	4	4	4	4	4	4
		0	0	0	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	4	3	3	4	3	3	4	3	3	3	3	3	4	4	3	4	4	4	3	3	3	3	3
		9	7	8	7	0	7	8	0	9	6	1	8	9	9	6	7	1	1	7	1	1	1	7	8	8	8	8
		0	4	3	9	2	7	4	1	5	3	4	0	8	6	2	8	2	8	3	9	3	6	7	1	8	8	8
																												<b>females (cont...)</b>

Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

**ENDOCRINE SYSTEM**

Adrenal Cortex Adenoma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Adrenal Medulla Pheochromocytoma Benign	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	X	+	+	+	+	+			
Islets, Pancreatic Adenoma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+		
Pituitary Gland Pars Distalis, Adenoma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Thyroid Gland Bilateral, C-cell, Adenoma C-cell, Adenoma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
																							X					X	X	X

**GENERAL BODY SYSTEM**

NONE	-
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**GENITAL SYSTEM**

Clitoral Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Ovary Granulosa Cell Tumor 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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 0/300 ppm	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	ANIMAL ID	females (cont...)		
		2	4	4	4	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7			7	7
		5	7	7	8	3	7	7	8	3	4	5	7	8	9	9	9	9	9	9	0	1	3	3	4	4	4		
		0	0	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	4	3	3	4	3	3	4	3	3	3	3	3	4	4	3	4	4	4	4	3	3	3		
		9	7	8	7	0	7	8	0	9	6	1	8	9	9	6	7	1	1	7	1	1	1	1	7	8	8		
		0	4	3	9	2	7	4	1	5	3	4	0	6	2	8	2	8	3	9	3	6	2	7	8	8			

Oviduct	+																									
Uterus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Polyp Stromal																										
Endometrium, Adenocarcinoma																										
Endometrium, Adenoma																										

HEMATOPOIETIC SYSTEM

Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymph Node	+																									
Axillary, Adenocarcinoma, Metastatic, Mammary Gland																										
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	M	+	+	+

INTEGUMENTARY SYSTEM

Mammary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenocarcinoma																										
Adenocarcinoma, Multiple																										
Adenoma																										
Fibroadenoma		X	X	X	X	X			X						X			X	X						X	
Fibroadenoma, Multiple							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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

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	females (cont...)
HARLAN SPRAGUE DAWLEY RATS FEMALE		5	7	7	8	3	7	7	8	3	4	5	7	8	9	9	9	9	9	0	1	3	3	4	4	4	4	
0/300 ppm		0	0	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	4	3	3	4	3	3	4	3	3	3	3	3	4	4	3	4	4	4	3	3	3	3	

Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Subcutaneous Tissue, Fibroma	X																										

**MUSCULOSKELETAL SYSTEM**

Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Skeletal Muscle																											
Hemangiosarcoma																											

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

**SPECIAL SENSES SYSTEM**

Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

**URINARY SYSTEM**

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Renal Tubule, 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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

<b>HARLAN SPRAGUE DAWLEY RATS FEMALE 0/300 ppm</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	
		2	4	4	4	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7
		5	7	7	8	3	7	7	8	3	4	5	7	8	9	9	9	9	9	0	1	3	3	4	4	4	4
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
	3	3	3	3	4	3	3	4	3	3	4	3	3	3	3	3	4	4	3	4	4	4	4	3	3	3	3
	9	7	8	7	0	7	8	0	9	6	1	8	9	9	6	7	1	1	7	1	1	1	7	8	8	8	8
	0	4	3	9	2	7	4	1	5	3	4	0	6	2	2	8	2	8	3	9	3	6	2	1	8	8	8

females  
(cont...)

Urinary Bladder

+ +

**SYSTEMIC LESIONS**

Multiple Organ  
Lymphoma 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



Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>0/300 ppm | 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 | * TOTALS |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
|   | ANIMAL ID   | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |
|   |             | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |          |
|   |             | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
|   |             | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 |          |
|   |             | 9 | 9 | 0 | 0 | 1 | 6 | 6 | 7 | 8 | 8 | 9 | 9 | 1 | 1 | 2 | 6 | 7 | 8 | 9 | 9 | 0 | 0 | 0 | 1 |          |
|   |             | 1 | 4 | 3 | 7 | 0 | 4 | 8 | 5 | 6 | 6 | 9 | 3 | 8 | 1 | 5 | 0 | 9 | 7 | 7 | 9 | 9 | 0 | 8 | 7 |          |

ALIMENTARY SYSTEM

|                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 50 |
| Intestine Large, Cecum    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 49 |    |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 49 |    |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 49 |    |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |    |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 49 |    |
| Intestine Small, Jejunum  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 49 |    |
| Liver                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |    |
| Cholangiocarcinoma        |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |    |
| Hepatocellular Carcinoma  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   | 1  |    |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |    |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |    |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |    |
| Stomach, Glandular        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |    |

CARDIOVASCULAR SYSTEM

|              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 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

Experiment Number: 20614 - 01  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/HSD

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Perfluorooctanoic Acid  
 CAS Number: 335-67-1

Date Report Requested: 07/25/2018  
 Time Report Requested: 12:58:26  
 First Dose M/F: 10/27/08 / 10/28/08  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>0/300 ppm | 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  |          |
|   | 7           | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 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  |          |
|   | 3           | 3 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4  |          |
|   | 9           | 9 | 0 | 0 | 1 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 3 | 8 | 1 | 5 | 0 | 9 | 7 | 8 | 9 | 9 | 0 | 0 | 1  |          |
|   | 1           | 4 | 3 | 7 | 0 | 4 | 8 | 5 | 6 | 6 | 8 | 9 | 3 | 8 | 1 | 5 | 0 | 9 | 7 | 8 | 9 | 9 | 0 | 0 | 8  |          |
| Heart   | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |          |
| <b>ENDOCRINE SYSTEM</b>                           |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |          |
| Adrenal Cortex                                    | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |          |
| Adenoma   |             |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   | 2  |          |
| Adrenal Medulla                                   | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |          |
| Pheochromocytoma Benign                           |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   | X |   |   |   |   |   | 3  |          |
| Islets, Pancreatic                                | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |          |
| Adenoma   |             |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   | 1  |          |
| Parathyroid Gland                                 | +           | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | 47 |          |
| Pituitary Gland                                   | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |          |
| Pars Distalis, Adenoma                            | X           |   |   |   | X |   |   |   |   |   |   | X |   |   |   |   |   |   | X | X |   |   |   |   | 11 |          |
| Thyroid Gland                                     | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |          |
| Bilateral, C-cell, Adenoma                        |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   | 1  |          |
| C-cell, Adenoma                                   |             |   |   |   |   |   | X |   |   |   |   | X |   |   |   |   |   | X | X |   | X |   |   | X | 10 |          |
| <b>GENERAL BODY SYSTEM</b>                        |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |          |
| NONE  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |          |
| <b>GENITAL SYSTEM</b>                             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |          |
| Clitoral Gland                                    | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 49 |          |
| Ovary   | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 49 |          |
| Granulosa Cell Tumor 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

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>0/300 ppm | 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 |          |
|   | 7           | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |
| ANIMAL ID   | 4           | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |          |
|   | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
|   | 0           | 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 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 |          |
|   | 9           | 9 | 0 | 0 | 1 | 6 | 6 | 7 | 8 | 8 | 8 | 9 | 9 | 1 | 1 | 2 | 6 | 7 | 8 | 9 | 9 | 0 | 0 | 0 | 1 |          |
|   | 1           | 4 | 3 | 7 | 0 | 4 | 8 | 5 | 6 | 6 | 8 | 9 | 3 | 8 | 1 | 5 | 0 | 9 | 7 | 7 | 9 | 9 | 0 | 4 | 8 |          |

|                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Oviduct                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Uterus                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M |   |
| Polyp Stromal               | X |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   | X |   |   |   |   |   |
| Endometrium, Adenocarcinoma |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Endometrium, Adenoma        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |

