

Final Report

PB84-241983



BORRISTON
LABORATORIES, INC.

Co-Carcinogenicity of Foundry Particulates Silica and Silica Sand Substitutes

Volume 2

210

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Borrison Project No. 0105

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A Subsidiary of Dynamac International, Inc.

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16. Abstract (Limit 200 words) The carcinogenicity of silica (14808607) and silica sand substitutes in male Syrian-Golden-hamsters is reviewed. Hamsters were administered silica sand and 10 silica sand substitutes alone or with benzo(a)pyrene (50328) (BP) by intratracheal instillation weekly for 15 weeks. After a total of 92 weeks, instillation of silica and silica sand substitutes alone did not induce malignant tumors in the respiratory tract. When given in combination with BP, the silica sand and substitutes caused malignant tumors in all parts of the respiratory tract. The only exception to this finding was seen with an aluminum (7429905) containing substitute. The tumors were classified as adenocarcinomas, squamous cell carcinomas, adenosquamous carcinomas, carcinomas, and sarcomas of various types. Benign tumors, mostly epithelial polyps, were found most frequently in the larynx and trachea. Analyses of the animal feed, Rodent Laboratory Chow, tabulations of clinical observations, and life table analyses of the animals that had tumors in the larynx, trachea, or lung are presented.				
17. Document Analysis a. Descriptors				
b. Identifiers/Open-Ended Terms NIOSH-Publication, NIOSH-Contract, Industrial-exposures, Animal-studies, Carcinogenicity, Airborne-particles, Foundry-sands, Silica-dusts, Tumorigens, Histopathology, Mortality-data, Contract-210-79-0036				
c. COSATI Field/Group				
18. Availability Statement		19. Security Class (This Report)	21. No. of Pages 169	
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APPENDIX I
BEDDING AND FEED ANALYSES

RESEARCH QOO. Research, Analysis and Consultation

900 CHECKERBOARD SQUARE PLAZA • SAINT LOUIS, MISSOURI 63188 • TELEPHONE (314) 982-3393

MR. TIM SILENCE
PAXTON PROCESSING CO. INC.
P. O. BOX 120
PAXTON, ILLINOIS 60957

LAB NO. 319558

ENTERED 02/03/78

REPORTED 03/08/78

PAXT SAN-I-CEL GROUND CORN COB ANIMAL BEDDING

CHICK EDEMA FACTOR REF- 163102
NEGATIVE

MICRO GENERAL LAB REF- 719751

MICROBIOLOGY LOG # 1209
YEAST AND MOLD COUNT/GRAM..... 14,000

PREDOMINATLY MOLD PRESENT

ORGANOPHOSPHATE PEST REF- 836735

	THIMET	LESS THAN 0.02 PPM
	DIAZINON	LESS THAN 0.02 PPM
0.37 PPM	DISULFOTON	
	METHYL PARATHION	LESS THAN 0.02 PPM
0.04 PPM	MALATHION	
	PARATHION	LESS THAN 0.02 PPM
	THIODAN	LESS THAN 0.02 PPM
	ETHION	LESS THAN 0.02 PPM
	TRITHION	LESS THAN 0.02 PPM

PESTICIDES AND PCB RIF- 868762

	HEPTACHLOR EPOXIDE	LESS THAN 0.02 PPM
	ALDRIN	LESS THAN 0.02 PPM
	HEPTACHLOR	LESS THAN 0.02 PPM
	DIELDRIN	LESS THAN 0.02 PPM
	DDE	LESS THAN 0.02 PPM
	DDT	LESS THAN 0.02 PPM
	LINDANE	LESS THAN 0.02 PPM
	CHLORDANE	LESS THAN 0.02 PPM
	ENDRIN	LESS THAN 0.02 PPM
	PCB	LESS THAN 0.15 PPM

ANY QUESTIONS CALL K. PROSSER - D CAUSEY (314)982-3393

Rodent Laboratory Chow

5001

(Formerly Laboratory Chow 5001)



Description

Rodent Laboratory Chow® is a constant formula rodent diet recommended for rats, mice and hamsters. The constant formula feature is designed to minimize nutritional variables in long-term studies. It is formulated for life cycle nutrition, however, it is not designed for maximizing production in breeding colonies.

This product has been the standard of bio-medical research for approximately four decades.

Features

1. Constant Formula
2. Formulated for multi-species
3. Standard rodent diet for bio-medical research
4. Pellet or meal form

Benefits

1. Helps minimize nutritional variables that may affect your research
2. Single product in inventory
3. Scientific proof of product efficacy, experimental replication uses
4. Facilitates addition of test substances by eliminating grinding

Guaranteed Analysis/Ingredients

Protein, min. 23.0%
 Fat, min. 4.5%
 Fiber, max. 6.0%
 Meat and bone meal, dried milk products, wheat germ meal, fish meal, animal liver meal, brewers' dried yeast, dried beet pulp, ground extruded corn, ground oat

groats, soybean meal, dehydrated alfalfa meal, cane molasses, wheat middlings, animal fat preserved with BHA (butylated hydroxyanisole), vitamin B₁₂ supplement, calcium pantothenate, choline chloride, folic acid, riboflavin supplement, thiamin, niacin, vitamin A supplement, D activated

animal sterol, vitamin E supplement, calcium carbonate, methionine hydroxy analogue calcium, pyridoxine hydrochloride, dicalcium phosphate, calcium iodate, salt, ferrous sulfate, zinc oxide, manganous oxide, copper oxide, iron oxide, cobalt carbonate.

Feeding Directions

Feed ad libitum to rodents. Plenty of fresh, clean water should be available to the animals at all times.

RATS — Adult rats will eat 12 to 15 grams of diet per day. Feeders in rat cages

should be designed to hold two to three days' supply of feed at one time.

MICE — Adult mice will eat 4 to 5 grams of pelleted ration daily. Some of the larger strains may eat as much as 8 grams per

day per animal. Feed should be available on a free choice basis in wire feeders above the floor of the cage.

HAMSTERS — Adults will eat 10-14 grams per day.

Chemical Composition*

NUTRIENTS*

Protein % 23.4
 Arginine % 1.38
 Cystine %32
 Glycine % 1.20
 Histidine %55
 Isoleucine % 1.18
 Leucine % 1.70
 Lysine % 1.42
 Methionine %43
 Phenylalanine % 1.03
 Threonine %91
 Tryptophan %29
 Valine % 1.21
 Fat % 4.5
 Fiber % 5.0
 TDN % 76
 NFE (by difference) %*** 49.8

Ash % 7.3
 Calcium % 1.20
 Phosphorus %80
 Potassium % 1.10
 Magnesium %21
 Sodium %40
 Chlorine %50
 Fluorine, ppm 35.0
 Iron, ppm 198.0
 Zinc, ppm 58.0
 Manganese, ppm 51.0
 Copper, ppm 18.0
 Cobalt, ppm4
 Iodine, ppm 1.7
 Gross Energy, KCal/gm 4.25

Vitamins

Carotene, ppm 6.5
 Menadione (added), ppm —
 Thiamin, ppm 17.7
 Riboflavin, ppm 8.0
 Niacin, ppm 95.0
 Pantothenic Acid, ppm 24.0
 Choline, ppm X100 22.5
 Folic Acid, ppm 5.9
 Pyridoxine, ppm 6.0
 Biotin, ppm07
 B-12, mcg/lb. 10.0
 Vitamin A, IU/gm 15.0
 Vitamin D, IU/gm 5.3
 Alpha-tocopherol, IU/lb. 29.6
 Ascorbic Acid, mg/gm —

*Based on latest ingredient analysis information. Since nutrient composition of natural ingredients varies, analysis will differ accordingly.

**Nutrients expressed as per cent of ration except where otherwise indicated. Moisture content is assumed to be 10.0% for the purposes of calculations.

***NFE = Nitrogen free extract

APPENDIX 2
INCIDENCES OF CLINICAL SIGNS

CLINICAL OBSERVATION CODES

ANIMAL AND HOUSING

00 NORMAL

ANIMAL STATUS - Six Digit Data. MMDDYY Required

01 FOUND DEAD
02 MORIBUND SACRIFICE
03 INTERVAL SACRIFICE
04 TERMINAL SACRIFICE
05 ACCIDENTAL DEATH
06 CANNIBALIZED
07 MIS-SEXED
08 REPLACED (explanatory text
must accompany)
080 ALIVE
081 ESCAPED FROM CAGE
09 OTHER

HOUSING, FOOD, AND WATER

10 SPILLAGE - WASTING FEED
11 NO FEED
12 NO WATER
13
14
15
16
17
18
19 OTHER

APPEARANCE

20 HUNCHED
21 THIN
22 OBESE
23 TEETH CUT
24 MALOCCLUSION
25 HEAD TILT
26 PARALYSIS
27 TREMORS
28
29 OTHER

BEHAVIOR

30 LETHARGIC
31 ANOREXIA
32 HYPERACTIVITY
33 CIRCLING
34 PROSTATE
35 ATAXIA
36 ADIPSIA
37 POLYDIPSIA
38 HYPERSENSITIVE
380 CONVULSIONS
381 LIMPING
382 TICS
383 TWITCHES
384 UNRESPONSIVE
385 AGGRESSIVE
39 OTHER

EXCRETION

40 EMESIS
41 SALIVATION
42 SOFT FECES
43 POLYURIA
44 ANURIA
45 COLORED STOOL
46 URINE
47 SOILED ANAL AREA
48 DIARRHEA
480 PARASITES IN STOOL
49 OTHER

RESPIRATION

50 WHEEZING
51 DYSPNEA
52 POLYPNEA
53 RHINORRHEA
54 EPISTAXIS
55 SNEEZING
56 COUGHING
57
58
59 OTHER

+SKIN AND PFLAGE

+60 URINE STAINS
+61 ALOPECIA
+62 ROUGH HAIRCOAT
+63 SORES
+64 CYANOTIC
+65 PILOERECTION
+66 DESQUAMATION
+67 SHAVE BURN
+68 FISSURING
+680 EDEMA
+681 ERYTHEMA
+682 STAINED HAIRCOAT
+683 ESCHAR
+684 RASH
+69 OTHER

*EYES

*70 SQUINTED
*71 OPAQUE
*72 LACRIMATION
*73 CHROMODACRYORRHEA
*74 EXOPHTHALMUS
*75 MYDRIASIS
*76 MIOSIS
*77
*78
*79 OTHER

*TISSUE MASSES

*80 NO PALPABLE TISSUE MASSES
*81 SMALL MOVEABLE TISSUE MASS¹
*82 SMALL STATIONARY TISSUE MASS
*83 LARGE MOVEABLE TISSUE MASS²
*84 LARGE STATIONARY TISSUE MASS
*85
*86
*87
*88
*89 OTHER

¹ (Rat - less than 1 cm in diam.,
Mouse - less than 0.5 cm in diam.)
² (Rat - over 1 cm in diam.,
Mouse - over 0.5 cm in diam.)

*ADDITIONAL ADJECTIVES

*90 EXUDATE
*91 SMALL
*92 ENLARGED
*93 RED
*930 YELLOW
*931 BLUE
*932 GREEN
*933 WHITE
*934 BLACK
*935 COMPOUND-COLORED
*94 PALE
*95 SWOLLEN
*96 ABSCESSSED
*97 NECROTIC
*98 ULCERATED
*980 PROTRUDING
*981 SLIGHT
*982 MODERATE
*983 MARKED
*984 BLOODY
*99 OTHER

BODY LOCATOR CODES (BLC)

* MAY be used with Codes 60-69.
* MUST be used with Codes 70-79,
80-89, and 90-99.
LEFT and RIGHT refer to the
animal's left and right,
not the technician's.

ABD ABDOMEN
ANS ANUS
AXL AXILLA-LEFT
AXR AXILLA-RIGHT
AXB AXILLA-BOTH
BCK BACK
BDY ENTIRE BODY
CHS CHEST
EAL EAR-LEFT
EAR EAR-RIGHT
EAB EARS-BOTH
ELL EYELIDS-LEFT
ELR EYELIDS-RIGHT
ELB EYELIDS-BOTH
EYL EYE-LEFT
EYR EYE-RIGHT
EYB EYES-BOTH

HED HEAD
HPL HIP-LEFT
HPR HIP-RIGHT
HPB HIPS-BOTH
INL INGIUNAL-LEFT
INR INGIUNAL-RIGHT
INB INGIUNAL-BOTH
LFL LEG-FORE-LEFT
LFR LEG-FORE-RIGHT
LHL LEG-HIND-LEFT
LHR LEG-HIND-RIGHT
LAL LEGS-ALL
MTH MOUTH
NSE NOSE
NCK NECK
PNS PENIS

PFL PAW-FORE-LEFT
PFR PAW-FORE-RIGHT
PHL PAW-HIND-LEFT
PHR PAW-HIND-RIGHT
PAL PAWS-ALL
SHL SHOULDER-LEFT
SHR SHOULDER-RIGHT
SHB SHOULDERS-BOTH
SOL SIDE-LEFT
SDR SIDE-RIGHT
SDB SIDES-BOTH
TAL TAIL
TEE TEETH
TSL TESTIS-LEFT
TSR TESTIS-RIGHT
TSB TESTES-BOTH
VAG VAGINA

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

		INCIDENCE OF CLINICAL OBSERVATIONS												
		GROUP NUMBER												
CLINICAL OBSERVATION FOR STUDY WEEK 1		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
No clinical signs observed.		<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
No clinical signs observed.														
CLINICAL OBSERVATION FOR STUDY WEEK 2		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Thin													1	
Eyes Squinted													1	
		<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Thin							3	2						
CLINICAL OBSERVATION FOR STUDY WEEK 3		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Thin													1	
Wheezing		1												
Dyspnea		1												
		<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
No clinical signs observed														

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

		INCIDENCE OF CLINICAL OBSERVATIONS												
		GROUP NUMBER												
<u>CLINICAL OBSERVATION FOR STUDY WEEK 4</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Thin													1	
Chromodacryorrhea				1										
		<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
No clinical signs observed														
<u>CLINICAL OBSERVATION FOR STUDY WEEK 5</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Thin												1	1	
		<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Thin								1						
<u>CLINICAL OBSERVATION FOR STUDY WEEK 6</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Thin												1	1	
Eyes Squinted				1										
Chromodacryorrhea				1										
		<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Thin							1					1		
Rough Hair Coat				1										

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

		INCIDENCE OF CLINICAL OBSERVATIONS												
		GROUP NUMBER												
CLINICAL OBSERVATION FOR STUDY WEEK 7		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Thin Eyes Squinted				1										1
		<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Thin Piloerection				1 1					1					1
CLINICAL OBSERVATION FOR STUDY WEEK 8		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched Thin Soft Feces Eyes Squinted						1 1							1	1
		<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Thin Piloerection				1				3	1					1

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 9	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Thin						1	1					1	1
Eyes Squinted			1										
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Thin								1					1
Urine Strains			1										
Alopecia			1								1		
Piloerection			1								1		
Rough Hair Coat											1		
CLINICAL OBSERVATION FOR STUDY WEEK 10	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Thin										2		1	1
Sores													1
Eyes Squinted			1										
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Thin					1	1					1		2
Diarrhea			1										
Wheezing			1								1		
Urine Stains			1										
Alopecia			1								1		
Piloerection			1								1		
Desquamation			1								1		
Rough Hair Coat											1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 11	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Thin										1	1	2	
Eyes Squinted			1										
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Thin											1		
Wheezing			1								1		
Dyspnea			1								1		
Alopecia			1								1		
Rough Hair Coat			1								1		
Piloerection			1								1		
Desquamation			1								1		
CLINICAL OBSERVATION FOR STUDY WEEK 12	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Thin												1	1
Eyes Squinted			1										
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Thin			2								1		
Wheezing			1								1		
Dyspnea			1								1		
Alopecia			1								1		
Rough Hair Coat			1								1		
Piloerection			1								1		
Desquamation			1								1		
Hunched											1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 13	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Thin				1				2			1		
Dyspnea				1									
Polypnea				1									
Rough Hair Coat				1									
Eyes Squinted			1										
Piloerection				1									
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Thin			1								1		
Wheezing			1								1		
Dyspnea			1								1		
Alopecia			1								1		
Rough Hair Coat			1								1		
Piloerection			1								1		
Desquamation			1								1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 14	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Thin								1		1			
Eyes Squinted			1										
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Wheezing			1								1		
Dyspnea			1								1		
Alopecia			1								1		
Rough Hair Coat			1								1		
Piloerection			1								1		
Desquamation			1								1		
Sores								1					
CLINICAL OBSERVATION FOR STUDY WEEK 15													
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Thin							1	2		1		1	
Soft Feces							1						
Eyes Squinted			1										
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Thin		1											
Wheezing			1								1		
Dyspnea			1								1		
Alopecia			1								1		
Rough Hair Coat			1								1		
Piloerection			1								1		
Desquamation			1								1		
Sores								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 16	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Thin				1				2		3			
Alopecia											1		
	14	15	16	17	18	19	20	21	22	23	24	25	26
Thin		2	1				2						2
Wheezing			1								1		
Dyspnea			1								1		
Alopecia			1								1		
Rough Hair Coat		1	1								1		
Piloerection			1								1		
Desquamation			1								1		
Sores								1					
	1	2	3	4	5	6	7	8	9	10	11	12	13
Thin												2	
Wheezing		1											
Polypnea		1											
Alopecia											1		
	14	15	16	17	18	19	20	21	22	23	24	25	26
Thin		1	1				2				1		2
Wheezing			1								1		
Dyspnea			1								1		
Alopecia		1	1			1					1		
Rough Hair Coat		1	1								1		
Sores		1				1		1					
Piloerection			1								1		
Desquamation			1								1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 18	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Thin												1	
Polypnea		2	1	1		1		1					
Alopecia											1		
Chromodacryorrhea		1											
	14	15	16	17	18	19	20	21	22	23	24	25	26
Thin		2	1				1	1		1	1		2
Wheezing			1								1		
Dyspnea			1								1		
Polypnea			1				1				1		
Alopecia			1		1						1		
Rough Hair Coat		1									1		
Sores		1				1			1				
Piloerection		1	1								1		
Desquamation			1								1		
CLINICAL OBSERVATION FOR STUDY WEEK 19	1	2	3	4	5	6	7	8	9	10	11	12	13
Thin							1			2			
Wheezing	4	2	3	2	1	9	1		2	9	2	4	3
Dyspnea	4	1	3	1		5				5	1	3	
Polypnea							2	1	2		1		
Alopecia											1		
Sores											1		
	14	15	16	17	18	19	20	21	22	23	24	25	26
Thin	1		1		1		2	1					2
Wheezing	5	3	3	1	2	3	2	1	3	2	1		1
Dyspnea	1		3								1		
Polypnea		1		2	3	1	2	3	3	2	3	2	2
Alopecia			1								1		
Rough Hair Coat		1									1		
Sores		1											
Piloerection			1								1		
Desquamation			1								1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 20	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched						1							
Thin						1	2					1	
Wheezing	3	1	1	2	2	6			1	3	2	5	
Dyspnea	1	4		2	2	4	5			4	1	3	
Polypnea							1	3	4	3	1		2
Alopecia		1									1		
Sores											1		
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched					1								
Thin	1	1	1		1		1	1					1
Wheezing	5		2	1	1	1	1	2	1		1	1	
Dyspnea	1	6	5	1	2	1	1	2	1		1		
Polypnea		1	1	3	4		3		1			2	4
Alopecia			1								1		
Rough Hair Coat		1									1		
Piloerection			1								1		
Desquamation			1								1		
Soft Feces								1					
Eyes Opaque						1							