**HEMATOPOIETIC SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Lymph Node  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3 |
| Axillary, Adenocarcinoma, Metastatic, Mammary Gland |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Lymph Node, Mandibular                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Lymph Node, Mesenteric                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M |   |
| Spleen  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Thymus  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |

**INTEGUMENTARY SYSTEM**

|                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Adenocarcinoma           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3 |
| Adenocarcinoma, Multiple |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Adenoma                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |
| Fibroadenoma             |   |   |   |   | X |   | X |   |   |   |   |   |   |   | X |   | X |   |   |   |   |   |   |   |   |   |
| Fibroadenoma, Multiple   |   |   |   | X |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |

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

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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>0/300 ppm | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS |  |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|--|
|   | 0<br>7<br>4<br>4      | 0<br>7<br>4<br>4      | 0<br>7<br>4<br>4      | 0<br>7<br>4<br>4      | 0<br>7<br>4<br>4      | 0<br>7<br>4<br>5      | 0<br>7<br>4<br>5      | 0<br>7<br>4<br>5      | 0<br>7<br>4<br>5      | 0<br>7<br>4<br>5      | 0<br>7<br>4<br>5      | 0<br>7<br>4<br>5      | 0<br>7<br>4<br>5      | 0<br>7<br>4<br>5      | 0<br>7<br>4<br>5      | 0<br>7<br>4<br>6      | 0<br>7<br>4<br>6      | 0<br>7<br>4<br>6      | 0<br>7<br>4<br>6      | 0<br>7<br>4<br>6      | 0<br>7<br>4<br>6      | 0<br>7<br>4<br>6      | 0<br>7<br>4<br>6      | 0<br>7<br>4<br>6      |          |  |
| ANIMAL ID   | 0<br>0<br>3<br>9<br>1 | 0<br>0<br>3<br>9<br>4 | 0<br>0<br>4<br>0<br>3 | 0<br>0<br>4<br>0<br>7 | 0<br>0<br>4<br>1<br>0 | 0<br>0<br>3<br>6<br>4 | 0<br>0<br>3<br>6<br>8 | 0<br>0<br>3<br>7<br>5 | 0<br>0<br>3<br>8<br>6 | 0<br>0<br>3<br>9<br>9 | 0<br>0<br>3<br>9<br>3 | 0<br>0<br>3<br>9<br>8 | 0<br>0<br>4<br>1<br>1 | 0<br>0<br>4<br>1<br>5 | 0<br>0<br>4<br>2<br>0 | 0<br>0<br>3<br>6<br>9 | 0<br>0<br>3<br>7<br>0 | 0<br>0<br>3<br>8<br>7 | 0<br>0<br>3<br>9<br>9 | 0<br>0<br>4<br>0<br>0 | 0<br>0<br>4<br>0<br>4 | 0<br>0<br>4<br>0<br>8 | 0<br>0<br>4<br>0<br>7 | 0<br>0<br>4<br>0<br>6 |          |  |
| Skin<br>Subcutaneous Tissue, Fibroma              | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50<br>1  |  |
| <b>MUSCULOSKELETAL SYSTEM</b>                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |  |
| Bone  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |  |
| Skeletal Muscle                                   | +                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |  |
| Hemangiosarcoma                                   | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |  |
| <b>NERVOUS SYSTEM</b>                             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |  |
| Brain   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |  |
| <b>RESPIRATORY SYSTEM</b>                         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |  |
| Lung  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |  |
| Nose  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |  |
| Trachea   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |  |
| <b>SPECIAL SENSES SYSTEM</b>                      |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |  |
| Eye   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |  |
| Harderian Gland                                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |  |
| <b>URINARY SYSTEM</b>                             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |  |
| Kidney<br>Renal Tubule, Adenoma                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50<br>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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>0/300 ppm | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |      |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|------|
|   | 0744        | 0744  | 0744  | 0744  | 0744  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  |          | 0745 |
| ANIMAL ID   | 00391       | 00334 | 00340 | 00344 | 00344 | 00363 | 00363 | 00373 | 00373 | 00383 | 00383 | 00393 | 00393 | 00403 | 00403 | 00413 | 00413 | 00423 | 00423 | 00433 | 00433 | 00443 | 00443 | 00453 | 00453    |      |
| Urinary Bladder                                   | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | M        | 49   |
| <b>SYSTEMIC LESIONS</b>                           |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |      |
| Multiple Organ Lymphoma Malignant                 | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +        | 1    |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
+ .. Tissue examined microscopically  
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|   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>150/300 ppm | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|   | ANIMAL ID   | 2 | 3 | 3 | 3 | 3 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
|   |             | 9 | 2 | 4 | 5 | 6 | 3 | 3 | 6 | 8 | 2 | 3 | 3 | 9 | 1 | 1 | 1 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |

females  
(cont...)

ALIMENTARY SYSTEM

|                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |   |
| Intestine Large, Cecum       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Large, Colon       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Large, Rectum      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Small, Duodenum    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Small, Ileum       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Small, Jejunum     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Liver                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Carcinoma, Metastatic, Ovary |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Cholangioma                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pancreas                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Salivary Glands              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Forestomach         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Glandular           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

CARDIOVASCULAR SYSTEM

|              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

\* .. 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  
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Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>150/300 ppm | DAY ON TEST      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | ANIMAL ID | females<br>(cont...) |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|----------------------|
|   | 0<br>2<br>9<br>5 | 0<br>3<br>2<br>2 | 0<br>3<br>4<br>9 | 0<br>3<br>5<br>1 | 0<br>3<br>6<br>8 | 0<br>5<br>3<br>3 | 0<br>5<br>3<br>3 | 0<br>5<br>6<br>4 | 0<br>5<br>8<br>9 | 0<br>6<br>2<br>2 | 0<br>6<br>3<br>4 | 0<br>6<br>3<br>8 | 0<br>6<br>9<br>5 | 0<br>7<br>1<br>4 | 0<br>7<br>1<br>8 | 0<br>7<br>1<br>8 | 0<br>7<br>3<br>9 | 0<br>7<br>4<br>2 | 0<br>7<br>4<br>4 | 0<br>7<br>4<br>4 | 0<br>7<br>4<br>4 | 0<br>7<br>4<br>4 | 0<br>7<br>4<br>4 | 0<br>7<br>4<br>4 |                  |           |                      |
|   | 0<br>4<br>3<br>2 | 0<br>0<br>4<br>1 | 0<br>0<br>4<br>4 | 0<br>0<br>4<br>9 | 0<br>0<br>4<br>3 | 0<br>0<br>4<br>5 | 0<br>0<br>4<br>7 | 0<br>0<br>4<br>0 | 0<br>0<br>5<br>2 | 0<br>0<br>4<br>6 | 0<br>0<br>4<br>7 | 0<br>0<br>4<br>0 | 0<br>0<br>4<br>2 | 0<br>0<br>4<br>1 | 0<br>0<br>4<br>8 | 0<br>0<br>4<br>3 | 0<br>0<br>5<br>2 | 0<br>0<br>4<br>8 | 0<br>0<br>4<br>4 | 0<br>0<br>3<br>4 | 0<br>0<br>4<br>5 | 0<br>0<br>4<br>0 | 0<br>0<br>4<br>5 | 0<br>0<br>5<br>5 | 0<br>0<br>6<br>0 |           |                      |

Heart +

ENDOCRINE SYSTEM

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex<br>Adenoma                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adrenal Medulla<br>Pheochromocytoma Benign | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | + | + | + | + | + |
| Islets, Pancreatic<br>Adenoma              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid Gland                          | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | M |   |
| Pituitary Gland<br>Pars Distalis, Adenoma  | + | + | + | + | + | + | + | + | X | + | + | X | + | X | + | + | + | + | + | X | + | X | + | + | + | + |
| Thyroid Gland<br>C-cell, Adenoma           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | + | + | + | X | X | + | + |
| C-cell, Adenoma, Multiple                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |
| C-cell, Carcinoma                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ovary          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