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

		INCIDENCE OF CLINICAL OBSERVATIONS												
		GROUP NUMBER												
CLINICAL OBSERVATION FOR STUDY WEEK 21		1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched							1				1			
Thin			1		1	1	1		1			1	1	
Wheezing		3	3	4	4	3	6		3	1	1		2	
Dyspnea		3	2	1	2	1	4	1				4	2	3
Polypnea		3		4		3		1	1				2	
		14	15	16	17	18	19	20	21	22	23	24	25	26
Thin		1	2					1		1	1	1		3
Wheezing		1	1	4		2		1		3		1		1
Dyspnea		1	6	1	1	3	2	3	1	2	4	3	2	1
Polypnea		1		1					2					
Rough Hair Coat			1	1								1		
Piloerection				1										
Desquamation				1										
Alopecia												2		
Sores									1					
Eyes Opaque							1							
Mydriasis								1						

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 22	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Thin		1	1	1	1	2	3	1	1	3	4	1	
Wheezing	4	3	5	4	4	3	2	1	2	1	1	2	2
Dyspnea	4	2	5	2	1	3	2	1	1		5	2	4
Polypnea	1		4		3		1					2	
	14	15	16	17	18	19	20	21	22	23	24	25	26
Thin	1	3		1			3	1	1	1	2	2	3
Wheezing	2		2		2	4	2	1	4	3	4	2	2
Dyspnea	2	2	1	1	3	1	5	1	5	5	4	2	1
Alopecia	1						1	1					
Rough Hair Coat			1								1		
Piloerection		1											
Desquamation			1								1		
Sores								1			1		
Chromodacryorrhea						1							
Mydriasis							1						

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

		INCIDENCE OF CLINICAL OBSERVATIONS												
		GROUP NUMBER												
CLINICAL OBSERVATION FOR STUDY WEEK 23		1	2	3	4	5	6	7	8	9	10	11	12	13
Thin				2		1	1	1	1			1	1	
Wheezing				1			1	1	1		3	3	4	1
Dyspnea			1		1	1		1		2	2	1		1
Polypnea					1				1					
Eyes Opaque														1
		14	15	16	17	18	19	20	21	22	23	24	25	26
Thin		1	1		1	2				1	1	1		2
Wheezing		6	3	4	1	7	1	3	1			1		
Dyspnea		1		1	1	1	1	2	1			1	1	1
Polypnea				1										
Alopecia				1								1		
Rough Hair Coat			1											
Eyes Opaque							1							
Piloerection				1								1		
Desquamation				1								1		
Sores									1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 24	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Thin			2		1	1	1				1	1	
Wheezing		2	1	1	1	1	1	2		3	3	2	1
Dyspnea			1				1		2	1	1	2	1
Polypnea					1							1	
Eyes Opaque													1
	14	15	16	17	18	19	20	21	22	23	24	25	26
Thin	2			1	1		1		1	1	2	1	2
Wheezing	6	2	4	1	4	4	2	4	1	1	2	2	1
Dyspnea	1			1		1	2	1	1		2	3	2
Polypnea			1										
Alopecia			1								1		
Rough Hair Coat		1									1		
Eyes Opaque						1							
Piloerection			1								1		
Desquamation			1								1		
Sores								1					
Small Movable Tissue Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 25	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Thin	1	2	1			1	2	2		1			
Wheezing	2	1	3	4		3	3	2	2	4	2	1	1
Dyspnea	1	1	3	4		2	2	1	1				
Lacrimation		1											
	14	15	16	17	18	19	20	21	22	23	24	25	26
Thin	1		2	1	2	1	1	1			1	2	1
Wheezing	2		2	3		2	3	1	2	2			1
Dyspnea				1		2	1	1			1		
Alopecia			1		1								
Rough Hair Coat		1											
Eyes Opaque	1					1							
Piloerection			1										
Desquamation			1										
Soft Feces									1	1			
Eyes Squinted									1				
Headtilt									1				
Small Movable Tissue Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 26	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched		1				1							
Thin		2			1	2	1	2		1	1		
Wheezing	3	1	3	4	3	5	3	3	2	4	1	1	
Dyspnea	2	1	2	4	2	2	2	1	1	1			
Polypnea				1	2								
Alopecia							1						
Eyes Opaque													1
Lacrimation		1											
	14	15	16	17	18	19	20	21	22	23	24	25	26
Thin	1		1	1				1			1	3	2
Wheezing	3		2	3		2	3	1		1	1	1	2
Dyspnea	2		1	1		2	1	1					2
Polypnea	1		1										
Alopecia			1		1								
Rough Hair Coat		1	1										
Eyes Opaque						1							
Piloerection			1										
Desquamation			1										
Soft Feces										2			
Eyes Squinted									1				
Headtilt									1				
Small Movable Tissue Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 27	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched		1											
Thin		1	1		1	1	1	3	1	6	1	2	2
Soft Feces									1				
Wheezing	4	2	4	5	2	4	3	3	5	5	3	7	3
Dyspnea	3	1	2	4	1	1	2	1	3	4	2	4	1
Polypnea				1	1								
Alopecia							1						
Eyes Opaque													1
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched							1				1		
Thin	2		2		1		1		1	1			
Soft Feces										1			
Wheezing	6	1	7	3	5	4	3	2	1	5	3	7	5
Dyspnea	4	1	4	1	2	3	1	2		3	2	4	3
Polypnea			1										
Alopecia			1		1								
Rough Hair Coat		1											
Eyes Opaque						1							
Piloerection			1										
Desquamation			1										
Sores								1					
Eyes Squinted						1							
Small Movable Tissue Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

		INCIDENCE OF CLINICAL OBSERVATIONS												
		GROUP NUMBER												
CLINICAL OBSERVATION FOR STUDY WEEK 28		1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched			1			1								
Thin			1	1		2	2		2	2	2		2	
Wheezing		4	4	4	6	2	5	2	6	4	8	5	6	4
Dyspnea		4	2	3	5	1	3	1	3	3	6	4	4	3
Polypnea					1	1								
Eyes Opaque														1
		14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched								1	1		1	1	1	1
Thin		3		1	1	1	1	1	1		1	1	1	
Wheezing		8	3	7	6	5	9	3	5	7	6	4	6	5
Dyspnea		5	3		4	2	6	2	4	5	5	3	4	4
Polypnea				5										
Alopecia				1		1								
Rough Hair Coat			1								1			
Piloerection				1										
Desquamation				1										
Eyes Squinted										1				
Small Movable Tissue Mass									1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 29	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched					1				1				
Thin	1	1		1		2	7	2	5	5		1	
Wheezing	3	4	4	4	2	4	2	3	4	6	7	7	7
Dyspnea	3	3	3	4	1	3	2	3	2	6	5	4	5
Polypnea				1	1							2	
Eyes Opaque													1
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched										1	5	1	2
Thin	2		3	4	1	1				1	5	1	2
Wheezing	11	7	2	2	5	12	3	5	7	6	4	6	5
Dyspnea	6	4		5	2	9	2	4	6	5	4	5	5
Polypnea			1										
Alopecia			1		1								
Rough Hair Coat		1								1			
Eyes Squinted		1							1				
Piloerection			1										
Desquamation			1										
Chromodacryorrhea						1							
Small Movable Tissue Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

		INCIDENCE OF CLINICAL OBSERVATIONS												
		GROUP NUMBER												
CLINICAL OBSERVATION FOR STUDY WEEK 30		1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched										2	2		2	1
Thin		1		1	2	3	2	4	2	4	6	3	2	1
Wheezing		5	5	6	6	3	4	3	4	3	11	3	7	3
Dyspnea		5	3	6	6	3	3	3	3	3	9	3	6	3
Polypnea					1									
		14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched			1			2		3		2		5		2
Thin		1	2	5	1	3		5	1	6	1	6	2	5
Wheezing		9	3	5	9	9	12	4	7	11	8	8	7	10
Dyspnea		7	3	4	8	5	10	2	6	11	7	8	6	9
Polypnea				2		2			1				2	
Alopecia				1		1								
Rough Hair Coat			1								1	1		
Sores			1											
Eyes Opaque							1							
Piloerection				1										
Desquamation				1										
Soft Feces							1				1			
Eyes Squinted													1	

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 31	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched						1			2			2	1
Thin	1		1	2	3	1	3	3	5	7	2	5	1
Wheezing	2	5	5	7	3	9	3	5	3	9	3	7	3
Dyspnea	2	4	5	6	3	8	3	5	3	9	3	6	3
Polypnea		1		1		2		2	1	1	1		
Eyes Opaque													1
Soft Feces								1					
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched		1	1		1		2		2		3	1	2
Thin	3	3	6	1	3		3		3		5	2	2
Soft feces												1	
Wheezing	9	3	5	9	9	12	3	6	11	7	7	8	10
Dyspnea	9	3	4	8	7	11	3	6	11	7	7	8	9
Polypnea		1	2	1	2		1	2	1	1	4	4	3
Alopecia			1		1								
Rough Hair Coat		1								1			
Sores		1											
Piloerection			1										
Desquamation			1										
Eyes Squinted											1		
Small Movable Tissue Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 32	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched	1				1	1	1	1	1	1	1	2	
Thin	4		1		2	2	2	1	1	1	1	3	
Soft Feces					1								
Wheezing	7	4	5	7	5	11	4	8	5	8	6	10	3
Dyspnea	6	4	5	6	5	11	5	8	5	8	5	10	3
Polypnea	3	1	1	2	4	5	4	4	3	4	4	2	3
Alopecia				1									
Eyes Opaque													1
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched		3	2		2	3	4		1		1		
Thin	1	6	3		2	3	5	1	2		2	1	1
Soft Feces						1							
Wheezing	9	4	9	9	14	13	8	7	12	8	7	5	
Dyspnea	9	4	9	9	12	13	8	7	12	8	7	5	9
Polypnea	7	3	7	5	10	8	7	5	8	6	6	5	4
Alopecia			1		1								
Rough Hair Coat		1								1	1		
Eyes Opaque		1											
Piloerection			1										
Desquamation			1										
Eyes Squinted											1		
Small Movable Tissue Mass							1						

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 33	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched	2		1		3	3	1	1	3	2	2	1	
Thin	2	1	2		3	4	2	1	3	2	3	2	1
Soft Feces							1	1					
Wheezing	6	7	6	7	6	11	4	8	6	8	6	9	3
Dyspnea	6	7	6	7	6	11	4	8	6	8	6	9	3
Polypnea	4	5	2	2	5	6	3	4	4	4	4	4	3
Alopecia				1									
Eyes Opaque													1
2-24	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched	1	4	2	2	1		3		2				
Thin	3	4	3	3	1		3		3		1		
Soft Feces				1					1		2		
Wheezing	10	5	9	13	14	12	7	7	8	8	7	8	9
Dyspnea	9	5	9	13	14	12	7	7	11	8	7	8	9
Polypnea	7	4	7	9	9	10	6	5	8	6	6	5	4
Alopecia			1										
Rough Hair Coat		1	1							1			
Sores		1											
Eyes Opaque						1							
Piloerection			1										
Desquamation			1										
Small Movable Tissue Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 34	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched	2		1		3			1	1	1	2	1	
Thin	3		2		3			1	1	1	3	2	1
Wheezing	6	10	4	11	7	12	4	7	6	8	7	10	6
Dyspnea	4	10	5	11	7	12	4	7	6	8	7	3	6
Polypnea	3	3	5	6	5	6	3	3	4	4	5		3
Alopecia				1									
Eyes Opaque													1
2-25	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched	1	4	2	2	2		3		2		2		
Thin	3	4	3	3	2		3		2		2		
Soft Feces			2		1	1							
Wheezing	11	6	8	13	15	13	8	7	14	7	8	8	10
Dyspnea	11	4	8	13	15	13	8	7	14	7	8	8	10
Polypnea	6		8	10	11	11	7	7	11	6	7	5	7
Alopecia		1	1										
Rough Hair Coat			1							1	1		
Sores		1											
Eyes Opaque						1							
Piloerection			1										
Desquamation			1										
Small Movable Tissue Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 35	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched	1				1								
Thin	1	1			1								
Wheezing	6	9	6	11	7	12	4	7	6	8	7	10	5
Dyspnea	6	9	6	11	7	12	4	7	6	8	7	10	5
Polypnea	5	2	5	10	7	8	4	6	6	8	6	6	5
Alopecia				1									
Eyes Opaque													1
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched					1				2		1		
Thin					1				2		1		
Soft Feces	1												
Wheezing	10	7	9	13	14	13	6	7	14	7	8	8	10
Dyspnea	10	7	9	13	14	13	6	7	14	7	8	8	10
Polypnea	6	5	7	11	11	11	5	7	13	6	7	5	8
Rough Hair Coat			1							1	1		
Piloerection													
Desquamation			1										
Eyes Squinted						1							
Small Movable Tissue Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 36	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched			1	2		2	1	3		3			
Thin		1	1	2		2	1	3		3			
Wheezing	9	4	7	16	3	15	11	12	12	13	7	10	5
Dyspnea	9	3	7	16	3	15	11	12	12	13	7	10	5
Polypnea	6		7	14	3	13	9	11	8	13	7	8	5
Rough Hair Coat				1									
Eyes Opaque													1
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched	1		2		1			1	3		1	1	1
Thin	1		2		1			1	3		1	1	1
Wheezing	12	7	10	13	14	13	7	9	15	10	7	8	10
Dyspnea	12	7	10	13	14	13	7	9	15	10	7	8	10
Polypnea	9	7	9	13	11	12	5	8	14	8	7	8	9
Alopecia			1								1		
Rough Hair Coat			1							1	1		
Sores		1											
Desquamation			1										
Piloerection			1										
Small Movable Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 37	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched		5	3	7	5	7	4	5	5	4	2	3	
Thin		5	3	7	5	7	4	5	5	4	2	3	
Wheezing	8	14	11	17	12	15	13	13	12	14	7	11	8
Dyspnea	8	14	11	17	12	15	13	13	12	14	7	11	8
Polypnea	8	12	10	16	12	15	11	11	12	12	7	11	7
Alopecia					1								
Eyes Opaque													1
Soft Feces	1												
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched	3		2	7	4	4	1	4	4	2	3	1	2
Thin	3		2	7	4	4	1	4	4	2		1	2
Wheezing	13	9	15	16	15	15	11	12	18	11	8	8	10
Dyspnea	13	9	15	16	14	14	11	12	18	11	8	8	10
Polypnea	11	9	14	16	14	15	7	10	18	8	8	8	9
Rough Hair Coat		1								1	1		
Eyes Opaque						1							
Small Movable Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 38	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched		5	4	7	5	7	2	4	5	4		3	
Thin		5	4	7	5	7	2	4	5	4		3	
Soft Feces	1		2				1					1	
Wheezing	7	10	8	16	10	12	6	6	11	10	5	9	5
Dyspnea	7	10	8	16	10	12	5	6	11	10	5	9	5
Polypnea	6	8	8	16	10	12	5	6	10	10	5	9	5
Alopecia				1									
Eyes Opaque													1
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched	3	1	4	1	5	3	1	4	7				4
Thin	3	1	4	2	9	3	1	4	7				4
Soft Feces			1										
Wheezing	10	7	10	7	9	10	9	12	20	10	7	11	10
Dyspnea	10	7	10	7	9	10	9	12	19	11	7	11	9
Polypnea	9	7	10	7	9	10	9	10	18	9	7	8	9
Rough Hair Coat			1							1			
Sores		1											
Erectile			1										
Desquamation			1		1								
Eyes Opaque						1							
Small Movable Mass								1					