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+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
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| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS FEMALE |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | ANIMAL ID | females (cont...) |
|-------------|-----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|-------------------|
|             | 0295                              | 0322 | 0339 | 0345 | 0351 | 0353 | 0355 | 0355 | 0355 | 0355 | 0356 | 0356 | 0356 | 0356 | 0357 | 0357 | 0357 | 0357 | 0357 | 0357 | 0357 | 0357 | 0357 | 0357 |           |                   |
| 150/300 ppm | 0                                 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 00432     |                   |

Carcinoma

X

Uterus

+ +

Polyp Stromal

X

Bilateral, Endometrium, Adenocarcinoma

Endometrium, Adenocarcinoma

X

**HEMATOPOIETIC SYSTEM**

Bone Marrow

+ +

Lymph Node, Mandibular

+ +

Lymph Node, Mesenteric

Carcinoma, Metastatic, Ovary

+  
X

Spleen

Carcinoma, Metastatic, Ovary

+  
X

Thymus

Adenocarcinoma, Metastatic, Mammary Gland

+  
X

**INTEGUMENTARY SYSTEM**

Mammary Gland

Adenocarcinoma

Adenoma

Fibroadenoma

Fibroadenoma, Multiple

+  
X  
X X

Skin

Subcutaneous Tissue, Fibroma

+  
X

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
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|   |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |
|---|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>150/300 ppm | DAY ON TEST | 0<br>2<br>9<br>5      | 0<br>3<br>2<br>2      | 0<br>3<br>4<br>9      | 0<br>3<br>5<br>1      | 0<br>3<br>6<br>8      | 0<br>3<br>3<br>3      | 0<br>5<br>5<br>4      | 0<br>5<br>6<br>9      | 0<br>6<br>2<br>2      | 0<br>6<br>3<br>4      | 0<br>6<br>3<br>8      | 0<br>6<br>9<br>5      | 0<br>7<br>1<br>4      | 0<br>7<br>1<br>8      | 0<br>7<br>1<br>8      | 0<br>7<br>3<br>9      | 0<br>7<br>4<br>2      | 0<br>7<br>4<br>4      | 0<br>7<br>4<br>4      | 0<br>7<br>4<br>4      | 0<br>7<br>4<br>4      | 0<br>7<br>4<br>4      | 0<br>7<br>4<br>4      | 0<br>7<br>4<br>4      | females<br>(cont...) |
|   | ANIMAL ID   | 0<br>0<br>4<br>3<br>2 | 0<br>0<br>4<br>4<br>1 | 0<br>0<br>4<br>7<br>4 | 0<br>0<br>4<br>7<br>9 | 0<br>0<br>4<br>2<br>3 | 0<br>0<br>4<br>4<br>5 | 0<br>0<br>4<br>7<br>2 | 0<br>0<br>4<br>5<br>7 | 0<br>0<br>4<br>2<br>6 | 0<br>0<br>4<br>2<br>6 | 0<br>0<br>4<br>3<br>7 | 0<br>0<br>4<br>7<br>2 | 0<br>0<br>4<br>7<br>6 | 0<br>0<br>4<br>6<br>1 | 0<br>0<br>4<br>2<br>2 | 0<br>0<br>4<br>4<br>8 | 0<br>0<br>4<br>4<br>3 | 0<br>0<br>4<br>5<br>2 | 0<br>0<br>4<br>3<br>4 | 0<br>0<br>4<br>4<br>7 | 0<br>0<br>4<br>4<br>3 | 0<br>0<br>4<br>4<br>3 | 0<br>0<br>4<br>5<br>0 | 0<br>0<br>4<br>5<br>5 |                      |

MUSCULOSKELETAL SYSTEM

|                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Skeletal Muscle              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + |
| Carcinoma, Metastatic, Ovary |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |

NERVOUS SYSTEM

|       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

RESPIRATORY SYSTEM

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lung                                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, Metastatic, Mammary Gland |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Adenocarcinoma, Metastatic, Uterus        |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Carcinoma, Metastatic, Ovary              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |
| Nose                                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Trachea                                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

SPECIAL SENSES SYSTEM

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

URINARY SYSTEM

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney                                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, Metastatic, Mammary Gland |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Carcinoma, Metastatic, Ovary              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

|   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------|
| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>150/300 ppm | 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 | females<br>(cont...) |
|   |             | 2 | 3 | 3 | 3 | 3 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |                      |
|   |             | 9 | 2 | 4 | 5 | 6 | 3 | 3 | 6 | 8 | 2 | 3 | 3 | 9 | 1 | 1 | 1 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |                      |
|   | 5           | 2 | 9 | 1 | 8 | 3 | 3 | 4 | 9 | 2 | 4 | 8 | 5 | 4 | 8 | 8 | 9 | 2 | 4 | 4 | 4 | 4 | 4 | 4 |   |                      |
|   | 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 |   |                      |
|   |             | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |   |                      |
|   |             | 3 | 2 | 7 | 5 | 7 | 2 | 4 | 7 | 5 | 6 | 2 | 3 | 7 | 6 | 2 | 4 | 3 | 5 | 2 | 3 | 4 | 5 | 6 |   |                      |
|   |             | 2 | 1 | 4 | 9 | 3 | 5 | 7 | 0 | 2 | 7 | 6 | 0 | 2 | 1 | 2 | 8 | 8 | 8 | 4 | 4 | 7 | 3 | 0 |   |                      |

Lipoma

Urinary Bladder

SYSTEMIC LESIONS

Multiple Organ

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

\* .. 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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>150/300 ppm | 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 | * TOTALS |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
|   | ANIMAL ID   | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |
|   |             | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |          |
|   |             | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
|   |             | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |          |
|   |             | 6 | 6 | 7 | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 6 | 7 | 7 | 2 | 2 | 3 | 4 | 5 | 6 | 6 | 7 | 7 | 8 |          |
|   |             | 2 | 9 | 8 | 1 | 9 | 1 | 5 | 9 | 3 | 7 | 6 | 5 | 9 | 3 | 7 | 3 | 0 | 4 | 3 | 4 | 5 | 7 | 0 |          |

ALIMENTARY SYSTEM

|                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Colon       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Rectum      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Duodenum    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Ileum       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Jejunum     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Liver                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma, Metastatic, Ovary |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Cholangioma                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   | 1  |
| Pancreas                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Salivary Glands              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Forestomach         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Glandular           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

CARDIOVASCULAR SYSTEM

|              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 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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**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>150/300 ppm | DAY ON TEST |   | ANIMAL ID |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * 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         | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7        |   |
|   | 4           | 4 | 4         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4        |   |
|   | 4           | 4 | 4         | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        |   |
|   | 4           | 4 | 4         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4        |   |
|   | 6           | 6 | 7         | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 6 | 7 | 7 | 7 | 2 | 2 | 3 | 4 | 5 | 6 | 6 | 7 | 8        |   |
|   | 2           | 9 | 8         | 1 | 9 | 1 | 5 | 9 | 3 | 7 | 6 | 5 | 6 | 9 | 3 | 7 | 3 | 0 | 4 | 3 | 4 | 5 | 0        |   |

Heart + 50

**ENDOCRINE SYSTEM**

Adrenal Cortex + 50  
 Adenoma X 1

Adrenal Medulla + 50  
 Pheochromocytoma Benign X 4

Islets, Pancreatic + 50  
 Adenoma X 1

Parathyroid Gland + M M + + + + M + M + + + + + + M + + + + + + + 42

Pituitary Gland + 50  
 Pars Distalis, Adenoma X X X X X X 13

Thyroid Gland + 50  
 C-cell, Adenoma X X X X 7  
 C-cell, Adenoma, Multiple 1  
 C-cell, Carcinoma 1

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

Clitoral Gland + 50

Ovary + 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

Experiment Number: 20614 - 01

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CAS Number: 335-67-1

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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>150/300 ppm | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
|   | 0744        | 0744  | 0744  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  | 0745  |          |
| ANIMAL ID   | 00462       | 00469 | 00468 | 00461 | 00463 | 00464 | 00465 | 00466 | 00467 | 00468 | 00469 | 00470 | 00471 | 00472 | 00473 | 00474 | 00475 | 00476 | 00477 | 00478 | 00479 | 00480 | 00481 | 00482 | 00483    |
| Carcinoma   |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1        |
| Uterus  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |
| Polyp Stromal                                       |             |       |       | X     |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       |       | X     |       |       |       | 4        |
| Bilateral, Endometrium, Adenocarcinoma              |             |       |       |       |       |       |       |       |       |       |       | X     |       |       |       |       |       |       |       |       |       |       |       |       | 1        |
| Endometrium, Adenocarcinoma                         |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1        |