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INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 39	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched		3	2	7	3	6	1	3	2	1	1	4	7
Thin		3	2	7	3	6	1	3	2	1	1	4	7
Wheezing	9	11	10	15	10	15	9	12	11	13	6	12	5
Dyspnea	9	11	9	15	10	15	9	12	11	13	6	12	
Polypnea	8	9	9	16	10	12	6	10	11	12	6	11	
Alopecia				1									
Eyes Opaque													1
Soft Feces		1			1						1		
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched	2	1	4	2	4	2	3	4	4	1	2	2	3
Thin	2	1	4	2	4	2	3	4	4	1	2	2	3
Wheezing	10	10	12	8	8	12	9	12	20	12	9	11	12
Dyspnea	10	10	12	8	8	12	9	12	20	12	9	11	12
Polypnea	10	7	11	7	8	10	9	12	20	11	7	10	11
Alopecia			1										
Rough Hair Coat			1							1	1		
Sores		1	1										
Eyes Opaque						1							
Soft Feces			1		1								
Eyes Squinted											2		
Small Movable Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 40	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched	2	3	2	5	2	7	1	5		3	1	4	
Thin	2	3	2	5	2	7	1	5	2	3	1	4	
Soft Feces			1		1	1	2		1	1			
Wheezing	12	12	12	18	10	19	13	13	14	17	7	11	7
Dyspnea	12	12	12	18	10	19	13	13	14	17	7	11	7
Polypnea	10	10	11	17	10	18	8	13	12	15	7	11	7
Alopecia				1									
Eyes Opaque													1
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched	2	1	3	2	4	2	4	3	2	3	2	5	2
Thin	2	1	3	2	4	2	4	3	2	3	2	5	2
Soft Feces					1		1						
Wheezing	8	8	8	10	13	10	10	12	18	12	9	11	12
Dyspnea	8	8	8	10	13	10	10	12	18	12	9	11	12
Polypnea	8	8	8	10	10	10	9	12	18	12	8	11	12
Alopecia			1										
Rough Hair Coat			1							1	1		
Sores		1											
Eyes Squinted					1						2		
Small Movable Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 41	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched	1	1	3	3	2	4	1	3	1		1	4	
Thin	1	1	3	3	2	4	1	3	1		2	4	
Wheezing	12	12	12	18	10	18	13	13	14	17	5	9	6
Dyspnea	12	12	12	18	10	18	13	13	14	17	5	9	6
Polypnea	12	12	12	18	10	18	12	13	12	15	5	9	6
Alopecia				1									
Soft Feces					1						1		1
Eyes Squinted													1
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched	2	1	4	2	3	4	5	2	2	3	1	4	2
Thin	2	1	4	2	3	4	5	2	2	3	1	4	2
Wheezing	9	7	13	14	12	17	12	12	18	12	9	10	12
Dyspnea	9	7	13	14	12	17	12	12	18	12	9	10	12
Polypnea	9	7	13	13	12	16	11	12	18	12	9	10	12
Alopecia			1										
Rough Hair Coat			1							1	1		
Sores		1	1										
Eyes Opaque						1							
Piloerection			1										
Desquamation			1										
Soft Feces						1							
Eyes Squinted			1								2		
Small Movable Tissue Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 42	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched	1	1	2	2	4	3	2	3	2	5	2	4	4
Thin	1	1	2	2	4	3	2	3	2	5	2	4	4
Soft Feces												1	
Wheezing	12	14	12	18	10	13	14	13	14	17	7	10	7
Dyspnea	12	14	12	18	10	13	14	13	14	17	7	10	7
Polypnea	12	13	12	18	10	13	13	13	14	17	5	8	
Eyes Opaque													1
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched	3	5	6	5	4	4	2	6	4	4	1	3	2
Thin	3	5	6	5	4	4	2	6	4	4	1	3	2
Soft Feces				1									
Wheezing	10	7	15	15	14	18	11	13	18	13	11	12	13
Dyspnea	10	7	15	15	14	18	11	13	18	13	11	12	13
Polypnea	9	7	12	14	12	17	10	12	18	13	9	10	12
Alopecia			1							1			
Rough Hair Coat			1								1		
Sores		1	1										
Eyes Squinted											1		
Small Movable Tissue Mass								1					
Eyes Opaque						1					1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 43	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched	2	5	2	9	5	4	1	3	2	3	1	4	4
Thin	2	6	2	9	5	4	1	3	2	3	1	4	4
Wheezing	10	12	9	16	9	14	14	14	15	18	7	9	7
Dyspnea	10	12	9	16	9	14	14	14	15	18	7	9	7
Polypnea	10	12	9	16	9	13	14	12	14	17	7	9	7
Alopecia				1									
Eyes Opaque													1
Soft Feces								1					
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched	3	6	1	4	3	5	3	3	3	2	3	3	3
Thin	3	6	2	5	3	5	3	4	3	2	3	3	3
Wheezing	11	8	5	10	10	12	4	13	18	15	11	13	13
Dyspnea	11	8	4	8	9	11	5	13	18	15	10	12	13
Polypnea	11	8	4	2	2	5	1	13	18	13	10		13
Alopecia			2										
Rough Hair Coat			1							1	1		
Sores		1											
Eyes Opaque						1					1		
Soft Feces	1					1							
Eyes Squinted					1		1						
Small Movable Tissue Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 44	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched	1	3	2	6	3	3	1	3	2	3	3	2	2
Thin	1	3	2	6	3	3	1	3	2	3	3	2	2
Soft Feces		1											
Wheezing	13	12	9	16	10	14	13	14	16	18	9	9	7
Dyspnea	13	12	9	16	10	14	13	14	16	18	9	9	7
Polypnea	10	11	9	16	8	14	13	14	14	18	9	9	7
Alopecia				1									
Small Movable Tissue Mass						1							
Eyes Opaque													1
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched	4	6	1	4	2	2	2	3	3	3	3	2	
Thin	4	6	2	5	2	2	2	3	3	3	3	2	
Soft Feces								1				1	
Wheezing	11	9	5	10	11	14	6	16	18	17	11	13	14
Dyspnea	11	9	4	8	11	14	6	16	18	17	11	13	14
Polypnea	11	9	4	2	6	9	3	14	18	14	10	13	13
Alopecia			2				1						
Rough Hair Coat										1	1		
Sores		1	1										
Eyes Squinted					1		1				1		
Small Movable Tissue Mass								1					
Eyes Opaque											1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 45	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched	1	3	2	6	3	4		1	3	2	1	3	
Thin	1	3	2	6	3	4		1	3	2	1	3	
Wheezing	13	12	10	16	11	14	13	15	17	18	9	11	7
Dyspnea	13	12	10	16	11	14	13	15	17	18	9	11	7
Polypnea	10	11	9	16	9	14	13	15	14	18	9	9	7
Alopecia				1									
Eyes Opaque													1
Soft Feces	1	1							1				
Eyes Squinted							1						
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched		2	6	1	2	2	2	1	1		2		1
Thin		2	6	1	2	2	2	1	1		2		1
Soft Feces			1				1						
Wheezing	10	9	8	13	13	14	10	16	21	17	12	14	14
Dyspnea	10	9	8	13	13	14	10	16	21	17	12	14	14
Polypnea	10	9	5	9	10	9	7	13	19	14	10	13	13
Alopecia			2										
Rough Hair Coat										1	1		
Sores		1	1		1						1		
Eyes Squinted							1						
Small Movable Tissue Mass								1					
Eyes Opaque						1					1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 46	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched	1		2	2	2	5	1	1				1	1
Thin	1		2	2	2	5	1	1				1	1
Wheezing	13	14	11	17	12	18	13	16	16	16	9	10	7
Dyspnea	13	14	11	17	12	18	13	16	16	16	9	10	7
Polypnea	11	13	10	17	9	15	13	15	13	16	9	9	7
Alopecia				1									
Eyes Opaque													1
Soft Feces	1									1			
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched			4		1	1	2		1				1
Thin			4		1	1	2		1				1
Soft Feces			1			1			1				
Wheezing	10	10	10	13	13	18	9	20	21	18	16	16	13
Dyspnea	10	10	10	13	13	18	9	20	21	18	16	16	13
Polypnea	10	10	6	11	12	14	7	14	19	15	12	13	12
Alopecia			2										
Rough Hair Coat										1	1		
Sores		1	1		1								
Eyes Squinted											1		
Eyes Opaque								1			1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 47	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched	1		4	1	1	3	3	2		5		3	
Thin	1		4	1	1	3	3	2		5		3	
Wheezing	14	14	11	17	12	18	13	17	15	16	9	9	9
Dyspnea	14	14	11	17	12	18	13	17	15	16	9	9	9
Polypnea	12	13	10	17	9	15	13	16	13	16	9	9	8
Alopecia				1									
Sores	1											1	
Eyes Opaque													1
Soft Feces	1									1	1		
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched			2			1	1						
Thin			2			1	1						
Soft Feces	1	1							1				
Wheezing	11	10	11	14	13	18	10	20	20	18	15	16	13
Dyspnea	11	10	11	14	13	18	10	20	20	18	15	16	13
Polypnea	9	9	7	12	12	14	7	15	18	15	11	14	12
Alopecia			2										
Rough Hair Coat										1	1		
Sores		1	1		1								
Eyes Squinted											1		
Small Movable Tissue Mass								1					
Eyes Opaque											1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 48	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched	1						1	1			2		1
Thin	1						1	1			2		1
Wheezing	14	15	11	17	12	15	13	18	15	14	8	8	10
Dyspnea	14	15	11	17	12	15	13	18	15	14	8	8	10
Polypnea	12	13	11	17	10	12	13	16	14	14	8	7	9
Rough Hair Coat												1	
Sores	1												
Eyes Opaque													1
Soft Feces										1	1		
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched		1	1				1						
Thin		1	1				1						
Soft Feces									1				
Wheezing	14	10	11	14	13	17	10	19	20	18	15	16	13
Dyspnea	14	10	11	14	13	17	10	19	20	18	15	16	13
Polypnea	12	9	9	12	12	13	7	13	18	15	11	14	12
Alopecia			2										
Rough Hair Coat											1		
Eyes Squinted											1		
Small Movable Tissue Mass								1					
Eyes Opaque											1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 49	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched						1		1					
Thin						1		1					
Wheezing	14	15	11	17	12	15	14	21	15	15	9	8	10
Dyspnea	14	15	11	17	12	15	14	21	15	15	9	8	10
Polypnea	13	14	11	17	10	13	13	16	14	14	9	8	9
Alopecia													
Rough Hair Coat												1	
Sores	1												
Eyes Opaque													1
Piloerection													
Desquamation													
Soft Feces											1		

	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched			1		2	1	3	2		5	3	1	2
Thin			1		2	1	3	2		5	3	1	2
Soft Feces										1			
Wheezing	14	10	11	14	14	17	9	20	20	18	16	16	13
Dyspnea	14	10	11	14	14	17	9	20	20	18	16	16	13
Polypnea	9	9	9	12	12	13	7	14	18	15	11	14	12
Alopecia			2					1				1	1
Rough Hair Coat		1			1						1		
Sores													
Piloerection													
Desquamation													
Eyes Squinted											1		
Eyes Opaque											1		
Small Moveable Tissue Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 50	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched						1							
Thin						1							
Wheezing	14	16	11	16	11	16	14	19	15	15	10	8	10
Dyspnea	14	16	11	16	11	16	14	19	15	15	10	8	10
Polypnea	13	14	11	16	9	13	13	16	14	14	9	8	9
Alopecia				1		1							
Rough Hair Coat												1	
Sores	1												
Eyes Opaque													1
Piloerection													
Desquamation													
Soft Feces													
Eyes Squinted													

	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched			1										
Thin			1		2								
Soft Feces													
Wheezing	13	10	11	14	16	17	9	20	21	18	14	16	13
Dyspnea	13	10	11	14	16	17	9	20	21	18	14	16	13
Polypnea	11	8	9	11	13	14	6	14	8	15	11	14	12
Alopecia			2					1				1	1
Rough Hair Coat											1		
Sores		1	1		1								
Piloerection													
Desquamation													
Eyes Squinted											1		
Eyes Opaque											1		
Small Moveable Tissue Mass							1						

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 51	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched		1		1	1			1					
Thin		1		1				1					
Wheezing	12	12	13	14	10	15	14	19	14	15	12	8	10
Dyspnea	12	12	13	14	10	15	14	19	14	15	12	8	10
Polypnea	9	12	12	11	9	14	13	16	13	14	10	8	10
Alopecia						1							
Rough Hair Coat				1								1	
Sores	1												
Eyes Opaque													1
Piloerection													
Desquamation													
Soft Feces											1		
Eyes Squinted				1									
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched					1				3				
Thin					1				3				
Soft Feces					1								
Wheezing	13	11	12	15	14	17	10	20	22	18	15	16	13
Dyspnea	13	11	13	15	14	17	10	20	22	28	15	16	13
Polypnea	12	8	9	11	13	14	6	14	19	15	11	14	12
Alopecia			2					1					1
Rough Hair Coat													
Sores		1	1		2								
Piloerection													
Desquamation													
Eyes Squinted											1		
Small Moveable Tissue Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 52	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched		1										1	
Thin		1										1	
Wheezing	12	14	13	13	10	15	14	18	14	14	14	10	12
Dyspnea	12	14	13	13	10	15	14	18	14	14	14	10	12
Polypnea	9	11	12	10	9	13	13	16	13	13	11	8	11
Alopecia				1		1							
Rough Hair Coat					1							1	
Sores	1												
Eyes Opaque													
Piloerection													
Desquamation													
Soft Feces													
Eyes Squinted				1									
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched											1		
Thin													
Soft Feces													
Wheezing	14	11	12	7	5	8	4	8	8	14	7	7	11
Dyspnea	14	11	12	7	4	7	3	16	11	11	12	13	10
Polypnea	12	8	9	9	7	8	6	15	17	16	15	25	23
Alopecia			2										
Rough Hair Coat													
Sores		1	1		1								
Piloerection													
Desquamation													
Eyes Squinted											1		
Small Moveable Tissue Mass													
Chromodacryorrhea											1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 53	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched													
Thin													
Wheezing	12	13	13	13	10	15	14	18	13	13	15	11	12
Dyspnea	12	13	13	13	10	15	14	18	13	12	15	11	12
Polypnea	9	10	12	11	9	14	13	16	12	9	11	8	11
Alopecia													
Rough Hair Coat					1								
Sores													
Eyes Opaque													
Piloerection													
Desquamation													
Soft Feces													
Eyes Squinted									1				
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched								1	1	2		1	1
Thin								1	1	2		1	1
Soft Feces												1	
Wheezing	14	11	13	16	13	17	10	22	19	26	23	16	26
Dyspnea	14	11	10	14	13	17	9	21	18	25	21	16	22
Polypnea	12	8	9	9	7	9	7	19	16	16	16	14	23
Alopecia			2					1					
Rough Hair Coat													
Sores			1										
Piloerection													
Desquamation													
Eyes Squinted											1		
Small Moveable Tissue Mass								1					
Chromodacryorrhea											1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
CLINICAL OBSERVATION WEEK: 54	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched								1					
Thin													
Wheezing	13	13	13	15	10	15	14	18	13	13	15	11	12
Dyspnea	13	13	13	15	10	15	14	18	13	13	15	11	12
Polypnea	9	10	12	11	9	14	13	16	12	11	12	8	10
Alopecia				1									
Rough Hair Coat													
Sores	1				1	1							
Eyes Opaque													1
Piloerection													
Desquamation													
Soft Feces										1			
Eyes Squinted				1					1				
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched					1				1				
Thin					1								
Soft Feces													
Wheezing	13	11	13	16	13	17	10	22	18	26	22	16	26
Dyspnea	13	11	13	15	13	17	10	22	18	26	22	16	26
Polypnea	10	8	9	11	8	9	7	19	15	16	15	14	23
Alopecia			2		2			1				1	
Rough Hair Coat													1
Sores		1	1										
Piloerection													
Desquamation													
Eyes Squinted											1		
Small Moveable Tissue Mass								1					
Chromodacryorrhea											1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION WEEK: 55

	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched		1										1	
Thin	1	1										1	
Wheezing	13	12	13	14	10	15	14	17	13	12	15	9	12
Dyspnea	13	12	13	14	10	15	14	17	13	12	15	9	12
Polypnea	9	10	12	11	9	14	13	15	12	10	12	5	11
Alopecia				1									
Rough Hair Coat													
Sores	1				1	1							
Eyes													1
Piloerection													
Desquamation													
Soft Feces													
Eyes Squinted				1					1				

	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched		1	1						1	1		1	
Thin		1	1						1	1		1	
Soft Feces													
Wheezing	12	11	12	16	12	17	11	23	19	26	22	16	26
Dyspnea	12	11	13	16	12	17	11	22	19	26	22	16	26
Polypnea	9	8	10	11	8	9	8	19	16	16	16	14	23
Alopecia			2					1				1	
Rough Hair Coat												1	
Sores		1	1		1								
Piloerection													
Desquamation													
Eyes Squinted											1		
Small Moveable Tissue Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
CLINICAL OBSERVATION WEEK: 56	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched	1			1		1		1		2			
Thin	1			1		1		1					
Wheezing	12	12	13	15	11	15	14	17	13	13	15	9	12
Dyspnea	12	12	13	15	11	15	14	17	13	13	15	9	12
Polypnea	8	10	12	12	10	14	13	15	12	10	12	6	11
Alopecia	1			1									
Rough Hair Coat				1									
Sores						1							
Eyes Opaque													1
Piloerection													
Desquamation													
Soft Feces	1	1	1		1								
Eyes Squinted				1					1				
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched	1		1	1	1	1			3				
Thin	1		1	1	1	1			3				
Soft Feces			1										
Wheezing	11	11	13	17	11	17	12	23	19	26	22	16	25
Dyspnea	11	11	13	17	11	17	12	23	19	26	22	16	25
Polypnea	9	8	10	13	9	11	10	19	16	16	15	14	22
Alopecia								1					
Rough Hair Coat													
Sores		1											
Piloerection													
Desquamation													
Eyes Squinted													
Small Moveable Tissue Mass								1					
Eyes Opaque											1	1	

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
CLINICAL OBSERVATION WEEK: 57	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched			1		2	3	1	2	5	2	2		2
Thin			1		2	3	1	2	5	2	2		2
Wheezing	12	13	13	16	11	15	14	17	13	11	16	8	12
Dyspnea	12	13	13	16	10	15	14	17	13	11	16	8	12
Polypnea	8	10	13	12	10	14	13	15	12	10	13	5	11
Alopecia				1									1
Rough Hair Coat													
Sores													
Eyes Opaque				1					1				1
Piloerection													
Desquamation													
Soft Feces													
Eyes Squinted													
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched	1		3	1		2	1	4	3	2	2	1	2
Thin	1		3	1		2	1	4	3	2	2	1	2
Soft Feces												1	
Wheezing	8	11	13	17	10	16	12	23	17	26	22	16	24
Dyspnea	8	11	13	17	10	16	12	23	17	26	22	16	29
Polypnea	8	9	10	13	8	10	10	19	14	16	14	14	20
Alopecia			2					1				1	
Rough Hair Coat													
Sores		1	1										
Piloerection													
Desquamation													
Eyes Squinted											1		
Small Moveable Tissue Mass								1					

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK : 58	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched						1		1	1	2		2	3
Thin						1		1	1	2		2	4
Wheezing	12	12	13	15	11	16	14	17	14	13	16	9	13
Dyspnea	12	12	13	15	11	16	14	17	14	13	16	9	13
Polypnea	8	9	13	11	10	14	13	15	13	9	13	5	11
Alopecia	1			1									

	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched	3	2	3	1	1	1	1	4	2			1	1
Thin	3	2	3	1	1	1	1	4	2			1	1
Wheezing	10	11	13	17	11	17	13	23	17	26	22	15	25
Dyspnea	10	11	13	17	11	17	13	28	17	26	22	15	25
Polypnia	8	9	12	13	9	10	11	18	15	16	15	13	20
Alopecia			2										
Rough Hair Coat			1										
Sores		1								1			
*Soft Feces												1	

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK : 59	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched		2		1		3	1	3		2			
Thin		2		1		3	1	3		2			
Wheezing	12	11	13	15	11	13	14	16	14	11	16	9	13
Dyspnea	12	11	13	15	11	13	14	16	14	11	16	9	13
Polypnea	8	8	13	11	10	11	13	14	13	9	13	5	11
Alopecia				1									1
Eyes Opaque													1

	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched			2	1	2	2		1	2	1	4	1	1
Thin			2	1	2	2		1	2	1	4	1	1
Wheezing	7	10	12	17	11	16	12	23	17	26	22	15	24
Dyspnea	7	10	12	17	11	16	12	22	17	26	22	15	24
Polypnia	5	8	11	13	9	10	10	19	15	16	15	13	21
Alopecia			2										
Sores		1	1										
Eyes Squinted											1		

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

INCIDENCE OF CLINICAL OBSERVATIONS

GROUP NUMBER

CLINICAL OBSERVATION FOR STUDY WEEK: 60

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched								2					
Thin								2					
Wheezing	11	11	13	15	11	12	14	16	14	11	17	9	13
Dyspnea	11	11	13	15	11	12	14	16	14	11	17	9	13
Polypnea	7	8	13	11	10	10	13	15	13	9	13	6	11
Alopecia	1												1
Eyes Opaque													1

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	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched			2	1		2			2		3		
Thin			2	1		2			2		3		
Soft Feces						1							
Wheezing	6	11	12	18	10	16	12	22	15	26	23	15	25
Dyspnea	6	11	12	18	10	16	12	21	15	26	23	15	25
Polypnia	4	8	8	13	8	10	10	19	13	17	16	13	21
Alopecia			2							1			
Sores		1	1										
Eyes Squinted											1		
Small Movable Tissue Mass							1						

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK: 61	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched					3								
Thin					3								
Wheezing	10	10	13	14	11	4	6	8	4	4	11	11	11
Dyspnea	10	10	13	14	11	3	8	7	9	4	13	11	13
Polypnea	7	8	13	11	10	12	15	19	21	10	10	4	7
Alopecia	1												1
Sores									1				
Eyes Opaque													1

	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched			4		2	1	2	2	2		3		2
Thin			4		2	1	2	2	2		3		2
Wheezing	6	11	11	18	9	15	11	22	14	26	21	15	24
Dyspnea	6	11	11	18	9	15	11	22	14	26	21	15	24
Polypnia	2	5	9	14	7	11	9	19	12	18	17	13	20
Alopecia			1					1		1			
Sores		1	1										
Eyes Squinted											1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 62	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched					1		1	1	1			1	
Thin					1		1	2	1			1	
Wheezing	10	10	12	14	10	12	15	15	12	10	15	11	13
Dyspnea	10	10	12	14	11	12	15	15	13	10	15	11	13
Polypnea	7	8	12	11	10	10	14	13	12	8	10	6	6
Alopecia	1										1		1
Rough Hair Coat													
Sores													
Eyes Opaque													1
Piloerection													+
Desquamation													
Soft Feces											1		
Eyes Squinted													

	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched				1	1	1	1	1	2		1		1
Thin				1	1	1	1	1	2		1		1
Soft Feces													
Wheezing	8	11	11	19	13	16	13	22	14	26	20	16	23
Dyspnea	8	11	11	19	13	16	13	21	14	26	20	16	23
Polypnia	4	5	10	14	7	11	10	19	12	18	16	13	19
Alopecia			1					1		1			
Rough Hair Coat													
Sores		1	1										
Piloerection													
Desquamation													
Eyes Squinted											1		
Small Moveable Tissue Mass							1						

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 63	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched					1		2	1	2			1	
Thin					1		3	2	3			1	
Wheezing	10	11	13	16	11	13	15	15	13	10	15	12	13
Dyspnea	10	11	13	16	11	13	15	15	13	10	15	12	13
Polypnea	7	8	12	11	10	10	14	13	12	8	11	7	6
Alopecia	1										1		1
Rough Hair Coat													
Sores													
Eyes Opaque													1
Piloerection													
Desquamation													
Soft Eyes		1											
Eyes Squinted													
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched			3	5	2		1	3	4		1		
Thin			3	5	2	2	2	4	4		1		
Soft Feces							1						
Wheezing	8	11	11	19	15	16	13	21	13	25	18	15	22
Despnea	8	11	11	19	15	16	13	21	13	25	18	15	22
Polypnia	4	5	10	14	9	12	10	19	13	19	14	12	18
Alopecia			1					1		1			
Rough Hair Coat													
Sores		1	1										
Piloerection													
Desquamation													
Eyes Squinted					1	1							
Soft Moveable Tissue Mass													

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 64	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched				2		1	3	1	1		1	3	
Thin				2		1	3	1	1		1	3	
Wheezing	11	11	13	16	11	15	16	16	13	12	16	14	17
Dyspnea	11	11	13	16	11	15	16	16	13	12	16	14	17
Polypnea	7	8	12	11	10	11	14	15	11	8	12	8	8
Alopecia	1										1		1
Rough Hair Coat													
Sores											1		
Eyes Opaque													1
Piloerection													
Desquamation													
Soft Feces													
Eyes Squinted													
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched				2	2	1		2	1				
Thin				2	2	1		2	1				
Wheezing	11	14	12	21	15	16	12	22	12	25	18	16	22
Dyspnea	11	14	12	21	15	16	12	22	12	25	18	16	22
Polypnea	4	7	10	14	8	11	9	19	10	19	15	12	18
Alopecia			1					1		1			
Rough Hair Coat													
Sores		1	1										
Piloerection													
Desquamation													
Eyes Squinted					1						1		
Small Moveable Tissue Mass								1					

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 65	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched							2	4		2		4	
Thin							2	4		2		4	
Wheezing	11	13	14	16	11	15	18	18	14	14	16	16	17
Dyspnea	11	13	14	16	11	15	18	18	14	14	16	16	17
Polypnea	7	8	12	13	10	10	14	16	12	10	13	10	8
Alopecia	1										1		1
Rough Hair Coat													
Sores											1		
Eyes Opaque													1
Piloerection													
Desquamation													
Soft Feces													
Eyes Squinted													
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched						1		3	1				
Thin						1		3	1				
Soft Feces													
Wheezing	12	14	14	21	13	16	13	22	12	25	18	16	22
Despnea	12	14	14	21	13	16	13	22	12	25	18	16	22
Polypnia	8	7	10	14	8	11	8	19	9	19	15	12	18
Alopecia			1					1		1			
Rough Hair Coat													
Sores		1	1										
Piloerection													
Desquamation													
Eye Squinted													
Small Moveable Tissue Mass													

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 66	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched		1				2	1	4		1		1	
Thin		1				2	1	4		1		1	
Wheezing	11	14	14	17	11	18	18	21	14	13	17	15	17
Dyspnea	11	14	14	17	11	18	18	21	14	13	17	15	17
Polypnea	8	9	12	12	9	12	14	17	12	10	12	8	8
Alopecia	1										1		1
Rough Hair Coat													
Sores											1		
Eyes Opaque													1
Piloerection													
Desquamation													
Soft Feces							1	1					
Eyes Squinted													

	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched		1	2		1				1		1		
Thin		1	2		1				1		1		
Soft Feces													
Wheezing	12	14	14	20	13	17	13	23	12	25	17	16	22
Dyspnea	12	14	14	20	13	17	13	23	12	25	17	16	22
Polypnea	8	7	11	14	10	11	8	19	12	19	14	11	18
Alopecia			1					1					
Rough Hair Coat													
Sores		1											
Piloerection													
Desquamation													
Eyes Squinted											1		
Small Moveable Tissue Mass													

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 67	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched				1		1	1	3		1		1	
Thin				1		1	1	3		1		1	
Wheezing	12	14	14	16	11	17	18	20	14	13	17	18	18
Dyspnea	12	14	14	16	11	17	18	20	14	13	17	18	18
Polypnea	8	8	12	12	9	11	15	16	12	11	13	9	10
Alopecia											1		
Rough Hair Coat													
Sores											1		
Eyes Opaque													
Piloerection													
Desquamation													
Soft Feces													
Eyes Squinted													

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK:68	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched							1	3		1			
Thin							1	3		1			
Wheezing	14	14	16	15	13	17	22	18	14	13	19	18	22
Dyspnea	14	14	16	15	13	17	22	18	14	13	19	18	22
Polypnea	8	9	12	12	8	11	15	15	12	11	14	12	11
Alopecia											1		
Rough Hair Coat													
Sores													
Eyes Opaque													
Piloerection													
Desquamation													
Soft Feces							1						
Eyes Squinted													

	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched			3		2				2				
Thin			3		2				2				
Soft Feces													
Wheezing	12	16	18	21	17	20	16	24	12	24	17	17	22
Dyspnea	12	16	18	21	17	20	16	24	12	24	17	17	22
Polypnea	8	8	16	15	12	14	11	18	9	18	13	12	17
Alopecia			1					1		1			
Rough Hair Coat													
Sores			1										
Piloerection													
Desquamation													
Eyes Squinted									1		1		
Small Moveable Tissue Mass													
Eyes Opaque											1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK: 69	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched						2		2		2			
Thin						2		2		2			
Wheezing	16	17	17	16	17	16	22	17	14	16	19	22	22
Dyspnea	16	17	17	16	17	16	22	19	14	16	19	22	22
Polypnea	9	10	13	13	10	11	14	16	12	12	14	14	11
Alopecia	1										1		
Rough Hair Coat													
Sores													
Eyes Opaque													
Piloerection													
Desquamation													
Soft Feces							1						
Eyes Squinted										1			
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched	1		2		2			1	2		2		2
Thin	1		2		2			1	2		2		2
Soft Feces													
Wheezing	16	16	18	22	19	21	15	26	16	26	26	23	22
Dyspnea	16	16	18	22	19	21	15	26	16	26	26	23	22
Alopecia	12	8	15	16	15	15	15	20	10	19	14	12	19
Rough Hair Coat								1		1			
Sores		1	1										
Piloerection													
Desquamation													
Eyes Squinted											1		
Small Moveable Tissue Mass								1					
Eyes Opaque		1			1						1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK: 70	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched	1		1	1	1	2		1		1			
Thin	1		1	1	1	2		1		1			
Wheezing	22	23	22	19	21	18	28	25	21	19	28	21	26
Dyspnea	22	23	22	19	21	18	28	25	21	19	28	21	26
Polypnea	10	13	15	13	14	11	19	18	13	13	16	19	13
Alopecia	1										1		
Rough Hair Coat										1			
Sores													
Sores													
Eyes Opaque													
Piloerection													
Desquamation													
Soft Feces													
Eyes Squinted													1
	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched	1	3	2		1								1
Thin	1	3	2		1								1
Soft Feces													
Wheezing	17	20	20	27	18	22	15	27	19	26	24	23	24
Dyspnea	17	20	20	27	18	22	15	27	19	26	24	23	24
Polypnia	12	11	16	18	15	14	15	20	13	19	17	13	19
Alopecia								1		2			
Rough Hair Coat													
Sores			1										
Piloerection													
Desquamation													
Eyes Squinted		1									1		
Small Moveable Tissue Mass								1					
Eyes Opaque									1		1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 71	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Wheezing	24	23	23	20	22	20	29	22	28	18	28	19	27
Dyspnea	24	23	23	20	22	20	29	22	28	18	28	19	27
Polypnea	13	13	16	12	16	12	20	18	15	13	16	18	16
Hunched	1			3	1		2	3		2			1
Thin	1			3	1		2	3		2			1
Alopecia	1										2		
Ataxia	1	1		1		1							
Eye Squinted						1		1					
Soft Feces						1							
Eyes Opaque													1
	14	15	16	17	18	19	20	21	22	23	24	25	26
Wheezing	16	19	20	31	17	25	15	31	19	29	23	25	23
Dyspnea	16	19	20	31	17	25	15	31	19	29	23	25	23
Polypnea	14	14	17	17	14	15	15	20	15	19	17	14	19
Hunched	2	3	6	3	1	1	1	2	3	1	2		
Thin	2	3	5	3	1	1	1	2	3	1	2		
Alopecia								3		2			2
Ataxia		2									1		1
Eye Opaque		2									1		
Rough Haircoat		1											
Soft Feces						1				1			
Lanquid						1							
Small Moveable Tissue Mass								1					
Eye Squinted									1		1		
Head Tilt													2
Tremors													2

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 72	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Wheezing	22	30	23	20	21	19	30	20	28	10	28	18	28
Dyspnea	22	30	23	20	21	19	30	20	28	10	28	18	28
Polypnea	11	18	17	12	16	14	21	18	16	14	15	17	17
Hunched		2		2			1	1	1	2	2		3
Thin		2		2			1	1	1	2	2		3
Alopecia	1												
Ataxia		1											
Opaque Eyes													1
Soft Feces							1		1				
Miosis											1		
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Wheezing	15	21	20	31	16	22	15	30	19	29	23	23	22
Dyspnea	15	21	20	31	16	22	15	30	19	29	23	23	22
Polypnea	13	15	17	19	14	16	15	22	15	20	22	14	18
Hunched	2	1	4	3			1	1	1	1	3		1
Thin	2	1	4	3			1	1	1	1	3		1
Alopecia	1							3		2			1
Lanquid						1							
Small Moveable Tissue Mass							1						
Squinted Eyes									1		1		
Opaque Eyes											1		1
Ataxia											1		1
Tremors													1
Head Tilt													1

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 73	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Wheezing	24	28	24	20	22	19	30	19	28	17	30	18	27
Dyspnea	24	28	24	20	22	19	30	19	28	17	30	18	27
Polypnea	13	16	18	12	16	14	21	17	17	13	15	17	18
Hunched		2	1	2	3		1	1		1	3		3
Thin		2	1	2	3		1	1		1	3		3
Alopecia	1										1		
Squinted Eyes			1										
Ataxia		1						1					
Soft Feces							1						
Opaque Eyes													1
Large Stationary Tissue Mass											1		1
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Wheezing	13	18	20	32	17	21	14	31	18	28	20	22	22
Dyspnea	13	18	20	32	17	21	14	31	18	28	20	22	22
Polypnea	10	14	19	18	15	15	14	21	14	20	19	14	18
Hunched	1		4	3	1		1	3		4	1	6	1
Thin	1		4	3	1		1	3		4	1	6	1
Alopecia	2							2		2			1
Soft Feces		1							1	1			
Languid						1							
Squinted Eyes									1		1		
Opaque Eyes											1		
Ataxia											1	1	1
Small Moveable Tissue Mass								1					
Paralysis												1	
Head Tilt													1
Tremors													1

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 74	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Wheezing	24	28	24	20	20	17	29	18	28	17	29	18	28
Dyspnea	24	28	24	20	20	17	29	18	28	17	29	18	28
Polypnea	13	16	20	13	15	13	23	16	17	13	17	17	18
Hunched		2	1	1		1		1	1	1			2
Thin		2	1	1		1		1	1	1			2
Alopecia	1										3		1
Eyes Squinted			1			1							
Eyes Opaque													1
Lanquid										1			
Ataxia		1											1
Head Tilt		1											
Large Stationary Tissue Mass											1		1
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Wheezing	13	18	19	33	15	24	14	30	15	27	30	21	19
Dyspnea	13	18	19	33	15	24	14	30	15	27	30	21	19
Polypnea	11	15	19	23	15	18	14	20	14	18	20	14	17
Hunched			5	2		1	1	1		3		5	
Thin			5	2		1	1	1		3		5	
Alopecia	2							1		2			2
Soft Feces		1				1							
Ataxia			2	1								1	1
Eyes Squinted						1			1		1		
Eyes Opaque											1		
Small Moveable Tissue Mass							1						
Head tilt													1
Tremors													1

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 75	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched	2	2	3	1		5		2		1	1	1	1
Thin	2	2	3	1		5		2		1	1	1	1
Wheezing	24	27	27	20	20	17	30	17	27	16	22	18	26
Dyspnea	24	27	27	20	20	17	30	17	27	16	32	18	26
Polypnea	13	16	20	12	15	13	20	15	17	14	16	17	17
Alopecia	1										3		1
Rough Hair Coat													
Sores													1
Eyes Opaque													
Piloerection													
Desquamation													
Soft Feces											1		
Eyes Squinted			1			1							
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched	1		2	2	1	1	1	3	2		3		
Thin	1		2	2	1	1	1	3	2		3		
Soft Feces													
Wheezing	13	18	17	32	14	24	14	29	15	25	20	21	20
Dyspnea	13	18	17	32	14	24	14	29	15	25	20	21	20
	12	15	17	23	14	19	14	19	14	18	20	14	18
Alopecia	1							1					
Rough Hair Coat													
Sores													
Piloerection													
Desquamation													
Eyes Squinted						1			1		1		
Small Moveable Tissue Mass								1					
Eyes Opaque											1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 76	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched		4	1		2	2		2	1	1			1
Thin		4	1		2	2		2	1	1			1
Wheezing	24	25	27	18	21	17	29	16	26	14	32	18	26
Dyspnea	24	25	27	18	21	17	29	16	26	14	32	18	26
Polypnea	15	18	20	12	21	13	23	16	18	14	17	17	17
Alopecia	1		1										
Rough Hair Coat											3		
Sores													
Eyes Opaque													1
Piloerection													
Desquamation													
Soft Feces											1		
Eyes Squinted			1			1							
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched			2	1	1	1	1		2		3	1	
Thin			2	1	1	1	1		2		3	1	
Soft Feces													
Wheezing	13	17	15	30	11	24	14	28	15	26	20	21	19
Dyspnea	13	17	15	30	11	24	14	28	15	26	20	21	19
Polypnea	12	14	15	21	11	19	14	20	15	19	20	15	17
Alopecia	2							1		2			1
Rough Hair Coat													
Sores													
Piloerection													
Desquamation													
Eyes Squinted						1							
Small Moveable Tissue Mass													