**HEMATOPOIETIC SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node, Mandibular                    | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Lymph Node, Mesenteric                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma, Metastatic, Ovary              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Spleen                                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma, Metastatic, Ovary              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Thymus                                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenocarcinoma, Metastatic, Mammary Gland |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

**INTEGUMENTARY SYSTEM**

|                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Mammary Gland                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenocarcinoma               |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5  |
| Adenoma                      |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Fibroadenoma                 |   |   | X |   |   |   |   | X |   |   |   | X | X | X |   |   |   |   | X | X |   | X |   |   | 19 |
| Fibroadenoma, Multiple       |   | X |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   | X |   |   | X |   |   |   | 8  |
| Skin                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Subcutaneous Tissue, Fibroma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS FEMALE |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * 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 |          |
| 7           | 7                                 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 50       |
| 4           | 4                                 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 50       |
| 4           | 4                                 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 50       |
| 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 |          |
|             | 4                                 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |          |
|             | 6                                 | 6 | 7 | 3 | 3 | 4 | 4 | 4 | 5 | 6 | 7 | 7 | 7 | 2 | 2 | 3 | 4 | 5 | 6 | 6 | 7 | 7 | 8 | 8 |          |
|             | 2                                 | 9 | 8 | 1 | 9 | 1 | 5 | 9 | 3 | 7 | 6 | 5 | 9 | 3 | 7 | 3 | 0 | 4 | 3 | 4 | 5 | 7 | 0 | 0 |          |

MUSCULOSKELETAL SYSTEM

|                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Skeletal Muscle              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Carcinoma, Metastatic, Ovary |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

NERVOUS SYSTEM

|       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

RESPIRATORY SYSTEM

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Lung                                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenocarcinoma, Metastatic, Mammary Gland |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Adenocarcinoma, Metastatic, Uterus        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Carcinoma, Metastatic, Ovary              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

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

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

SPECIAL SENSES SYSTEM

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

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

URINARY SYSTEM

|        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

|   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| Adenocarcinoma, Metastatic, Mammary Gland |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|

|                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
|------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| Carcinoma, Metastatic, Ovary |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>150/300 ppm | 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 | * TOTALS |  |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|--|
|   | ANIMAL ID   | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |  |
|   |             | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |          |  |
|   |             | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |  |
|   |             | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |          |  |
|   |             | 6 | 6 | 7 | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 6 | 7 | 7 | 7 | 2 | 2 | 3 | 4 | 5 | 6 | 6 | 7 | 7 | 8 |          |  |
|   |             | 2 | 9 | 8 | 1 | 9 | 1 | 5 | 9 | 3 | 7 | 6 | 5 | 6 | 9 | 3 | 7 | 3 | 4 | 0 | 4 | 3 | 4 | 5 | 0 |          |  |
| Lipoma  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X        |  |
| Urinary Bladder                                     |             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50       |  |
| <b>SYSTEMIC LESIONS</b>                             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |  |
| Multiple Organ                                      |             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 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

|  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                      |      |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------|------|
| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>0/1000 ppm | DAY ON TEST | 0066 | 0225 | 0225 | 0228 | 0339 | 0339 | 0443 | 0443 | 0558 | 0558 | 0558 | 0558 | 0662 | 0662 | 0666 | 0666 | 0666 | 0669 | 0669 | 0771 | 0771 | 0772 | 0772 | 0773 | females<br>(cont...) |      |
|  | ANIMAL ID   | 0048 | 0032 | 0042 | 0054 | 0054 | 0055 | 0045 | 0054 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0045 | 0054 | 0054 | 0054 | 0055 | 0055 | 0055 | 0054 | 0055 |                      | 0054 |
|  |             | 84   | 22   | 92   | 20   | 88   | 17   | 07   | 97   | 10   | 86   | 77   | 33   | 44   | 55   | 00   | 66   | 00   | 99   | 22   | 88   | 00   | 22   | 99   | 18   |                      | 18   |

### ALIMENTARY SYSTEM

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus  | M | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum   | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon   | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum  | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum                                      | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum   | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum<br>Adenocarcinoma, Metastatic, Uterus | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X |
| Liver<br>Adenocarcinoma, Metastatic, Uterus                    | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X |
| Carcinoma, Metastatic, Stomach, Glandular                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Hepatocellular Adenoma   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Hepatocellular Carcinoma                                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |
| Mesentery  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + |
| Pancreas<br>Adenocarcinoma, Metastatic, Uterus                 | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X |
| Acinus, Adenoma  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Acinus, Carcinoma  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |
| Salivary Glands  | M | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + |   |

\* .. 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



Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

| DAY ON TEST                              | 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 | 0 | 0 |                      |   |
| <b>HARLAN SPRAGUE DAWLEY RATS FEMALE</b> | 6 | 2 | 2 | 5 | 8 | 9 | 5 | 7 | 3 | 8 | 0 | 2 | 4 | 7 | 2 | 2 | 5 | 6 | 6 | 9 | 9 | 1 | 1 | 2 | 2                    | 3 |
| <b>0/1000 ppm</b>                        | 6 | 5 | 3 | 4 | 8 | 1 | 9 | 8 | 4 | 5 | 2 | 0 | 5 | 4 | 4 | 2 | 9 | 9 | 5 | 5 | 4 | 8 | 1 | 2 | 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                    |   |
|  | 4 | 5 | 4 | 5 | 4 | 5 | 5 | 4 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 5 | 5 | 4 | 5 | 5                    |   |
|  | 8 | 3 | 9 | 2 | 8 | 1 | 0 | 9 | 1 | 8 | 2 | 3 | 2 | 2 | 4 | 0 | 9 | 2 | 8 | 0 | 2 | 1 | 6 | 9 | 1                    |   |
|  | 4 | 2 | 2 | 0 | 8 | 7 | 7 | 7 | 0 | 6 | 7 | 3 | 4 | 5 | 0 | 6 | 0 | 9 | 9 | 2 | 9 | 8 | 8 | 8 | 8                    |   |

Stomach, Forestomach Squamous Cell Papilloma

M +

Stomach, Glandular Carcinoma

M +

CARDIOVASCULAR SYSTEM

Blood Vessel

M +

Heart

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

ENDOCRINE SYSTEM

Adrenal Cortex

M +

Adrenal Medulla Pheochromocytoma Benign

M + + + + + + + + + + + + + + + + + X + + + + + + +

Islets, Pancreatic Adenoma

M + + + + + + + + + + + X + + + + + + + + + + + +

Parathyroid Gland Adenoma

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

Pituitary Gland Pars Distalis, Adenoma

M + + + + + + + + + + + + + + + X + + + + X X + +

Thyroid Gland Carcinoma, Metastatic, Pancreas C-cell, Adenoma C-cell, Carcinoma

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

Experiment Number: 20614 - 01  
 Test Type: CHRONIC  
 Route: DOSED FEED  
 Species/Strain: RATS/HSD

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Perfluorooctanoic Acid  
 CAS Number: 335-67-1

Date Report Requested: 07/25/2018  
 Time Report Requested: 12:58:26  
 First Dose M/F: 10/27/08 / 10/28/08  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>0/1000 ppm | 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 |                      |
|  | 6           | 2 | 2 | 5 | 8 | 9 | 5 | 7 | 3 | 8 | 0 | 2 | 4 | 7 | 2 | 2 | 5 | 6 | 6 | 9 | 9 | 1 | 1 | 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 | 0 | 0 | 0                    |
| 4  | 5           | 4 | 5 | 4 | 5 | 5 | 4 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5                    |
| 8  | 3           | 9 | 2 | 8 | 1 | 0 | 9 | 1 | 8 | 2 | 3 | 2 | 2 | 4 | 0 | 9 | 2 | 8 | 0 | 0 | 2 | 1 | 9 | 1 | 1                    |
| 4  | 2           | 2 | 0 | 8 | 7 | 7 | 7 | 0 | 6 | 7 | 3 | 4 | 5 | 0 | 6 | 0 | 9 | 2 | 6 | 9 | 2 | 9 | 6 | 8 | 8                    |

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

|                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland                     | M | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ovary                              | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, Metastatic, Uterus |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Uterus                             | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Polyp Stromal                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sarcoma Stromal                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Cervix, Adenocarcinoma             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Endometrium, Adenocarcinoma        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Vagina                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Squamous Cell Carcinoma            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**HEMATOPOIETIC SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow                                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node                                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Adenocarcinoma, Metastatic, Uterus              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mediastinal, Adenocarcinoma, Metastatic, Uterus |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pancreatic, Adenocarcinoma, Metastatic, Uterus  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lymph Node, Mandibular                          | M | + | + | + | M | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | M | + |

\* .. 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

**Experiment Number:** 20614 - 01  
**Test Type:** CHRONIC  
**Route:** DOSED FEED  
**Species/Strain:** RATS/HSD

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Perfluorooctanoic Acid  
**CAS Number:** 335-67-1

**Date Report Requested:** 07/25/2018  
**Time Report Requested:** 12:58:26  
**First Dose M/F:** 10/27/08 / 10/28/08  
**Lab:** BAT

| <b>HARLAN SPRAGUE DAWLEY RATS</b><br><b>FEMALE</b><br><b>0/1000 ppm</b> |  | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | <b>females</b><br><b>(cont...)</b> |
|---|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------------------|
|   |  | 0<br>6<br>6           | 0<br>2<br>5           | 0<br>2<br>3           | 0<br>2<br>8           | 0<br>2<br>9           | 0<br>3<br>5           | 0<br>3<br>7           | 0<br>4<br>8           | 0<br>4<br>4           | 0<br>5<br>0           | 0<br>5<br>2           | 0<br>5<br>4           | 0<br>6<br>2           | 0<br>6<br>4           | 0<br>6<br>2           | 0<br>6<br>9           | 0<br>6<br>9           | 0<br>6<br>5           | 0<br>6<br>5           | 0<br>7<br>4           | 0<br>7<br>1           | 0<br>7<br>8           | 0<br>7<br>1           | 0<br>7<br>2           | 0<br>7<br>2           | 0<br>7<br>3           | 0<br>7<br>6           |                       |                                    |
| ANIMAL ID   |  | 0<br>0<br>4<br>8<br>4 | 0<br>0<br>5<br>3<br>2 | 0<br>0<br>4<br>9<br>2 | 0<br>0<br>5<br>8<br>0 | 0<br>0<br>4<br>1<br>8 | 0<br>0<br>5<br>0<br>7 | 0<br>0<br>4<br>0<br>7 | 0<br>0<br>5<br>1<br>7 | 0<br>0<br>4<br>8<br>0 | 0<br>0<br>5<br>4<br>6 | 0<br>0<br>5<br>5<br>7 | 0<br>0<br>5<br>5<br>3 | 0<br>0<br>5<br>5<br>4 | 0<br>0<br>5<br>2<br>5 | 0<br>0<br>4<br>0<br>6 | 0<br>0<br>5<br>4<br>0 | 0<br>0<br>4<br>5<br>2 | 0<br>0<br>5<br>0<br>9 | 0<br>0<br>4<br>8<br>0 | 0<br>0<br>5<br>5<br>8 | 0<br>0<br>5<br>5<br>5 | 0<br>0<br>5<br>4<br>2 | 0<br>0<br>5<br>5<br>9 | 0<br>0<br>4<br>0<br>0 | 0<br>0<br>5<br>2<br>6 | 0<br>0<br>5<br>1<br>8 | 0<br>0<br>4<br>9<br>8 | 0<br>0<br>5<br>4<br>8 |                                    |

Lymph Node, Mesenteric  
Adenocarcinoma, Metastatic, Uterus

M + + + + + + + + + + + M + + + + + + + + + + + + + + +  
X

Spleen

M +

Thymus  
Adenocarcinoma, Metastatic, Uterus  
Neural Crest Tumor

M + + + + M + + + + + + M + + + + + + + + + + + + + + +  
X  
X

**INTEGUMENTARY SYSTEM**

Mammary Gland  
Adenocarcinoma  
Fibroadenoma  
Fibroadenoma, Multiple

M + M + +  
X  
X X X X X X  
X

Skin  
Subcutaneous Tissue, Fibrosarcoma

M +  
X

**MUSCULOSKELETAL SYSTEM**

Bone  
Vertebra, Osteosarcoma

+  
X

Skeletal Muscle  
Adenocarcinoma, Metastatic, Uterus

+  
X

**NERVOUS SYSTEM**

Brain

M +

Peripheral Nerve

+

\* .. 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

Experiment Number: 20614 - 01  
Test Type: CHRONIC  
Route: DOSED FEED  
Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
Perfluorooctanoic Acid  
CAS Number: 335-67-1

Date Report Requested: 07/25/2018  
Time Report Requested: 12:58:26  
First Dose M/F: 10/27/08 / 10/28/08  
Lab: BAT

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS FEMALE<br>0/1000 ppm |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  | 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 | 0 | 0 | 0 |  |           |                      |
| 0           | 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 | 3 | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 |  |           |                      |
| 6           | 2   | 5 | 8 | 9 | 5 | 7 | 3 | 8 | 0 | 2 | 4 | 7 | 2 | 2 | 5 | 6 | 6 | 9 | 9 | 1 | 1 | 2 | 2 |  |           |                      |
| 6           | 5   | 3 | 4 | 8 | 1 | 9 | 8 | 4 | 5 | 2 | 0 | 5 | 4 | 4 | 2 | 9 | 9 | 5 | 5 | 4 | 8 | 1 | 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           | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |           |                      |
| 4           | 5   | 4 | 5 | 4 | 5 | 5 | 4 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 5 | 5 | 4 | 5 |  |           |                      |
| 8           | 3   | 9 | 2 | 8 | 1 | 0 | 9 | 1 | 8 | 2 | 2 | 2 | 4 | 0 | 9 | 2 | 8 | 0 | 0 | 2 | 1 | 9 | 1 |  |           |                      |
| 4           | 2   | 2 | 0 | 8 | 7 | 7 | 0 | 0 | 6 | 7 | 3 | 4 | 5 | 0 | 6 | 0 | 9 | 6 | 9 | 2 | 9 | 8 | 8 |  |           |                      |

**RESPIRATORY SYSTEM**

|                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lung                               | M | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, Metastatic, Uterus |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |
| Osteosarcoma, Metastatic, Bone     |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |
| Nose                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Trachea                            | M | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + |

**SPECIAL SENSES SYSTEM**

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

**URINARY SYSTEM**

|                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney                             | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Urinary Bladder                    | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M |
| Adenocarcinoma, Metastatic, Uterus |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + |

**SYSTEMIC LESIONS**

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

\* .. 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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

### P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

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 |
|--|-----------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  |           | 7               | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>0/1000 ppm | ANIMAL ID | 3               | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |   |
|  |           | 7               | 1 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 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 |
|  |           | 0               | 0 | 0 | 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               | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |   |
|  |           | 0               | 9 | 8 | 8 | 8 | 8 | 8 | 9 | 3 | 3 | 9 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 3 |   |
|  |           | 0               | 5 | 1 | 2 | 3 | 5 | 7 | 3 | 6 | 8 | 6 | 3 | 4 | 5 | 8 | 2 | 5 | 1 | 2 | 2 | 3 | 8 | 5 | 7 | 9 | 9 |   |
|  |           | <b>* TOTALS</b> |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