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 77	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched		3	2	1	3	4	4	3	2	1		4	3
Thin		3	2	1	3	4	4	3	2	1		3	3
Wheezing	22	21	26	19	18	17	29	15	26	13	29	18	27
Dyspnea	22	22	26	19	18	17	29	15	26	13	29	18	27
Polypnea	16	16	19	13	17	16	25	15	19	12	18	17	18
Alopecia	1		1								3		1
Rough Hair Coat													
Sores													
Eyes Opaque						1							
Piloerection													
Desquamation													
Soft Feces				1			1						
Eyes Squinted								1					1
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched	3	1	6	2		2	2	1	1	2	2	1	1
Thin	3	1	6	1		2	2	1	1	2	2	1	1
Soft Feces		1											
Wheezing	12	17	14	29	11	24	14	28	11	26	19	21	17
Dyspnea	12	17	14	29	11	24	14	29	11	26	19	21	18
Polypria	11	14	14	22	11	21	14	20	10	19	19	15	18
Alopecia	1		1	1					1	1		1	1
Rough Hair Coat													
Sores													
Piloerection													
Desquamation													
Eyes Squinted													
Small Moveable Tissue Mass													

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 78	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched	4	4			1	5	3	3	3	2	1	1	3
Thin	4	4			1	5	3	3	3	2	1	1	3
Wheezing	24	24	24	19	18	15	29	15	24	13	20	16	29
Dyspnea	24	24	24	19	18	15	29	15	24	13	20	16	29
Polynea	17	17	19	16	18	14	14	14	16	13	19	15	28
Alopecia											3		
Rough Hair Coat													
Sores													
Eyes Opaque													
Piloerection													
Desquamation													
Soft Feces													
Eyes Squinted													

	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched	3	1	2	1	2	1	2					1	
Thin	3	1	2	1	2	1	2					1	
Soft Feces		2											
Wheezing	10	18	12	29	11	24	13	23	11	26	19	20	17
Dyspnea	10	18	12	29	11	24	13	27	11	26	19	20	17
Polynea	10	17	12	22	11	19	13	19	11	19	19	14	15
Alopecia	1						1						
Rough Hair Coat													
Sores													
Piloerection													
Desquamation													
Eyes Squinted													
Small Moveable Tissue Mass													

2-70

[illegible]

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 80	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched		2		1		7	3	2	3	2	3	3	3
Thin		2		1		7	3	2	3	2	3	3	3
Wheezing	26	23	25	17	15	13	29	11	26	11	15	28	28
Dyspnea	26	23	25	17	15	13	29	11	26	11	15	28	28
Polypnea	18	19	22	15	15	13	25	11	20	10	13	22	22
Alopecia											2		
Soft Feces				1									

	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched	1	2	5	3	1	1		1		6			
Thin	1	2	5	3	1	1		1		6			
Wheezing	7	15	12	29	9	23	10	27	11	22	17	18	15
Dyspnea	7	15	12	29	9	23	10	27	11	22	17	18	15
Polypnea	7	15	12	22	9	19	9	19	11	17	17	12	15
Eyes Squinted						1							

750

[illegible]

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 82	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched	2	5	4	4	5	5	11	3	7	3	2	4	5
Thin	2	5	4	4	5	5	11	3	7	3	2	4	5
Wheezing	20	20	21	15	9	9	27	8	24	10	24	13	24
Dyspnea	20	20	21	15	9	9	27	8	24	10	24	13	24
Polypnea	19	19	18	15	9	9	26	8	24	10	19	13	23

	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched	1	2	3	4	1	4		6	2	6	4	2	1
Thin	1	2	3	4	1	4		6	2	6		2	1
Wheezing	5	9	8	31	8	22	10	26	10	22	12	16	10
Dyspnea	5	9	8	31	8	22	10	26	10	22	12	16	10
Polypnea	5	9	8	25	8	21	10	17	10	16	11	11	10

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

INCIDENCE OF CLINICAL OBSERVATIONS

GROUP NUMBER

CLINICAL OBSERVATION FOR STUDY WEEK 83

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched	9	5	2	4	2	3	5	4	3	3	2	5	4
Thin	4	1		1	1	1	2	3	1	2		1	3
Wheezing	22	16	19	12	8	8	24	8	23	10	24	12	24
Dyspnea	22	17	19	12	8	8	24	8	23	10	24	12	24
Polypnea	15	12	14	9	8	7	20	8	16	9	17	11	17
Alopecia	1						1				1	1	
Soft Feces				1			1						
Eyes Squinted													1

	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched	1	3	2	7		11	1	6	1	6	2	1	1
Thin	1	2	2	6	2	3		2		4	2		
Soft Feces		1		1					1				
Wheezing	5	9	7	28	8	22	9	25	6	20	12	18	9
Dyspnea	5	9	7	28	8	22	9	26	6	20	12	18	9
Polypnea	5	6	7	20	8	21	9	17	6	14	12	13	9
Alopecia									1	2		1	
Eyes Squinted											1		

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

INCIDENCE OF CLINICAL OBSERVATIONS

GROUP NUMBER

CLINICAL OBSERVATION FOR STUDY WEEK 84

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched	5	2	5	4	1	2	8	4	7	1	4	4	4
Thin	5	2	6	4	1	2	8	4	7	1	4	4	4
Wheezing	23	19	20	11	8	7	24	7	24	9	21	12	23
Dyspnea	23	19	20	11	8	7	24	7	24	9	21	12	23
Polypnea	22	18	19	11	8	7	24	7	22	9	20	11	22
Alopecia									1				1
Eyes squinted	1												
Soft feces				1									
Large stationary tissue mass											3		
Enlarged abdomen			1										
Extended penis											1		

	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched	3	2	1	6	2	4	3	14	3	7	3	2	3
Thin	3	2	1	6	2	4	3	14	3	7	3	2	3
Wheezing	5	9	6	28	8	22	9	30	7	20	11	17	8
Dyspnea	5	8	6	28	8	22	9	30	7	20	11	17	8
Polypnea	5	8	6	23	8	21	9	30	7	20	11	16	8
Alopecia										2			
Eyes squinted											1		
Soft feces		1				1							
Ataxia		1		1									
Paralysis		1											
Enlarged abdomen				1						1			
Extended penis				1									1

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

INCIDENCE OF CLINICAL OBSERVATIONS

CLINICAL OBSERVATION FOR STUDY WEEK 85	GROUP NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Hunched	9	5	4	4	2	1	10	4	3	3	5	3	2
Thin	6	2	1	2	1	1	4	1	2	1	1	1	2
Wheezing	21	17	19	11	8	6	24	5	22	9	22	10	21
Dyspnea	21	18	19	11	8	6	24	5	22	9	22	10	21
Polypnea	14	12	14	8	8	5	19	5	15	9	16	9	14
Alopecia	1									1			
Eyes squinted													1
Soft feces			1	1									
Large stationary tissue mass											1		
Ataxia		1				1							1
Enlarged abdomen			1									1	

	14	15	16	17	18	19	20	21	22	23	24	25	26
Hunched	1	1	2	8	1	11	1	8	1	7	1		
Thin	1	1	2	7	1	4	1	4		5	1		
Wheezing	5	5	6	26	8	21	8	25	6	19	11	17	7
Dyspnea	5	5	6	26	8	21	8	26	6	19	11	17	7
Polypnea	5	3	6	20	8	20	8	17	6	14	11	12	7
Alopecia									1	2		1	
Soft feces	1								1				
Large stationary tissue mass				1									
Ataxia				1									
Opaque left eye											1		
Enlarged abdomen										1			

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 86	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched	4	2	5	3	1		8	2	6	1	6	4	1
Thin	4	2	4	3	1		8	2	6	1	6	4	1
Wheezing	21	19	18	8	7	4	23	5	23	8	18	8	20
Dyspnea	21	19	18	8	7	4	23	5	23	8	18	8	20
Polypnea	20	18	16	8	7	4	23	5	23	8	17	8	19
Alopecia				1						1			1
Soft feces													
Swollen abdomen		1											
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched	1	2		3	2	5		7	2	2	4	2	1
Thin	1	2		3	2	5		7	2	2	3	2	1
Wheezing	4	4	2	27	5	20	8	27	7	18	10	18	7
Dyspnea	4	4	2	27	5	20	8	27	7	18	10	18	7
Polypnea	4	4	2	25	5	20	8	25	7	18	10	17	7
Alopecia				1						1			
Soft feces								1					
Large stationary tissue mass						1							
Enlarged abdomen				1						1			

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 87	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched	10	6	3	3	2	1	12	4	3	3	3	2	2
Thin	6	4		1	1		4	1	2	1	1	1	2
Wheezing	19	17	17	9	7	4	23	5	22	8	18	8	21
Dyspnea	19	18	17	9	7	4	23	5	22	8	18	8	21
Polypnea	13	12	12	6	7	3	18	5	15	7	13	7	14
Alopecia						1				1			
Eyes squinted													1
Soft feces				1									
Ataxia		1											
Enlarged abdomen		1											
Extended penis											1		
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched				9	2	11	1	6	1	7	1	1	
Thin				7	1	4	1	4		5	1		
Wheezing	4	4	2	27	5	20	8	23	6	17	10	16	7
Dyspnea	4	4	2	27	5	20	8	24	6	17	10	16	7
Polypnea	4	2	2	20	5	19	8	15	6	12	10	11	7
Alopecia				1					1	1		1	
Large stationary tissue mass						1							
Ataxia					1	1							
Opaque left eye											1		
Enlarged abdomen				2							1	1	

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 88	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched	6	1	1	3	3		9		7	1	3	2	5
Thin	6	1	1	2	2		8		6		3	2	4
Wheezing	21	17	17	9	7	4	23	5	23	7	18	8	20
Dyspnea	21	17	17	9	7	4	23	5	23	7	18	8	20
Polypnea	21	15	17	9	7	4	23	5	23	7	18	8	18
Alopecia	1			1						1			
Enlarged abdomen		1											
Soft feces				1									
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched	1			3	1	5	1	5	2	3	4	1	2
Thin	1			2	1	4	1	5	2	2	4	1	2
Wheezing	4	4	2	26	4	20	8	28	7	17	9	18	7
Dyspnea	4	4	2	26	4	20	8	28	7	17	9	18	7
Polypnea	4	4	2	24	4	20	8	25	7	17	9	17	7
Alopecia										1			
Soft feces	1			1									
Enlarged abdomen				1							1		
Paralysis					1								
Tremors					1								
Eyes squinted						1							
Large stationary tissue mass						1							

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 89	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched	7	4	1	5		1	12	3	2	3	2	3	4
Thin	4	3		1	1		4	2	2	1	1	1	2
Wheezing	17	15	17	8	6	4	23	5	22	6	18	8	21
Dyspnea	17	15	17	8	6	4	23	5	22	6	18	8	21
Polypnea	11	9	12	5	6	3	18	5	15	5	13	7	14
Alopecia	1					1				1			
Enlarged abdomen					1								
Ataxia		1											
Extended penis											1		
Eyes squinted													1
	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched	3		1	11	1	10	1	7	2	8	3	5	
Thin				7		5	1	4	1	5	1		
Wheezing	4	4	2	25	3	18	8	22	6	17	8	16	7
Dyspnea	4	4	2	25	3	18	8	23	6	17	8	16	7
Polypnea	4	2	2	20	3	17	8	14	6	14	8	11	7
Alopecia				1			1	1	1	1		1	
Lethargic							1			1	1		
Hyperactivity							1						
Enlarged abdomen				1						1	1		
Soft feces				1					1			1	
Piloerection				1									
Mydriasis				1									
Ataxia						1							
Large stationary tissue mass						1							
Hypersensitive								1					
Eyes squinted											1		
Left eye opaque											1		

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 90	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched	8	5	2	5	1	1	13	2	8	1	3	2	5
Thin	7	4	1	4	1		11	3	6	1	3	2	4
Wheezing	18	15	16	8	4	3	23	5	22	5	18	7	20
Dyspnea	18	15	16	8	4	3	23	5	22	5	18	7	20
Polypnea	18	15	16	8	4	3	23	5	21	5	18	7	18
Alopecia						1							
Soft feces	1								1				
Paralysis	1												
Tremors	2	1	1		1								
Enlarged abdomen		1											
Lethargic						1	3		1			3	

	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched	1			4		4	1	9	4	9	4	1	4
Thin	1			1		3	2	7	4	7	4		3
Wheezing	4	4	2	25	3	17	6	25	6	16	6	13	6
Dyspnea	4	4	2	25	3	17	6	25	6	16	6	13	6
Polypnea	4	4	2	23	3	17	6	25	6	16	6	13	6
Alopecia				1				2		1	1		
Prostrate	1					1	1			1			
Enlarged/swollen abdomen	1			1									
Lethargic						4							
Eyes squinted						1	1				1		
Large stationary tissue mass						1							
Tremors										1			

18-6

INCIDENCE OF CLINICAL OBSERVATIONS
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES IN HAMSTERS

CLINICAL OBSERVATION FOR STUDY WEEK 91	INCIDENCE OF CLINICAL OBSERVATIONS												
	GROUP NUMBER												
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Hunched	7	5	2	5	1	1	7		3		1		1
Thin	6	4	1	3	1	1	7	2	5		2		2
Wheezing	17	13	14	8	4	3	23	3	17	3	17	6	18
Dyspnea	17	13	14	8	4	3	23	3	17	3	17	6	18
Polypnea	17	13	14	8	4	3	23	3	17	3	17	6	18
Alopecia													1
Tremors	2	1	1		1								
Bloated				1		1	1						
Soft feces	1												
Right eye opaque													1
Ataxia													1

	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>
Hunched													1
Thin						1						1	1
Wheezing	2	3	2	23	3	11	3	23	4	14	3	11	5
Dyspnea	2	3	2	21	3	11	3	23	4	14	3	11	5
Polypnea	2	3	2	21	3	11	3	23	4	14	3	11	5
Alopecia								3		1			
Bloated				1					1				
Eyes squinted							1						

APPENDIX 3

LIFE TABLE ANALYSES ON RESPIRATORY TRACT TUMOR BEARING ANIMALS

LARYNGEAL TBA

TRACHEAL TBA

LUNG TBA

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 1

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	48	48.000	0.000	1.000
10	1	0	47	48.000	0.000	1.000
15	1	0	46	47.000	0.000	1.000
20	1	0	45	46.000	0.000	1.000
26	1	0	44	45.000	0.000	1.000
34	1	0	43	44.000	0.000	1.000
35	1	0	42	43.000	0.000	1.000
37	1	0	41	42.000	0.000	1.000
38	1	0	40	41.000	0.000	1.000
39	2	0	38	40.000	0.000	1.000
43	1	0	37	38.000	0.000	1.000
45	1	0	36	37.000	0.000	1.000
58	1	0	35	36.000	0.000	1.000
59	1	0	34	35.000	0.000	1.000
61	1	0	33	34.000	0.000	1.000
71	1	0	32	33.000	0.000	1.000
73	1	0	31	32.000	0.000	1.000
74	1	0	30	31.000	0.000	1.000
76	1	0	29	30.000	0.000	1.000
80	2	0	27	29.000	0.000	1.000
81	3	0	24	27.000	0.000	1.000
82	1	0	23	24.000	0.000	1.000
85	2	0	21	23.000	0.000	1.000
88	1	0	20	21.000	0.000	1.000
89	2	0	18	20.000	0.000	1.000
90	1	0	17	18.000	0.000	1.000
92	17	0	0	17.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 48

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 2

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	47	47.000	0.000	1.000
37	1	0	46	47.000	0.000	1.000
38	1	0	45	46.000	0.000	1.000
39	1	0	44	45.000	0.000	1.000
42	1	1	42	43.500	0.021	0.979
44	1	0	41	42.000	0.021	0.979
51	2	0	39	41.000	0.021	0.979
53	2	0	37	39.000	0.021	0.979
55	1	0	36	37.000	0.021	0.979
57	1	0	35	36.000	0.021	0.979
58	1	0	34	35.000	0.021	0.979
60	2	1	31	33.000	0.043	0.957
65	0	1	30	31.000	0.064	0.936
66	1	0	29	30.000	0.064	0.936
67	1	0	28	29.000	0.064	0.936
69	1	0	27	28.000	0.064	0.936
72	1	0	26	27.000	0.064	0.936
74	1	0	25	26.000	0.064	0.936
75	1	0	24	25.000	0.064	0.936
76	1	0	23	24.000	0.064	0.936
77	0	1	22	23.000	0.085	0.915
79	1	0	21	22.000	0.085	0.915
80	1	0	20	21.000	0.085	0.915
81	0	1	19	20.000	0.106	0.894
82	2	0	17	19.000	0.106	0.894
87	2	0	15	17.000	0.106	0.894
88	1	0	14	15.000	0.106	0.894
90	1	0	13	14.000	0.106	0.894
91	1	0	12	13.000	0.106	0.894
92	12	0	0	12.000	0.106	0.894

TOTAL WITHDRAWN (NTBA) = 42

TOTAL TBA'S = 5

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 3

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
23	1	0	49	50.000	0.000	1.000
24	1	0	48	49.000	0.000	1.000
25	1	0	47	48.000	0.000	1.000
29	1	0	46	47.000	0.000	1.000
30	2	0	44	46.000	0.000	1.000
32	1	0	43	44.000	0.000	1.000
33	1	0	42	43.000	0.000	1.000
34	1	0	41	42.000	0.000	1.000
43	1	0	40	41.000	0.000	1.000
44	1	0	39	40.000	0.000	1.000
49	1	0	38	39.000	0.000	1.000
52	1	0	37	38.000	0.000	1.000
55	1	0	36	37.000	0.000	1.000
56	1	0	35	36.000	0.000	1.000
61	1	0	34	35.000	0.000	1.000
62	1	1	32	33.500	0.020	0.980
69	1	0	31	32.000	0.020	0.980
70	1	0	30	31.000	0.020	0.980
76	1	0	29	30.000	0.020	0.980
78	3	0	26	29.000	0.020	0.980
81	5	0	21	26.000	0.020	0.980
83	1	0	20	21.000	0.020	0.980
85	1	0	19	20.000	0.020	0.980
86	1	0	18	19.000	0.020	0.980
87	1	0	17	18.000	0.020	0.980
90	2	0	15	17.000	0.020	0.980
91	1	0	14	15.000	0.020	0.980
92	14	0	0	14.000	0.020	0.980