### ALIMENTARY SYSTEM

|   |   |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |    |  |  |  |   |   |
|---|---|---|--|---|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|----|--|--|--|---|---|
| Esophagus                                 | + |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | 48 |  |  |  |   |   |
| Intestine Large, Cecum                    | + |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | 49 |  |  |  |   |   |
| Intestine Large, Colon                    | + |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | 49 |  |  |  |   |   |
| Intestine Large, Rectum                   | + |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | 49 |  |  |  |   |   |
| Intestine Small, Duodenum                 | + |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | 49 |  |  |  |   |   |
| Intestine Small, Ileum                    | + |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | 49 |  |  |  |   |   |
| Intestine Small, Jejunum                  | + |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | 49 |  |  |  |   |   |
| Adenocarcinoma, Metastatic, Uterus        | + |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | 1  |  |  |  |   |   |
| Liver                                     | + |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | 49 |  |  |  |   |   |
| Adenocarcinoma, Metastatic, Uterus        |   | X |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |    |  |  |  | 3 |   |
| Carcinoma, Metastatic, Stomach, Glandular |   |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  | X |   |    |  |  |  | 1 |   |
| Hepatocellular Adenoma                    |   |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |    |  |  |  |   | 1 |
| Hepatocellular Carcinoma                  |   |   |  | X |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |    |  |  |  |   | 3 |
| Mesentery                                 | + |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | 2  |  |  |  |   |   |
| Pancreas                                  | + |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | 49 |  |  |  |   |   |
| Adenocarcinoma, Metastatic, Uterus        |   | X |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |    |  |  |  |   | 3 |
| Acinus, Adenoma                           |   |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   | X |    |  |  |  |   | 1 |
| Acinus, Carcinoma                         |   |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |    |  |  |  |   | 1 |
| Salivary Glands                           | + |   |  |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | 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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS FEMALE |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |
|-------------|-----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
|             | 0737                              | 0741 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 |          |
| 0/1000 ppm  | ANIMAL ID                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |
|             | 0050                              | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044     |

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |         |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|---------|
| Stomach, Forestomach Squamous Cell Papilloma | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | 49<br>1 |         |
| Stomach, Glandular Carcinoma                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X       | 49<br>1 |

**CARDIOVASCULAR SYSTEM**

|              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Heart        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |

**ENDOCRINE SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |             |         |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------------|---------|
| Adrenal Cortex                                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49          |         |
| Adrenal Medulla Pheochromocytoma Benign       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | 49<br>2     |         |
| Islets, Pancreatic Adenoma                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49<br>1     |         |
| Parathyroid Gland Adenoma                     | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | 46<br>1     |         |
| Pituitary Gland Pars Distalis, Adenoma        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X<br>X<br>X | 49<br>8 |
| Thyroid Gland Carcinoma, Metastatic, Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48<br>1     |         |
| C-cell, Adenoma                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 3           |         |
| C-cell, Carcinoma                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 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

|                                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |   |  |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|---|--|
|                                      | 0 | 0 | 0 | 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 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7        | 7 |  |
| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4        |   |  |
|                                      | 7 | 1 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6        |   |  |
| 0/1000 ppm                           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        |   |  |
|                                      | 0 | 0 | 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 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |          |   |  |
|                                      | 0 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 3 | 9 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 3 |          |   |  |
|                                      | 0 | 5 | 1 | 2 | 3 | 5 | 7 | 3 | 6 | 8 | 6 | 3 | 4 | 5 | 8 | 2 | 5 |   |   |   |   |   |   |   |   | * TOTALS |   |  |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

|                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Clitoral Gland                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 48 |
| Ovary                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 49 |
| Adenocarcinoma, Metastatic, Uterus |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1  |
| Uterus                             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |    |
| Polyp Stromal                      | X |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   | X |   |   |   |   |   | X |   | 5  |    |
| Sarcoma Stromal                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |    |
| Cervix, Adenocarcinoma             |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |    |
| Endometrium, Adenocarcinoma        |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3  |    |
| Vagina                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1  |
| Squamous Cell Carcinoma            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1  |

HEMATOPOIETIC SYSTEM

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Bone Marrow                                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 50 |
| Lymph Node                                      |   | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 3  |
| Adenocarcinoma, Metastatic, Uterus              |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |    |
| Mediastinal, Adenocarcinoma, Metastatic, Uterus |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |    |
| Pancreatic, Adenocarcinoma, Metastatic, Uterus  |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |    |
| Lymph Node, Mandibular                          | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |    |

\* .. 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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>0/1000 ppm                        | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS           |  |  |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|--|--|
|   | 0737        | 0741 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 |                    |  |  |
| ANIMAL ID   | 0050        | 0054 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058 | 0058               |  |  |
| Lymph Node, Mesenteric<br>Adenocarcinoma, Metastatic, Uterus              | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 48<br>2            |  |  |
| Spleen  | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 49                 |  |  |
| Thymus<br>Adenocarcinoma, Metastatic, Uterus<br>Neural Crest Tumor        | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 47<br>1<br>1       |  |  |
| <b>INTEGUMENTARY SYSTEM</b>   |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                    |  |  |
| Mammary Gland<br>Adenocarcinoma<br>Fibroadenoma<br>Fibroadenoma, Multiple | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 48<br>1<br>17<br>3 |  |  |
| Skin<br>Subcutaneous Tissue, Fibrosarcoma                                 | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 49<br>1            |  |  |
| <b>MUSCULOSKELETAL SYSTEM</b>   |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                    |  |  |
| Bone<br>Vertebra, Osteosarcoma  | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50<br>1            |  |  |
| Skeletal Muscle<br>Adenocarcinoma, Metastatic, Uterus                     |             | +    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 2<br>2             |  |  |
| <b>NERVOUS SYSTEM</b>   |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                    |  |  |
| Brain   | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 49                 |  |  |
| Peripheral Nerve  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 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



Experiment Number: 20614 - 01

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P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS FEMALE |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |
|-------------|-----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
|             | 0737                              | 0741 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 | 0774 |          |
| ANIMAL ID   | 0050                              | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044     |
| 0/1000 ppm  | 0                                 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0        |
|             | 0                                 | 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                                 | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    |          |
|             | 0                                 | 9    | 8    | 8    | 8    | 8    | 8    | 9    | 3    | 3    | 9    | 0    | 0    | 0    | 1    | 1    | 2    | 2    | 1    | 2    | 2    | 3    | 3    | 3    |          |
|             | 0                                 | 5    | 1    | 2    | 3    | 5    | 7    | 3    | 6    | 8    | 6    | 3    | 4    | 5    | 8    | 2    | 5    | 1    | 2    | 3    | 8    | 5    | 7    | 9    |          |

RESPIRATORY SYSTEM

|                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Lung                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Adenocarcinoma, Metastatic, Uterus |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Osteosarcoma, Metastatic, Bone     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Nose                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Trachea                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |

SPECIAL SENSES SYSTEM

|                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Eye             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |

URINARY SYSTEM

|                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Kidney                             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Urinary Bladder                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Adenocarcinoma, Metastatic, Uterus |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

SYSTEMIC LESIONS

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Multiple Organ       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Lymphoma Malignant   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

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

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS FEMALE<br>300/1000 ppm |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | ANIMAL ID | females<br>(cont...) |
|-------------|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------|----------------------|
|             | 01  | 03 | 03 | 04 | 04 | 04 | 04 | 04 | 04 | 05 | 05 | 05 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 |           |                      |
|             | 8   | 9  | 9  | 4  | 5  | 5  | 7  | 9  | 0  | 7  | 8  | 1  | 2  | 2  | 3  | 3  | 4  | 7  | 7  | 7  | 7  | 7  | 8  | 8  | 9         |                      |
|             | 3   | 1  | 3  | 0  | 4  | 7  | 2  | 1  | 8  | 4  | 9  | 7  | 4  | 4  | 4  | 8  | 7  | 3  | 3  | 3  | 6  | 6  | 1  | 3  | 0         |                      |
|             | 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        |                      |
|             | 55  | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |           |                      |
|             | 77  | 77 | 88 | 88 | 55 | 77 | 55 | 99 | 77 | 44 | 44 | 44 | 44 | 55 | 77 | 88 | 66 | 55 | 66 | 66 | 99 | 99 | 55 | 44 |           |                      |
|             | 45  | 55 | 55 | 88 | 77 | 66 | 11 | 11 | 22 | 22 | 66 | 77 | 66 | 55 | 99 | 77 | 88 | 00 | 11 | 77 | 99 | 88 | 33 | 70 |           |                      |