TOTAL WITHDRAWN (NTBA) = 49

TOTAL TBA'S = 1

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 4

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	48	48.000	0.000	1.000
13	2	0	46	48.000	0.000	1.000
36	1	0	45	46.000	0.000	1.000
40	1	0	44	45.000	0.000	1.000
47	1	0	43	44.000	0.000	1.000
48	1	0	42	43.000	0.000	1.000
49	1	0	41	42.000	0.000	1.000
50	3	0	38	41.000	0.000	1.000
51	1	0	37	38.000	0.000	1.000
52	1	0	36	37.000	0.000	1.000
54	1	0	35	36.000	0.000	1.000
57	1	0	34	35.000	0.000	1.000
58	2	0	32	34.000	0.000	1.000
59	0	1	31	32.000	0.021	0.979
60	1	0	30	31.000	0.021	0.979
61	1	0	29	30.000	0.021	0.979
62	1	0	28	29.000	0.021	0.979
63	1	0	27	28.000	0.021	0.979
65	1	0	26	27.000	0.021	0.979
66	2	0	24	26.000	0.021	0.979
67	1	0	23	24.000	0.021	0.979
69	1	0	22	23.000	0.021	0.979
70	0	1	21	22.000	0.042	0.958
71	1	0	20	21.000	0.042	0.958
74	1	0	19	20.000	0.042	0.958
76	1	0	18	19.000	0.042	0.958
79	2	0	16	18.000	0.042	0.958
81	1	1	14	15.500	0.063	0.938
82	2	0	12	14.000	0.063	0.938
83	1	0	11	12.000	0.063	0.938
86	1	0	10	11.000	0.063	0.938
87	1	0	9	10.000	0.063	0.938
90	1	0	8	9.000	0.063	0.938
92	6	2	0	5.000	0.104	0.896

TOTAL WITHDRAWN (NTBA) = 43

TOTAL TBA'S = 5

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 5

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
8	1	0	49	50.000	0.000	1.000
15	1	0	48	49.000	0.000	1.000
22	1	0	47	48.000	0.000	1.000
24	1	0	46	47.000	0.000	1.000
28	2	0	44	46.000	0.000	1.000
32	1	0	43	44.000	0.000	1.000
36	1	0	42	43.000	0.000	1.000
40	1	0	41	42.000	0.000	1.000
42	2	0	39	41.000	0.000	1.000
43	1	0	38	39.000	0.000	1.000
46	1	0	37	38.000	0.000	1.000
49	1	0	36	37.000	0.000	1.000
54	1	0	35	36.000	0.000	1.000
58	1	0	34	35.000	0.000	1.000
60	1	0	33	34.000	0.000	1.000
61	1	0	32	33.000	0.000	1.000
65	1	0	31	32.000	0.000	1.000
68	4	0	27	31.000	0.000	1.000
71	3	0	24	27.000	0.000	1.000
74	2	0	22	24.000	0.000	1.000
75	1	0	21	22.000	0.000	1.000
77	2	0	19	21.000	0.000	1.000
78	2	0	17	19.000	0.000	1.000
79	1	0	16	17.000	0.000	1.000
80	2	0	14	16.000	0.000	1.000
81	2	0	12	14.000	0.000	1.000
82	4	0	8	12.000	0.000	1.000
86	1	0	7	8.000	0.000	1.000
88	1	0	6	7.000	0.000	1.000
89	2	0	4	6.000	0.000	1.000
92	4	0	0	4.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 6

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
7	1	0	49	50.000	0.000	1.000
21	1	0	48	49.000	0.000	1.000
26	1	0	47	48.000	0.000	1.000
31	1	0	46	47.000	0.000	1.000
35	1	0	45	46.000	0.000	1.000
36	1	0	44	45.000	0.000	1.000
39	1	0	43	44.000	0.000	1.000
40	1	0	42	43.000	0.000	1.000
41	2	1	39	41.000	0.020	0.980
42	1	0	38	39.000	0.020	0.980
46	1	0	37	38.000	0.020	0.980
47	2	0	35	37.000	0.020	0.980
50	1	0	34	35.000	0.020	0.980
51	1	0	33	34.000	0.020	0.980
56	1	0	32	33.000	0.020	0.980
57	2	0	30	32.000	0.020	0.980
58	1	3	26	29.500	0.080	0.920
59	1	0	25	26.000	0.080	0.920
63	1	0	24	25.000	0.080	0.920
65	1	0	23	24.000	0.080	0.920
66	0	1	22	23.000	0.100	0.900
68	1	0	21	22.000	0.100	0.900
70	1	0	20	21.000	0.100	0.900
71	1	0	19	20.000	0.100	0.900
73	0	1	18	19.000	0.120	0.880
74	1	0	17	18.000	0.120	0.880
77	1	0	16	17.000	0.120	0.880
78	1	1	14	15.500	0.140	0.860
79	1	0	13	14.000	0.140	0.860
80	0	1	12	13.000	0.160	0.840
81	1	0	11	12.000	0.160	0.840
82	0	2	9	11.000	0.200	0.800
83	2	0	7	9.000	0.200	0.800
84	0	1	6	7.000	0.220	0.780
86	1	1	4	5.500	0.240	0.760
90	1	0	3	4.000	0.240	0.760
92	2	1	0	2.000	0.260	0.740

TOTAL WITHDRAWN (NTBA) = 37

TOTAL TBA'S = 13

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 7

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
26	2	0	48	50.000	0.000	1.000
32	2	0	46	48.000	0.000	1.000
34	1	0	45	46.000	0.000	1.000
38	1	0	44	45.000	0.000	1.000
39	1	0	43	44.000	0.000	1.000
40	1	0	42	43.000	0.000	1.000
43	1	0	41	42.000	0.000	1.000
45	2	0	39	41.000	0.000	1.000
47	1	0	38	39.000	0.000	1.000
57	1	0	37	38.000	0.000	1.000
63	1	0	36	37.000	0.000	1.000
67	1	0	35	36.000	0.000	1.000
68	1	0	34	35.000	0.000	1.000
73	1	0	33	34.000	0.000	1.000
74	1	0	32	33.000	0.000	1.000
75	1	0	31	32.000	0.000	1.000
76	1	0	30	31.000	0.000	1.000
80	2	0	28	30.000	0.000	1.000
81	1	0	27	28.000	0.000	1.000
82	1	0	26	27.000	0.000	1.000
83	2	0	24	26.000	0.000	1.000
86	1	0	23	24.000	0.000	1.000
92	23	0	0	23.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 8

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
3	1	0	49	50.000	0.000	1.000
23	1	0	48	49.000	0.000	1.000
24	1	0	47	48.000	0.000	1.000
29	1	0	46	47.000	0.000	1.000
41	1	0	45	46.000	0.000	1.000
42	1	0	44	45.000	0.000	1.000
47	1	0	43	44.000	0.000	1.000
48	1	0	42	43.000	0.000	1.000
49	2	1	39	41.000	0.020	0.980
51	1	0	38	39.000	0.020	0.980
52	1	0	37	38.000	0.020	0.980
55	1	0	36	37.000	0.020	0.980
58	2	0	34	36.000	0.020	0.980
60	0	1	33	34.000	0.040	0.960
61	1	0	32	33.000	0.040	0.960
64	1	0	31	32.000	0.040	0.960
65	0	1	30	31.000	0.060	0.940
66	1	0	29	30.000	0.060	0.940
67	0	1	28	29.000	0.080	0.920
68	2	0	26	28.000	0.080	0.920
70	2	1	23	25.000	0.100	0.900
71	3	0	20	23.000	0.100	0.900
72	1	0	19	20.000	0.100	0.900
73	0	1	18	19.000	0.120	0.880
74	1	0	17	18.000	0.120	0.880
75	1	0	16	17.000	0.120	0.880
77	1	0	15	16.000	0.120	0.880
78	1	0	14	15.000	0.120	0.880
79	2	1	11	13.000	0.140	0.860
80	2	0	9	11.000	0.140	0.860
82	0	1	8	9.000	0.160	0.840
83	1	0	7	8.000	0.160	0.840
84	1	1	5	6.500	0.180	0.820
90	0	1	4	5.000	0.200	0.800
91	1	0	3	4.000	0.200	0.800
92	3	0	0	3.000	0.200	0.800

TOTAL WITHDRAWN (NTBA) = 40

TOTAL TBA'S = 10

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 9

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
25	1	0	49	50.000	0.000	1.000
30	1	0	48	49.000	0.000	1.000
33	2	0	46	48.000	0.000	1.000
41	1	0	45	46.000	0.000	1.000
42	1	0	44	45.000	0.000	1.000
43	1	0	43	44.000	0.000	1.000
45	2	0	41	43.000	0.000	1.000
46	1	0	40	41.000	0.000	1.000
47	1	0	39	40.000	0.000	1.000
50	1	0	38	39.000	0.000	1.000
51	1	0	37	38.000	0.000	1.000
52	1	0	36	37.000	0.000	1.000
53	1	0	35	36.000	0.000	1.000
55	1	0	34	35.000	0.000	1.000
59	1	0	33	34.000	0.000	1.000
61	1	0	32	33.000	0.000	1.000
63	1	0	31	32.000	0.000	1.000
69	2	0	29	31.000	0.000	1.000
70	1	0	28	29.000	0.000	1.000
74	1	0	27	28.000	0.000	1.000
76	1	0	26	27.000	0.000	1.000
80	1	0	25	26.000	0.000	1.000
81	2	0	23	25.000	0.000	1.000
90	2	0	21	23.000	0.000	1.000
91	4	0	17	21.000	0.000	1.000
92	17	0	0	17.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 10

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
32	1	0	49	50.000	0.000	1.000
33	1	0	47	49.000	0.000	1.000
35	2	0	45	47.000	0.000	1.000
36	1	0	44	45.000	0.000	1.000
40	1	0	43	44.000	0.000	1.000
43	1	0	42	43.000	0.000	1.000
45	2	0	40	42.000	0.000	1.000
47	1	1	38	39.500	0.020	0.980
48	1	0	37	38.000	0.020	0.980
50	1	0	36	37.000	0.020	0.980
51	1	0	35	36.000	0.020	0.980
52	3	1	31	33.500	0.040	0.960
55	1	0	30	31.000	0.040	0.960
56	1	1	28	29.500	0.060	0.940
57	0	1	27	28.000	0.080	0.920
58	1	1	25	26.500	0.100	0.900
59	1	0	24	25.000	0.100	0.900
61	1	0	23	24.000	0.100	0.900
63	1	0	22	23.000	0.100	0.900
65	3	0	19	22.000	0.100	0.900
70	1	0	18	19.000	0.100	0.900
72	0	1	17	18.000	0.120	0.880
75	3	0	14	17.000	0.120	0.880
76	1	0	13	14.000	0.120	0.880
78	1	0	12	13.000	0.120	0.880
80	1	0	11	12.000	0.120	0.880
81	1	0	10	11.000	0.120	0.880
83	1	0	9	10.000	0.120	0.880
86	0	1	8	9.000	0.140	0.860
87	1	0	7	8.000	0.140	0.860
88	1	0	6	7.000	0.140	0.860
89	1	0	5	6.000	0.140	0.860
90	1	0	4	5.000	0.140	0.860
91	0	1	3	4.000	0.160	0.840
92	3	0	0	3.000	0.160	0.840

TOTAL WITHDRAWN (NTBA) = 42

TOTAL TBA'S = 8

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 11

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
14	1	0	49	50.000	0.000	1.000
23	1	0	48	49.000	0.000	1.000
24	1	0	47	48.000	0.000	1.000
29	1	0	46	47.000	0.000	1.000
34	1	0	45	46.000	0.000	1.000
37	2	0	43	45.000	0.000	1.000
38	1	0	42	43.000	0.000	1.000
40	1	0	41	42.000	0.000	1.000
42	1	0	40	41.000	0.000	1.000
49	1	0	39	40.000	0.000	1.000
52	1	0	38	39.000	0.000	1.000
54	1	0	37	38.000	0.000	1.000
62	1	0	36	37.000	0.000	1.000
72	2	0	34	36.000	0.000	1.000
76	1	0	33	34.000	0.000	1.000
77	3	0	30	33.000	0.000	1.000
78	1	0	29	30.000	0.000	1.000
79	2	0	27	29.000	0.000	1.000
80	1	0	26	27.000	0.000	1.000
81	2	0	24	26.000	0.000	1.000
83	1	0	23	24.000	0.000	1.000
84	1	0	22	23.000	0.000	1.000
85	1	0	21	22.000	0.000	1.000
86	3	0	18	21.000	0.000	1.000
91	1	0	17	18.000	0.000	1.000
92	17	0	0	17.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 12

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
12	1	0	49	50.000	0.000	1.000
15	1	0	48	49.000	0.000	1.000
27	1	0	47	48.000	0.000	1.000
40	3	0	44	47.000	0.000	1.000
41	1	1	42	43.500	0.020	0.980
43	1	0	41	42.000	0.020	0.980
45	0	1	40	41.000	0.040	0.960
46	1	0	39	40.000	0.040	0.960
47	1	0	38	39.000	0.040	0.960
48	1	0	37	38.000	0.040	0.960
52	1	0	36	37.000	0.040	0.960
54	2	0	34	36.000	0.040	0.960
55	1	0	33	34.000	0.040	0.960
56	2	0	31	33.000	0.040	0.960
59	1	0	30	31.000	0.040	0.960
61	1	0	29	30.000	0.040	0.960
64	1	0	28	29.000	0.040	0.960
65	3	0	25	28.000	0.040	0.960
66	1	0	24	25.000	0.040	0.960
67	1	1	22	23.500	0.060	0.940
69	1	0	21	22.000	0.060	0.940
70	1	1	19	20.500	0.080	0.920
71	1	0	18	19.000	0.080	0.920
77	1	0	17	18.000	0.080	0.920
78	0	1	16	17.000	0.100	0.900
79	1	0	15	16.000	0.100	0.900
80	0	1	14	15.000	0.120	0.880
81	1	0	13	14.000	0.120	0.880
83	1	0	12	13.000	0.120	0.880
84	2	0	10	12.000	0.120	0.880
85	1	0	9	10.000	0.120	0.880
86	1	0	8	9.000	0.120	0.880
89	1	0	7	8.000	0.120	0.880
91	1	0	6	7.000	0.120	0.880
92	3	3	0	4.500	0.180	0.820

TOTAL WITHDRAWN (NTBA) = 41

TOTAL TBA'S = 9

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 13

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
9	1	0	49	50.000	0.000	1.000
10	1	0	48	49.000	0.000	1.000
12	1	0	47	48.000	0.000	1.000
13	2	0	45	47.000	0.000	1.000
16	1	0	44	45.000	0.000	1.000
18	1	0	43	44.000	0.000	1.000
24	1	0	42	43.000	0.000	1.000
25	1	0	41	42.000	0.000	1.000
28	1	0	40	41.000	0.000	1.000
35	1	0	39	40.000	0.000	1.000
36	3	0	36	39.000	0.000	1.000
40	1	0	35	36.000	0.000	1.000
43	1	0	34	35.000	0.000	1.000
54	1	0	33	34.000	0.000	1.000
58	1	0	32	33.000	0.000	1.000
69	1	0	31	32.000	0.000	1.000
72	1	0	30	31.000	0.000	1.000
74	1	0	29	30.000	0.000	1.000
79	1	0	28	29.000	0.000	1.000
80	3	0	25	28.000	0.000	1.000
82	1	0	24	25.000	0.000	1.000
84	3	0	21	24.000	0.000	1.000
90	1	0	20	21.000	0.000	1.000
91	2	0	18	20.000	0.000	1.000
92	18	0	0	18.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 14

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	48	48.000	0.000	1.000
14	1	0	47	48.000	0.000	1.000
26	1	0	46	47.000	0.000	1.000
29	1	0	45	46.000	0.000	1.000
31	1	0	44	45.000	0.000	1.000
35	2	0	42	44.000	0.000	1.000
37	1	0	41	42.000	0.000	1.000
39	1	0	40	41.000	0.000	1.000
41	2	0	38	40.000	0.000	1.000
43	0	1	37	38.000	0.021	0.979
44	1	0	36	37.000	0.021	0.979
45	1	0	35	36.000	0.021	0.979
46	1	0	34	35.000	0.021	0.979
48	1	0	33	34.000	0.021	0.979
49	2	0	31	33.000	0.021	0.979
53	1	0	30	31.000	0.021	0.979
54	1	1	28	29.500	0.042	0.958
55	1	0	27	28.000	0.042	0.958
56	4	0	23	27.000	0.042	0.958
58	1	2	20	22.500	0.083	0.917
59	1	0	19	20.000	0.083	0.917
62	0	1	18	19.000	0.104	0.896
63	0	1	17	18.000	0.125	0.875
69	1	0	16	17.000	0.125	0.875
71	2	0	14	16.000	0.125	0.875
72	2	0	12	14.000	0.125	0.875
76	0	1	11	12.000	0.146	0.854
77	1	1	9	10.500	0.167	0.833
79	1	1	7	8.500	0.188	0.813
80	1	1	5	6.500	0.208	0.792
81	1	0	4	5.000	0.208	0.792
85	1	0	3	4.000	0.208	0.792
90	1	1	1	2.500	0.229	0.771
92	0	1	0	1.000	0.250	0.750

TOTAL WITHDRAWN (NTBA) = 36

TOTAL TBA'S = 12

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 15

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	49	49.000	0.000	1.000
16	1	0	48	49.000	0.000	1.000
17	1	0	47	48.000	0.000	1.000
30	1	0	46	47.000	0.000	1.000
33	2	0	44	46.000	0.000	1.000
34	2	0	42	44.000	0.000	1.000
35	1	0	41	42.000	0.000	1.000
38	1	0	40	41.000	0.000	1.000
42	1	0	39	40.000	0.000	1.000
45	2	0	37	39.000	0.000	1.000
46	1	0	36	37.000	0.000	1.000
48	1	0	35	36.000	0.000	1.000
49	1	0	34	35.000	0.000	1.000
50	1	0	33	34.000	0.000	1.000
52	1	0	32	33.000	0.000	1.000
54	1	0	31	32.000	0.000	1.000
58	1	0	30	31.000	0.000	1.000
59	1	0	29	30.000	0.000	1.000
62	1	0	28	29.000	0.000	1.000
64	1	0	27	28.000	0.000	1.000
65	2	0	25	27.000	0.000	1.000
69	1	0	24	25.000	0.000	1.000
72	4	0	20	24.000	0.000	1.000
73	1	0	19	20.000	0.000	1.000
75	1	0	18	19.000	0.000	1.000
79	3	0	15	18.000	0.000	1.000
80	4	0	11	15.000	0.000	1.000
81	2	0	9	11.000	0.000	1.000
83	1	0	8	9.000	0.000	1.000
84	3	0	5	8.000	0.000	1.000
86	1	0	4	5.000	0.000	1.000
90	1	0	3	4.000	0.000	1.000
92	3	0	0	3.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 49

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 16

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
18	1	0	49	50.000	0.000	1.000
22	1	0	48	49.000	0.000	1.000
38	1	0	47	48.000	0.000	1.000
39	2	1	44	46.000	0.020	0.980
40	0	1	43	44.000	0.040	0.960
41	2	0	41	43.000	0.040	0.960
42	1	0	40	41.000	0.040	0.960
43	0	1	39	40.000	0.060	0.940
44	0	1	38	39.000	0.080	0.920
46	0	1	37	38.000	0.100	0.900
48	0	1	36	37.000	0.120	0.880
50	0	1	35	36.000	0.140	0.860
52	0	1	34	35.000	0.160	0.840
55	0	1	33	34.000	0.180	0.820
58	0	1	32	33.000	0.200	0.800
59	0	1	31	32.000	0.220	0.780
60	0	1	30	31.000	0.240	0.760
61	2	1	27	29.000	0.260	0.740
63	1	2	24	26.500	0.300	0.700
64	0	1	23	24.000	0.320	0.680
68	1	2	20	22.500	0.360	0.640
69	0	1	19	20.000	0.380	0.620
74	0	3	16	19.000	0.440	0.560
75	0	2	14	16.000	0.480	0.520
76	0	1	13	14.000	0.500	0.500
77	0	1	12	13.000	0.520	0.480
78	0	1	11	12.000	0.540	0.460
80	0	1	10	11.000	0.560	0.440
81	2	1	7	9.000	0.580	0.420
82	0	1	6	7.000	0.600	0.400
83	0	1	5	6.000	0.620	0.380
85	0	2	3	5.000	0.660	0.340
86	0	1	2	3.000	0.680	0.320
87	0	1	1	2.000	0.700	0.300
92	0	1	0	1.000	0.720	0.280

TOTAL WITHDRAWN (NTBA) = 14

TOTAL TBA'S = 36

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 17

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
12	1	0	49	50.000	0.000	1.000
34	2	0	47	49.000	0.000	1.000
37	1	0	46	47.000	0.000	1.000
41	1	0	45	46.000	0.000	1.000
42	1	0	44	45.000	0.000	1.000
50	1	0	43	44.000	0.000	1.000
55	1	0	42	43.000	0.000	1.000
65	1	0	41	42.000	0.000	1.000
66	1	0	40	41.000	0.000	1.000
70	1	0	39	40.000	0.000	1.000
72	1	0	38	39.000	0.000	1.000
73	1	0	37	38.000	0.000	1.000
74	1	0	36	37.000	0.000	1.000
75	1	0	35	36.000	0.000	1.000
76	2	0	33	35.000	0.000	1.000
80	2	0	31	33.000	0.000	1.000
82	1	0	30	31.000	0.000	1.000
83	1	0	29	30.000	0.000	1.000
84	1	0	28	29.000	0.000	1.000
87	1	0	27	28.000	0.000	1.000
88	1	0	26	27.000	0.000	1.000
90	1	0	25	26.000	0.000	1.000
91	1	0	24	25.000	0.000	1.000
92	24	0	0	24.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50 TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 18

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
14	1	0	49	50.000	0.000	1.000
20	1	0	48	49.000	0.000	1.000
23	1	0	47	48.000	0.000	1.000
26	1	0	46	47.000	0.000	1.000
32	2	0	44	46.000	0.000	1.000
35	1	0	43	44.000	0.000	1.000
38	1	1	41	42.500	0.020	0.980
40	1	1	39	40.500	0.040	0.960
43	0	1	38	39.000	0.060	0.940
44	1	0	37	38.000	0.060	0.940
50	0	1	36	37.000	0.080	0.920
51	1	0	35	36.000	0.080	0.920
53	1	0	34	35.000	0.080	0.920
54	1	0	33	34.000	0.080	0.920
55	2	0	31	33.000	0.080	0.920
56	0	1	30	31.000	0.100	0.900
57	1	0	29	30.000	0.100	0.900
58	1	0	28	29.000	0.100	0.900
60	3	0	25	28.000	0.100	0.900
62	0	1	24	25.000	0.120	0.880
63	0	1	23	24.000	0.140	0.860
64	2	0	21	23.000	0.140	0.860
67	0	1	20	21.000	0.160	0.840
69	1	1	18	19.500	0.180	0.820
70	1	0	17	18.000	0.180	0.820
71	1	0	16	17.000	0.180	0.820
73	0	1	15	16.000	0.200	0.800
75	3	0	12	15.000	0.200	0.800
76	1	0	11	12.000	0.200	0.800
79	1	0	10	11.000	0.200	0.800
80	2	0	8	10.000	0.200	0.800
85	0	2	6	8.000	0.240	0.760
86	1	0	5	6.000	0.240	0.760
87	1	1	3	4.500	0.260	0.740
92	2	1	0	2.000	0.280	0.720

TOTAL WITHDRAWN (NTBA) = 36

TOTAL TBA'S = 14

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 19

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
7	1	0	49	50.000	0.000	1.000
9	1	0	48	49.000	0.000	1.000
18	1	0	47	48.000	0.000	1.000
19	1	0	46	47.000	0.000	1.000
28	1	0	45	46.000	0.000	1.000
32	1	0	44	45.000	0.000	1.000
33	2	0	42	44.000	0.000	1.000
34	1	0	41	42.000	0.000	1.000
38	2	0	39	41.000	0.000	1.000
40	1	0	38	39.000	0.000	1.000
41	1	0	37	38.000	0.000	1.000
45	1	0	36	37.000	0.000	1.000
47	1	0	35	36.000	0.000	1.000
49	1	0	34	35.000	0.000	1.000
50	1	0	33	34.000	0.000	1.000
55	1	0	32	33.000	0.000	1.000
57	1	0	31	32.000	0.000	1.000
58	1	0	30	31.000	0.000	1.000
62	1	0	29	30.000	0.000	1.000
63	1	0	28	29.000	0.000	1.000
67	1	0	27	28.000	0.000	1.000
68	2	0	25	27.000	0.000	1.000
72	1	0	24	25.000	0.000	1.000
78	1	0	23	24.000	0.000	1.000
81	1	0	22	23.000	0.000	1.000
85	2	0	20	22.000	0.000	1.000
88	1	0	19	20.000	0.000	1.000
89	1	0	18	19.000	0.000	1.000
90	4	0	14	18.000	0.000	1.000
91	3	0	11	14.000	0.000	1.000
92	11	0	0	11.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 20

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
12	1	0	49	50.000	0.000	1.000
16	1	0	48	49.000	0.000	1.000
21	1	0	47	48.000	0.000	1.000
22	1	0	46	47.000	0.000	1.000
28	3	0	43	46.000	0.000	1.000
31	1	0	42	43.000	0.000	1.000
32	1	0	41	42.000	0.000	1.000
34	0	1	40	41.000	0.020	0.980
35	3	0	37	40.000	0.020	0.980
37	1	0	36	37.000	0.020	0.980
39	1	1	34	35.500	0.040	0.960
41	3	0	31	34.000	0.040	0.960
45	2	0	29	31.000	0.040	0.960
46	1	0	28	29.000	0.040	0.960
47	1	0	27	28.000	0.040	0.960
49	2	0	25	27.000	0.040	0.960
52	2	0	23	25.000	0.040	0.960
53	1	0	22	23.000	0.040	0.960
58	1	0	21	22.000	0.040	0.960
60	1	0	20	21.000	0.040	0.960
61	1	0	19	20.000	0.040	0.960
62	1	0	18	19.000	0.040	0.960
63	0	1	17	18.000	0.060	0.940
64	1	0	16	17.000	0.060	0.940
68	1	0	15	16.000	0.060	0.940
72	0	1	14	15.000	0.080	0.920
77	1	0	13	14.000	0.080	0.920
78	1	0	12	13.000	0.080	0.920
79	2	0	10	12.000	0.080	0.920
83	1	0	9	10.000	0.080	0.920
84	1	0	8	9.000	0.080	0.920
89	1	1	6	7.500	0.100	0.900
90	2	0	4	6.000	0.100	0.900
91	1	1	2	3.500	0.120	0.880
92	0	2	0	2.000	0.160	0.840

TOTAL WITHDRAWN (NTBA) = 42 TOTAL TBA'S = 8

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 21

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
5	1	0	49	50.000	0.000	1.000
20	1	0	48	49.000	0.000	1.000
21	1	0	47	48.000	0.000	1.000
25	1	0	46	47.000	0.000	1.000
29	1	0	45	46.000	0.000	1.000
39	1	0	44	45.000	0.000	1.000
40	1	0	43	44.000	0.000	1.000
43	1	0	42	43.000	0.000	1.000
50	1	0	41	42.000	0.000	1.000
51	1	0	40	41.000	0.000	1.000
59	1	0	39	40.000	0.000	1.000
66	1	0	38	39.000	0.000	1.000
68	1	0	37	38.000	0.000	1.000
69	1	0	36	37.000	0.000	1.000
72	1	0	35	36.000	0.000	1.000
74	2	0	33	35.000	0.000	1.000
76	1	0	32	33.000	0.000	1.000
77	1	0	31	32.000	0.000	1.000
80	1	0	30	31.000	0.000	1.000
81	1	0	29	30.000	0.000	1.000
84	1	0	28	29.000	0.000	1.000
86	2	0	26	28.000	0.000	1.000
88	2	0	24	26.000	0.000	1.000
91	1	0	23	24.000	0.000	1.000
92	23	0	0	23.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 22

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
17	1	0	49	50.000	0.000	1.000
18	1	0	48	49.000	0.000	1.000
21	1	0	47	48.000	0.000	1.000
24	1	0	46	47.000	0.000	1.000
31	1	0	45	46.000	0.000	1.000
32	1	0	44	45.000	0.000	1.000
35	1	0	43	44.000	0.000	1.000
36	1	0	42	43.000	0.000	1.000
39	2	0	40	42.000	0.000	1.000
46	1	0	39	40.000	0.000	1.000
51	2	0	37	39.000	0.000	1.000
52	1	0	36	37.000	0.000	1.000
53	1	0	35	36.000	0.000	1.000
55	0	1	34	35.000	0.020	0.980
56	1	0	33	34.000	0.020	0.980
57	0	1	32	33.000	0.040	0.960
59	2	1	29	31.000	0.060	0.940
60	1	0	28	29.000	0.060	0.940
63	2	0	26	28.000	0.060	0.940
64	1	1	24	25.500	0.080	0.920
66	1	0	23	24.000	0.080	0.920
67	2	0	21	23.000	0.080	0.920
68	1	0	20	21.000	0.080	0.920
70	0	1	19	20.000	0.100	0.900
72	0	1	18	19.000	0.120	0.880
73	1	1	16	17.500	0.140	0.860
74	1	0	15	16.000	0.140	0.860
76	1	1	13	14.500	0.160	0.840
77	1	1	11	12.500	0.180	0.820
81	1	0	10	11.000	0.180	0.820
82	2	0	8	10.000	0.180	0.820
83	1	0	7	8.000	0.180	0.820
89	1	0	6	7.000	0.180	0.820
90	0	1	5	6.000	0.200	0.800
91	0	1	4	5.000	0.220	0.780
92	3	1	0	2.500	0.240	0.760

TOTAL WITHDRAWN (NTBA) = 38

TOTAL TBA'S = 12

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 23

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	49	49.000	0.000	1.000
15	1	0	48	49.000	0.000	1.000
22	1	0	47	48.000	0.000	1.000
28	1	0	46	47.000	0.000	1.000
29	2	0	44	46.000	0.000	1.000
31	1	0	43	44.000	0.000	1.000
32	1	0	42	43.000	0.000	1.000
33	1	0	41	42.000	0.000	1.000
36	1	0	40	41.000	0.000	1.000
43	1	0	39	40.000	0.000	1.000
44	1	0	38	39.000	0.000	1.000
46	1	0	37	38.000	0.000	1.000
47	1	0	36	37.000	0.000	1.000
54	2	0	34	36.000	0.000	1.000
61	1	0	33	34.000	0.000	1.000
62	1	0	32	33.000	0.000	1.000
67	2	0	30	32.000	0.000	1.000
69	1	0	29	30.000	0.000	1.000
73	2	0	27	29.000	0.000	1.000
74	1	0	26	27.000	0.000	1.000
78	1	0	25	26.000	0.000	1.000
79	1	0	24	25.000	0.000	1.000
80	1	0	23	24.000	0.000	1.000
81	1	0	22	23.000	0.000	1.000
82	1	0	21	22.000	0.000	1.000
93	1	0	20	21.000	0.000	1.000
85	2	0	18	20.000	0.000	1.000
86	1	0	17	19.000	0.000	1.000
89	1	0	16	17.000	0.000	1.000
90	2	0	14	16.000	0.000	1.000
92	14	0	0	14.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 49

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 24

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
12	1	0	49	50.000	0.000	1.000
14	0	1	48	49.000	0.020	0.980
17	1	0	47	48.000	0.020	0.980
25	1	0	46	47.000	0.020	0.980
28	1	0	45	46.000	0.020	0.980
31	1	0	44	45.000	0.020	0.980
32	2	0	42	44.000	0.020	0.980
33	1	0	41	42.000	0.020	0.980
35	1	0	40	41.000	0.020	0.980
37	0	1	39	40.000	0.040	0.960
38	1	0	38	39.000	0.040	0.960
41	1	0	37	38.000	0.040	0.960
46	0	1	36	37.000	0.060	0.940
49	1	0	35	36.000	0.060	0.940
50	1	0	34	35.000	0.060	0.940
54	1	0	33	34.000	0.060	0.940
56	1	0	32	33.000	0.060	0.940
59	0	1	31	32.000	0.080	0.920
60	2	0	29	31.000	0.080	0.920
61	1	0	28	29.000	0.080	0.920
62	2	0	26	28.000	0.080	0.920
65	1	0	25	26.000	0.080	0.920
66	1	0	24	25.000	0.080	0.920
70	1	0	23	24.000	0.080	0.920
72	1	2	20	22.500	0.120	0.880
76	1	0	19	20.000	0.120	0.880
79	1	0	18	19.000	0.120	0.880
80	1	1	16	17.500	0.140	0.860
81	3	1	12	14.500	0.160	0.840
83	1	0	11	12.000	0.160	0.840
86	0	1	10	11.000	0.180	0.820
87	0	1	9	10.000	0.200	0.800
88	0	1	8	9.000	0.220	0.780
89	1	0	7	8.000	0.220	0.780
90	2	0	5	7.000	0.220	0.780
91	1	1	3	4.500	0.240	0.760
92	2	1	0	2.000	0.260	0.740

TOTAL WITHDRAWN (NTBA) = 37 TOTAL TBA'S = 13

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 25

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
14	1	0	49	50.000	0.000	1.000
29	1	0	48	49.000	0.000	1.000
32	2	0	46	48.000	0.000	1.000
33	1	0	45	46.000	0.000	1.000
34	1	0	44	45.000	0.000	1.000
37	1	0	43	44.000	0.000	1.000
38	1	0	42	43.000	0.000	1.000
41	1	0	41	42.000	0.000	1.000
42	1	0	40	41.000	0.000	1.000
45	1	0	39	40.000	0.000	1.000
53	1	0	38	39.000	0.000	1.000
54	1	0	37	38.000	0.000	1.000
57	1	0	36	37.000	0.000	1.000
59	2	0	34	36.000	0.000	1.000
62	1	0	33	34.000	0.000	1.000
67	1	0	32	33.000	0.000	1.000
69	1	0	31	32.000	0.000	1.000
70	1	0	30	31.000	0.000	1.000
71	2	0	28	30.000	0.000	1.000
72	1	0	27	28.000	0.000	1.000
73	2	0	25	27.000	0.000	1.000
74	1	0	24	25.000	0.000	1.000
77	1	0	23	24.000	0.000	1.000
78	1	0	22	23.000	0.000	1.000
79	1	0	21	22.000	0.000	1.000
81	2	0	19	21.000	0.000	1.000
83	1	0	18	19.000	0.000	1.000
86	1	0	17	18.000	0.000	1.000
88	1	0	16	17.000	0.000	1.000
89	3	0	13	16.000	0.000	1.000
92	13	0	0	13.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 26

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
4	1	0	49	50.000	0.000	1.000
6	1	0	48	49.000	0.000	1.000
7	1	0	47	48.000	0.000	1.000
12	1	0	46	47.000	0.000	1.000
22	1	0	45	46.000	0.000	1.000
29	1	0	44	45.000	0.000	1.000
30	1	0	43	44.000	0.000	1.000
31	2	0	41	43.000	0.000	1.000
43	1	0	40	41.000	0.000	1.000
45	3	0	37	40.000	0.000	1.000
46	1	0	36	37.000	0.000	1.000
50	1	0	35	36.000	0.000	1.000
53	1	0	34	35.000	0.000	1.000
56	1	0	33	34.000	0.000	1.000
57	1	1	31	32.500	0.020	0.980
60	1	0	30	31.000	0.020	0.980
61	1	0	29	30.000	0.020	0.980
62	1	0	28	29.000	0.020	0.980
66	0	1	27	28.000	0.040	0.960
67	1	0	26	27.000	0.040	0.960
69	0	1	25	26.000	0.060	0.940
70	1	1	23	24.500	0.080	0.920
71	0	1	22	23.000	0.100	0.900
73	1	1	20	21.500	0.120	0.880
75	1	0	19	20.000	0.120	0.880
76	1	0	18	19.000	0.120	0.880
77	1	0	17	18.000	0.120	0.880
78	2	0	15	17.000	0.120	0.880
80	1	0	14	15.000	0.120	0.880
81	1	2	11	13.500	0.160	0.840
82	1	1	9	10.500	0.180	0.820
83	0	1	8	9.000	0.200	0.800
84	1	0	7	8.000	0.200	0.800
89	1	0	6	7.000	0.200	0.800
91	0	1	5	6.000	0.220	0.780
92	5	0	0	5.000	0.220	0.780