ALIMENTARY SYSTEM

|                                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, Metastatic, Pancreas |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Intestine Small, Ileum               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, Metastatic, Pancreas |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Liver                                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma, Metastatic, Pancreas |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Adenocarcinoma, Metastatic, Uterus   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Cholangioma                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Hepatocellular Adenoma               |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |
| Hepatocellular Carcinoma             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Oral Mucosa                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Squamous Cell Carcinoma              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + |   |   |   |
|                                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |
| Pancreas                             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Acinus, Adenoma                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |
| Acinus, Carcinoma                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

\* .. 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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>300/1000 ppm | DAY ON TEST |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | females<br>(cont...) |
|--|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------------------|
|  | 01          | 03 | 03 | 04 | 04 | 04 | 04 | 04 | 05 | 05 | 05 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 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 |                      |
|  | 55          | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |                      |
|  | 77          | 77 | 88 | 88 | 55 | 77 | 55 | 99 | 77 | 44 | 44 | 44 | 55 | 77 | 88 | 66 | 55 | 66 | 99 | 99 | 88 | 33 | 55 | 77 |                      |
|  | 45          | 55 | 55 | 88 | 77 | 66 | 11 | 22 | 22 | 46 | 47 | 55 | 56 | 97 | 77 | 88 | 00 | 11 | 77 | 77 | 88 | 33 | 55 | 77 |                      |

Duct, Adenocarcinoma

X

Salivary Glands

+ +

Stomach, Forestomach  
Adenocarcinoma, Metastatic, Pancreas  
Leiomyosarcoma  
Squamous Cell Papilloma

+  
X  
X  
X

Stomach, Glandular  
Leiomyosarcoma, Metastatic, Stomach,  
Forestomach

+  
X

CARDIOVASCULAR SYSTEM

Blood Vessel

+ +

Heart

+ +

ENDOCRINE SYSTEM

Adrenal Cortex

+ +

Adrenal Medulla  
Pheochromocytoma Benign  
Pheochromocytoma Malignant

+  
X

Islets, Pancreatic  
Adenoma

+ +

Parathyroid Gland

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

Pituitary Gland

+ +

\* .. 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

Experiment Number: 20614 - 01

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Route: DOSED FEED

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Perfluorooctanoic Acid

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First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>300/1000 ppm | DAY ON TEST |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | ANIMAL ID | females<br>(cont...) |
|--|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------|----------------------|
|  | 01          | 03 | 03 | 04 | 04 | 04 | 04 | 04 | 05 | 05 | 05 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 |           |                      |
|  | 8           | 9  | 9  | 4  | 5  | 5  | 7  | 9  | 0  | 7  | 8  | 1  | 2  | 2  | 3  | 3  | 4  | 7  | 7  | 7  | 7  | 7  | 8  | 8  | 9         |                      |
|  | 3           | 1  | 3  | 0  | 4  | 7  | 2  | 1  | 8  | 4  | 9  | 7  | 4  | 4  | 4  | 8  | 7  | 3  | 3  | 6  | 6  | 6  | 6  | 6  | 0         |                      |
|  | 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        |                      |
|  | 55          | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |           |                      |
|  | 77          | 77 | 88 | 88 | 55 | 77 | 55 | 99 | 77 | 44 | 44 | 44 | 77 | 55 | 66 | 77 | 88 | 66 | 55 | 66 | 66 | 99 | 55 | 47 |           |                      |
|  | 45          | 55 | 55 | 88 | 77 | 66 | 11 | 11 | 22 | 44 | 66 | 77 | 55 | 66 | 99 | 77 | 88 | 00 | 11 | 77 | 77 | 88 | 33 | 00 |           |                      |

Pars Distalis, Adenoma

X

X

Thyroid Gland

+

+

+

+

+

+

+

+

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+

Bilateral, C-cell, Adenoma

X

C-cell, Adenoma

X

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Clitoral Gland

+

+

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Adenocarcinoma, Metastatic, Pancreas

X

Uterus

+

+

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Adenocarcinoma, Metastatic, Pancreas

X

Polyp Stromal

X

Endometrium, Adenocarcinoma

HEMATOPOIETIC SYSTEM

Bone Marrow

+

+

+

+

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Lymph Node

+

Pancreatic, Sarcoma, Metastatic, Stomach, Forestomach

X

Lymph Node, Mandibular

M

+

+

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M

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+

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

| DAY ON TEST  | HARLAN SPRAGUE DAWLEY RATS FEMALE |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | ANIMAL ID | females (cont...) |
|--------------|-----------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------|-------------------|
|              | 01                                | 03 | 03 | 04 | 04 | 04 | 04 | 04 | 04 | 05 | 05 | 05 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 |           |                   |
| 300/1000 ppm | 08                                | 09 | 09 | 04 | 05 | 05 | 07 | 09 | 00 | 07 | 08 | 01 | 02 | 02 | 03 | 03 | 04 | 07 | 07 | 07 | 07 | 07 | 08 | 08 | 09        |                   |
|              | 03                                | 01 | 03 | 00 | 04 | 07 | 02 | 01 | 08 | 04 | 09 | 07 | 04 | 04 | 04 | 08 | 07 | 03 | 03 | 03 | 06 | 06 | 01 | 03 | 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        |                   |
|              | 05                                | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05        |                   |
|              | 07                                | 07 | 08 | 08 | 05 | 07 | 05 | 09 | 07 | 04 | 04 | 04 | 04 | 05 | 05 | 07 | 08 | 06 | 05 | 06 | 06 | 09 | 09 | 04 | 07        |                   |
|              | 04                                | 05 | 05 | 08 | 07 | 06 | 01 | 01 | 02 | 02 | 06 | 07 | 05 | 06 | 09 | 07 | 08 | 00 | 01 | 07 | 07 | 08 | 03 | 00 |           |                   |

|                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lymph Node, Mesenteric | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + |
| Spleen                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Thymus                 | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

INTEGUMENTARY SYSTEM

|                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenocarcinoma                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   | X |   |   |   |   |
| Adenoma                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Fibroadenoma                      |   |   |   |   |   |   |   |   | X |   |   |   |   | X | X |   |   |   | X | X | X |   | X |   |   |
| Fibroadenoma, Multiple            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |
| Skin                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Subcutaneous Tissue, Fibrosarcoma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

MUSCULOSKELETAL SYSTEM

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

NERVOUS SYSTEM

|       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

RESPIRATORY SYSTEM

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lung  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pheochromocytoma Malignant, Metastatic, Adrenal Medulla |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Nose  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

\* .. 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

| 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 |
|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HARLAN SPRAGUE DAWLEY RATS FEMALE                                 |  | 8 | 9 | 9 | 4 | 5 | 5 | 7 | 9 | 0 | 7 | 8 | 1 | 2 | 2 | 3 | 3 | 4 | 7 | 7 | 7 | 3 | 6 | 6 | 6 | 6 | 6 |
| 300/1000 ppm  |  | 3 | 1 | 3 | 0 | 4 | 7 | 2 | 1 | 8 | 4 | 9 | 7 | 4 | 4 | 4 | 8 | 7 | 3 | 3 | 3 | 6 | 6 | 6 | 1 | 3 | 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 |
|   |  | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
|   |  | 7 | 7 | 8 | 8 | 5 | 7 | 5 | 9 | 7 | 4 | 4 | 4 | 5 | 5 | 7 | 8 | 6 | 5 | 6 | 6 | 9 | 9 | 9 | 5 | 4 | 7 |
|   |  | 4 | 5 | 5 | 8 | 7 | 6 | 1 | 1 | 2 | 2 | 6 | 7 | 5 | 6 | 9 | 7 | 8 | 0 | 1 | 7 | 7 | 8 | 3 | 5 | 0 |   |
| Trachea   |  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| <b>SPECIAL SENSES SYSTEM</b>                                      |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Eye   |  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Harderian Gland   |  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Zymbal's Gland Carcinoma  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + | X |
| <b>URINARY SYSTEM</b>   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Kidney Adenocarcinoma, Metastatic, Pancreas Renal Tubule, Adenoma |  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Urinary Bladder Adenocarcinoma, Metastatic, Pancreas              |  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <b>SYSTEMIC LESIONS</b>   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Multiple Organ Leukemia Mononuclear                               |  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

females (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

|  |  |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|--|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST<br><b>HARLAN SPRAGUE DAWLEY RATS</b><br><b>FEMALE</b><br><b>300/1000 ppm</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 |   |
|  |  | 6               | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| ANIMAL ID  |  | 9               | 1 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |   |
|  |  | 5               | 8 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 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 |
|  |  | 5               | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| ANIMAL ID  |  | 8               | 5 | 5 | 5 | 6 | 6 | 8 | 8 | 9 | 9 | 9 | 9 | 4 | 4 | 5 | 6 | 6 | 8 | 8 | 9 | 4 | 4 | 6 | 6 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
|  |  | 2               | 9 | 2 | 8 | 3 | 4 | 6 | 6 | 9 | 0 | 2 | 4 | 6 | 8 | 9 | 4 | 6 | 9 | 4 | 3 | 4 | 4 | 0 | 0 | 3 | 7 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
|  |  | <b>* TOTALS</b> |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

ALIMENTARY SYSTEM

|                                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Esophagus                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Intestine Large, Cecum               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Intestine Large, Colon               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Intestine Large, Rectum              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Intestine Small, Duodenum            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Adenocarcinoma, Metastatic, Pancreas |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |   |
| Intestine Small, Ileum               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Intestine Small, Jejunum             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Adenocarcinoma, Metastatic, Pancreas |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |   |
| Liver                                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Adenocarcinoma, Metastatic, Pancreas |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |   |
| Adenocarcinoma, Metastatic, Uterus   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 |
| Cholangioma                          |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |   |
| Hepatocellular Adenoma               |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3  |   |
| Hepatocellular Carcinoma             |   |   |   |   |   |   | X |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4  |   |
| Oral Mucosa                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 |
| Squamous Cell Carcinoma              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |   |
| Pancreas                             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Acinus, Adenoma                      |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3  |   |
| Acinus, Carcinoma                    |   |   | 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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

|   |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| <b>HARLAN SPRAGUE DAWLEY RATS FEMALE</b><br><b>300/1000 ppm</b> | DAY ON TEST | 0695  | 0718  | 0744  | 0774  | 0777  | 0777  | 0777  | 0777  | 0777  | 0777  | 0777  | 0777  | 0777  | 0777  | 0777  | 0777  | 0777  | 0777  | 0777  | 0777  | 0777  | 0777  | 0777  | * TOTALS |
|   | ANIMAL ID   | 00582 | 00555 | 00555 | 00556 | 00563 | 00564 | 00568 | 00568 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 |          |
|   |             | 00582 | 00555 | 00555 | 00556 | 00563 | 00564 | 00568 | 00568 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 | 00569 |          |

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Duct, Adenocarcinoma                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Salivary Glands                                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Forestomach                             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenocarcinoma, Metastatic, Pancreas             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Leiomyosarcoma                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Squamous Cell Papilloma                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Stomach, Glandular                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leiomyosarcoma, Metastatic, Stomach, Forestomach |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

CARDIOVASCULAR SYSTEM

|              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Heart        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

ENDOCRINE SYSTEM

|                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adrenal Medulla            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Pheochromocytoma Benign    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Pheochromocytoma Malignant |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Islets, Pancreatic         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenoma                    | X |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Parathyroid Gland          | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Pituitary Gland            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 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



Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>300/1000 ppm | DAY ON TEST |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | * TOTALS |
|--|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|
|  | 065         | 071 | 074 | 074 | 074 | 074 | 074 | 074 | 074 | 074 | 074 | 074 | 074 | 074 | 074 | 074 | 074 | 074 | 074 | 074 | 074 | 074 | 074 | 074 |          |
| ANIMAL ID  | 005         | 005 | 005 | 005 | 005 | 005 | 005 | 005 | 005 | 005 | 005 | 005 | 005 | 005 | 005 | 005 | 005 | 005 | 005 | 005 | 005 | 005 | 005 | 005 |          |
|  |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |

|                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Pars Distalis, Adenoma     | X |   |   |   |   |   |   | X |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   | 5  |
| Thyroid Gland              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Bilateral, C-cell, Adenoma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| C-cell, Adenoma            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   | X |   | 3  |

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

|                                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Clitoral Gland                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Ovary                                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenocarcinoma, Metastatic, Pancreas |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Uterus                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenocarcinoma, Metastatic, Pancreas |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Polyp Stromal                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3  |
| Endometrium, Adenocarcinoma          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

**HEMATOPOIETIC SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Pancreatic, Sarcoma, Metastatic, Stomach, Forestomach |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Lymph Node, Mandibular                                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 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

Experiment Number: 20614 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 07/25/2018

Time Report Requested: 12:58:26

First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>300/1000 ppm    | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |  |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|--|
|   | 0695        | 0718  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  | 0774  |          |  |
| ANIMAL ID   | 00582       | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 |          |  |
| Lymph Node, Mesenteric                                  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 48       |  |
| Spleen  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |
| Thymus  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | M     | +     | +     | M     | +     | +     | +     | +     | +     | +     | 47       |  |
| <b>INTEGUMENTARY SYSTEM</b>                             |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |  |
| Mammary Gland   | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |
| Adenocarcinoma  |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       |       |       |       |       | X     | 4        |  |
| Adenoma   |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     | 1        |  |
| Fibroadenoma  |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       |       |       |       |       | X     |       | 10       |  |
| Fibroadenoma, Multiple                                  | X           |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 2        |  |
| Skin  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |
| Subcutaneous Tissue, Fibrosarcoma                       |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     | 1        |  |
| <b>MUSCULOSKELETAL SYSTEM</b>                           |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |  |
| Bone  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |
| <b>NERVOUS SYSTEM</b>                                   |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |  |
| Brain   | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |
| <b>RESPIRATORY SYSTEM</b>                               |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |  |
| Lung  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |
| Pheochromocytoma Malignant, Metastatic, Adrenal Medulla |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       | 1        |  |
| Nose  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
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| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>300/1000 ppm | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |  |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|--|
|  | 065         | 071   | 077   | 074   | 074   | 074   | 074   | 074   | 074   | 074   | 074   | 074   | 074   | 074   | 074   | 074   | 074   | 074   | 074   | 074   | 074   | 074   | 074   | 074   |          |  |
| ANIMAL ID  | 00582       | 00555 | 00555 | 00556 | 00563 | 00564 | 00568 | 00589 | 00590 | 00592 | 00594 | 00596 | 00598 | 00599 | 00604 | 00606 | 00609 | 00614 | 00619 | 00623 | 00624 | 00630 | 00637 | 00640 |          |  |
| Trachea  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |
| <b>SPECIAL SENSES SYSTEM</b>                         |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |  |
| Eye  | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |
| Harderian Gland                                      | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |
| Zymbal's Gland<br>Carcinoma                          |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1<br>1   |  |
| <b>URINARY SYSTEM</b>                                |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |  |
| Kidney   | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |
| Adenocarcinoma, Metastatic, Pancreas                 |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1        |  |
| Renal Tubule, Adenoma                                |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | X     |       | 1        |  |
| Urinary Bladder                                      | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |
| Adenocarcinoma, Metastatic, Pancreas                 |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 1        |  |
| <b>SYSTEMIC LESIONS</b>                              |             |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          |  |
| Multiple Organ                                       | +           | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 50       |  |
| Leukemia Mononuclear                                 |             |       |       |       |       |       |       |       |       |       |       |       |       | X     |       |       |       |       |       |       |       |       | X     |       | 2        |  |

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

\* .. 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