TOTAL WITHDRAWN (NTBA) = 39

TOTAL TBA'S = 11

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 1

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	48	48.000	0.000	1.000
10	1	0	47	48.000	0.000	1.000
15	1	0	46	47.000	0.000	1.000
20	1	0	45	46.000	0.000	1.000
26	1	0	44	45.000	0.000	1.000
34	1	0	43	44.000	0.000	1.000
35	1	0	42	43.000	0.000	1.000
37	1	0	41	42.000	0.000	1.000
38	1	0	40	41.000	0.000	1.000
39	2	0	38	40.000	0.000	1.000
43	1	0	37	38.000	0.000	1.000
45	1	0	36	37.000	0.000	1.000
58	1	0	35	36.000	0.000	1.000
59	1	0	34	35.000	0.000	1.000
61	1	0	33	34.000	0.000	1.000
71	1	0	32	33.000	0.000	1.000
73	1	0	31	32.000	0.000	1.000
74	1	0	30	31.000	0.000	1.000
76	1	0	29	30.000	0.000	1.000
80	2	0	27	29.000	0.000	1.000
81	3	0	24	27.000	0.000	1.000
82	1	0	23	24.000	0.000	1.000
85	2	0	21	23.000	0.000	1.000
88	1	0	20	21.000	0.000	1.000
89	2	0	18	20.000	0.000	1.000
90	1	0	17	18.000	0.000	1.000
92	17	0	0	17.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 48

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 2

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	47	47.000	0.000	1.000
37	0	1	46	47.000	0.021	0.979
38	1	0	45	46.000	0.021	0.979
39	1	0	44	45.000	0.021	0.979
42	2	0	42	44.000	0.021	0.979
44	1	0	41	42.000	0.021	0.979
51	2	0	39	41.000	0.021	0.979
53	2	0	37	39.000	0.021	0.979
55	1	0	36	37.000	0.021	0.979
57	1	0	35	36.000	0.021	0.979
58	1	0	34	35.000	0.021	0.979
60	3	0	31	34.000	0.021	0.979
65	1	0	30	31.000	0.021	0.979
66	1	0	29	30.000	0.021	0.979
67	1	0	28	29.000	0.021	0.979
69	1	0	27	28.000	0.021	0.979
72	1	0	26	27.000	0.021	0.979
74	1	0	25	26.000	0.021	0.979
75	1	0	24	25.000	0.021	0.979
76	1	0	23	24.000	0.021	0.979
77	1	0	22	23.000	0.021	0.979
79	1	0	21	22.000	0.021	0.979
80	1	0	20	21.000	0.021	0.979
81	1	0	19	20.000	0.021	0.979
82	2	0	17	19.000	0.021	0.979
87	2	0	15	17.000	0.021	0.979
88	1	0	14	15.000	0.021	0.979
90	1	0	13	14.000	0.021	0.979
91	1	0	12	13.000	0.021	0.979
92	10	2	0	7.000	0.064	0.936

TOTAL WITHDRAWN (NTBA) = 44

TOTAL TBA'S = 3

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 3

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
23	1	0	49	50.000	0.000	1.000
24	1	0	48	49.000	0.000	1.000
25	1	0	47	48.000	0.000	1.000
29	1	0	46	47.000	0.000	1.000
30	2	0	44	46.000	0.000	1.000
32	1	0	43	44.000	0.000	1.000
33	1	0	42	43.000	0.000	1.000
34	1	0	41	42.000	0.000	1.000
43	1	0	40	41.000	0.000	1.000
44	1	0	39	40.000	0.000	1.000
49	1	0	38	39.000	0.000	1.000
52	1	0	37	38.000	0.000	1.000
55	1	0	36	37.000	0.000	1.000
56	1	0	35	36.000	0.000	1.000
61	1	0	34	35.000	0.000	1.000
62	2	0	32	34.000	0.000	1.000
69	1	0	31	32.000	0.000	1.000
70	1	0	30	31.000	0.000	1.000
76	1	0	29	30.000	0.000	1.000
78	3	0	26	29.000	0.000	1.000
81	5	0	21	26.000	0.000	1.000
83	1	0	20	21.000	0.000	1.000
85	1	0	19	20.000	0.000	1.000
86	1	0	18	19.000	0.000	1.000
87	1	0	17	18.000	0.000	1.000
90	2	0	15	17.000	0.000	1.000
91	1	0	14	15.000	0.000	1.000
92	14	0	0	14.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 4

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	48	48.000	0.000	1.000
13	2	0	46	48.000	0.000	1.000
36	1	0	45	46.000	0.000	1.000
40	1	0	44	45.000	0.000	1.000
47	1	0	43	44.000	0.000	1.000
48	1	0	42	43.000	0.000	1.000
49	1	0	41	42.000	0.000	1.000
50	3	0	38	41.000	0.000	1.000
51	1	0	37	38.000	0.000	1.000
52	1	0	36	37.000	0.000	1.000
54	0	1	35	36.000	0.021	0.979
57	1	0	34	35.000	0.021	0.979
58	2	0	32	34.000	0.021	0.979
59	1	0	31	32.000	0.021	0.979
60	1	0	30	31.000	0.021	0.979
61	1	0	29	30.000	0.021	0.979
62	1	0	28	29.000	0.021	0.979
63	1	0	27	28.000	0.021	0.979
65	1	0	26	27.000	0.021	0.979
66	1	1	24	25.500	0.042	0.958
67	1	0	23	24.000	0.042	0.958
69	0	1	22	23.000	0.063	0.938
70	1	0	21	22.000	0.063	0.938
71	1	0	20	21.000	0.063	0.938
74	1	0	19	20.000	0.063	0.938
76	1	0	18	19.000	0.063	0.938
79	2	0	16	18.000	0.063	0.938
81	2	0	14	16.000	0.063	0.938
82	0	2	12	14.000	0.104	0.896
83	1	0	11	12.000	0.104	0.896
84	1	0	10	11.000	0.104	0.896
87	1	0	9	10.000	0.104	0.896
90	1	0	8	9.000	0.104	0.896
92	7	1	0	4.500	0.125	0.875

TOTAL WITHDRAWN (NTBA) = 42

TOTAL TBA'S = 6

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 5

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
8	1	0	49	50.000	0.000	1.000
15	1	0	48	49.000	0.000	1.000
22	1	0	47	48.000	0.000	1.000
24	1	0	46	47.000	0.000	1.000
28	2	0	44	46.000	0.000	1.000
32	1	0	43	44.000	0.000	1.000
36	1	0	42	43.000	0.000	1.000
40	1	0	41	42.000	0.000	1.000
42	2	0	39	41.000	0.000	1.000
43	1	0	38	39.000	0.000	1.000
46	1	0	37	38.000	0.000	1.000
49	1	0	36	37.000	0.000	1.000
54	1	0	35	36.000	0.000	1.000
58	1	0	34	35.000	0.000	1.000
60	1	0	33	34.000	0.000	1.000
61	1	0	32	33.000	0.000	1.000
65	1	0	31	32.000	0.000	1.000
68	4	0	27	31.000	0.000	1.000
71	3	0	24	27.000	0.000	1.000
74	2	0	22	24.000	0.000	1.000
75	1	0	21	22.000	0.000	1.000
77	2	0	19	21.000	0.000	1.000
78	2	0	17	19.000	0.000	1.000
79	1	0	16	17.000	0.000	1.000
80	2	0	14	16.000	0.000	1.000
81	2	0	12	14.000	0.000	1.000
82	4	0	8	12.000	0.000	1.000
86	1	0	7	8.000	0.000	1.000
88	1	0	6	7.000	0.000	1.000
89	2	0	4	6.000	0.000	1.000
92	4	0	0	4.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 6

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
7	1	0	49	50.000	0.000	1.000
21	1	0	48	49.000	0.000	1.000
26	1	0	47	48.000	0.000	1.000
31	1	0	46	47.000	0.000	1.000
35	1	0	45	46.000	0.000	1.000
36	1	0	44	45.000	0.000	1.000
39	1	0	43	44.000	0.000	1.000
40	1	0	42	43.000	0.000	1.000
41	1	2	39	41.500	0.040	0.960
42	0	1	38	39.000	0.060	0.940
46	0	1	37	38.000	0.080	0.920
47	2	0	35	37.000	0.080	0.920
50	1	0	34	35.000	0.080	0.920
51	1	0	33	34.000	0.080	0.920
56	1	0	32	33.000	0.080	0.920
57	1	1	30	31.500	0.100	0.900
58	3	1	26	28.500	0.120	0.880
59	1	0	25	26.000	0.120	0.880
63	1	0	24	25.000	0.120	0.880
65	1	0	23	24.000	0.120	0.880
66	1	0	22	23.000	0.120	0.880
68	1	0	21	22.000	0.120	0.880
70	0	1	20	21.000	0.140	0.860
71	0	1	19	20.000	0.160	0.840
73	1	0	18	19.000	0.160	0.840
74	1	0	17	18.000	0.160	0.840
77	1	0	16	17.000	0.160	0.840
78	1	1	14	15.500	0.180	0.820
79	1	0	13	14.000	0.180	0.820
80	0	1	12	13.000	0.200	0.800
81	0	1	11	12.000	0.220	0.780
82	2	0	9	11.000	0.220	0.780
83	1	1	7	8.500	0.240	0.760
84	1	0	6	7.000	0.240	0.760
86	1	1	4	5.500	0.260	0.740
90	1	0	3	4.000	0.260	0.740
92	3	0	0	3.000	0.260	0.740

TOTAL WITHDRAWN (NTBA) = 37

TOTAL TBA'S = 13

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 7

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
26	2	0	48	50.000	0.000	1.000
32	2	0	46	48.000	0.000	1.000
34	1	0	45	46.000	0.000	1.000
38	1	0	44	45.000	0.000	1.000
39	1	0	43	44.000	0.000	1.000
40	1	0	42	43.000	0.000	1.000
43	1	0	41	42.000	0.000	1.000
45	2	0	39	41.000	0.000	1.000
47	1	0	38	39.000	0.000	1.000
57	1	0	37	38.000	0.000	1.000
63	1	0	36	37.000	0.000	1.000
67	1	0	35	36.000	0.000	1.000
68	1	0	34	35.000	0.000	1.000
73	1	0	33	34.000	0.000	1.000
74	1	0	32	33.000	0.000	1.000
75	1	0	31	32.000	0.000	1.000
76	1	0	30	31.000	0.000	1.000
80	2	0	28	30.000	0.000	1.000
81	1	0	27	28.000	0.000	1.000
82	1	0	26	27.000	0.000	1.000
83	2	0	24	26.000	0.000	1.000
86	1	0	23	24.000	0.000	1.000
92	23	0	0	23.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 8

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
3	1	0	49	50.000	0.000	1.000
23	1	0	48	49.000	0.000	1.000
24	1	0	47	48.000	0.000	1.000
29	1	0	46	47.000	0.000	1.000
41	1	0	45	46.000	0.000	1.000
42	1	0	44	45.000	0.000	1.000
47	1	0	43	44.000	0.000	1.000
48	1	0	42	43.000	0.000	1.000
49	1	0	39	42.000	0.000	1.000
51	1	0	38	39.000	0.000	1.000
53	1	0	37	38.000	0.000	1.000
55	1	0	36	37.000	0.000	1.000
58	2	0	34	36.000	0.000	1.000
60	1	0	33	34.000	0.000	1.000
61	1	0	32	33.000	0.000	1.000
64	1	0	31	32.000	0.000	1.000
65	1	0	30	31.000	0.000	1.000
66	1	0	29	30.000	0.000	1.000
67	1	0	28	29.000	0.000	1.000
68	2	0	26	28.000	0.000	1.000
70	3	0	23	26.000	0.000	1.000
71	3	0	20	23.000	0.000	1.000
72	1	0	19	20.000	0.000	1.000
73	1	0	18	19.000	0.000	1.000
74	1	0	17	18.000	0.000	1.000
75	1	0	16	17.000	0.000	1.000
77	1	0	15	16.000	0.000	1.000
78	1	0	14	15.000	0.000	1.000
79	2	1	11	13.000	0.020	0.980
80	1	1	9	10.500	0.040	0.960
82	1	0	8	9.000	0.040	0.960
83	1	0	7	8.000	0.040	0.960
84	2	0	5	7.000	0.040	0.960
90	1	0	4	5.000	0.040	0.960
91	1	0	3	4.000	0.040	0.960
92	3	0	0	3.000	0.040	0.960

TOTAL WITHDRAWN (NTBA) = 48

TOTAL TBA'S = 2

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 9

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
25	1	0	49	50.000	0.000	1.000
30	1	0	48	49.000	0.000	1.000
33	2	0	46	48.000	0.000	1.000
41	1	0	45	46.000	0.000	1.000
42	1	0	44	45.000	0.000	1.000
43	1	0	43	44.000	0.000	1.000
45	2	0	41	43.000	0.000	1.000
46	1	0	40	41.000	0.000	1.000
47	1	0	39	40.000	0.000	1.000
50	1	0	38	39.000	0.000	1.000
51	1	0	37	38.000	0.000	1.000
52	1	0	36	37.000	0.000	1.000
53	1	0	35	36.000	0.000	1.000
55	1	0	34	35.000	0.000	1.000
59	1	0	33	34.000	0.000	1.000
61	1	0	32	33.000	0.000	1.000
63	1	0	31	32.000	0.000	1.000
69	2	0	29	31.000	0.000	1.000
70	1	0	28	29.000	0.000	1.000
74	1	0	27	28.000	0.000	1.000
76	1	0	26	27.000	0.000	1.000
80	1	0	25	26.000	0.000	1.000
81	2	0	23	25.000	0.000	1.000
90	2	0	21	23.000	0.000	1.000
91	4	0	17	21.000	0.000	1.000
92	17	0	0	17.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 10

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
32	1	0	49	50.000	0.000	1.000
33	2	0	47	49.000	0.000	1.000
35	2	0	45	47.000	0.000	1.000
36	1	0	44	45.000	0.000	1.000
40	1	0	43	44.000	0.000	1.000
43	1	0	42	43.000	0.000	1.000
45	2	0	40	42.000	0.000	1.000
47	2	0	38	40.000	0.000	1.000
48	1	0	37	38.000	0.000	1.000
50	1	0	36	37.000	0.000	1.000
51	1	0	35	36.000	0.000	1.000
52	4	0	31	35.000	0.000	1.000
55	1	0	30	31.000	0.000	1.000
56	2	0	28	30.000	0.000	1.000
57	1	0	27	28.000	0.000	1.000
58	0	2	25	27.000	0.040	0.960
59	1	0	24	25.000	0.040	0.960
61	1	0	23	24.000	0.040	0.960
63	1	0	22	23.000	0.040	0.960
65	2	1	19	21.000	0.060	0.940
70	1	0	18	19.000	0.060	0.940
72	1	0	17	18.000	0.060	0.940
75	3	0	14	17.000	0.060	0.940
76	1	0	13	14.000	0.060	0.940
78	1	0	12	13.000	0.060	0.940
80	0	1	11	12.000	0.090	0.920
81	1	0	10	11.000	0.080	0.920
83	0	1	9	10.000	0.100	0.900
86	1	0	8	9.000	0.100	0.900
87	1	0	7	8.000	0.100	0.900
88	0	1	6	7.000	0.120	0.880
89	1	0	5	6.000	0.120	0.880
90	1	0	4	5.000	0.120	0.880
91	0	1	3	4.000	0.140	0.860
92	3	0	0	3.000	0.140	0.860

TOTAL WITHDRAWN (NTBA) = 43

TOTAL TBA'S = 7

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 11

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
14	1	0	49	50.000	0.000	1.000
23	1	0	48	49.000	0.000	1.000
24	1	0	47	48.000	0.000	1.000
29	1	0	46	47.000	0.000	1.000
34	1	0	45	46.000	0.000	1.000
37	2	0	43	45.000	0.000	1.000
38	1	0	42	43.000	0.000	1.000
40	1	0	41	42.000	0.000	1.000
42	1	0	40	41.000	0.000	1.000
49	1	0	39	40.000	0.000	1.000
52	1	0	38	39.000	0.000	1.000
54	1	0	37	38.000	0.000	1.000
62	1	0	36	37.000	0.000	1.000
72	2	0	34	36.000	0.000	1.000
76	1	0	33	34.000	0.000	1.000
77	3	0	30	33.000	0.000	1.000
78	1	0	29	30.000	0.000	1.000
79	2	0	27	29.000	0.000	1.000
80	1	0	26	27.000	0.000	1.000
81	2	0	24	26.000	0.000	1.000
83	1	0	23	24.000	0.000	1.000
84	1	0	22	23.000	0.000	1.000
85	1	0	21	22.000	0.000	1.000
86	3	0	18	21.000	0.000	1.000
91	1	0	17	18.000	0.000	1.000
92	17	0	0	17.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 12

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
12	1	0	49	50.000	0.000	1.000
15	1	0	48	49.000	0.000	1.000
27	1	0	47	48.000	0.000	1.000
40	3	0	44	47.000	0.000	1.000
41	2	0	42	44.000	0.000	1.000
43	1	0	41	42.000	0.000	1.000
45	0	1	40	41.000	0.020	0.980
46	1	0	39	40.000	0.020	0.980
47	0	1	38	39.000	0.040	0.960
48	1	0	37	38.000	0.040	0.960
52	1	0	36	37.000	0.040	0.960
54	2	0	34	36.000	0.040	0.960
55	1	0	33	34.000	0.040	0.960
56	1	1	31	32.500	0.060	0.940
59	1	0	30	31.000	0.060	0.940
61	1	0	29	30.000	0.060	0.940
64	1	0	28	29.000	0.060	0.940
65	3	0	25	28.000	0.060	0.940
66	1	0	24	25.000	0.060	0.940
67	2	0	22	24.000	0.060	0.940
69	1	0	21	22.000	0.060	0.940
70	1	1	19	20.500	0.080	0.920
71	0	1	18	19.000	0.100	0.900
77	1	0	17	18.000	0.100	0.900
78	1	0	16	17.000	0.100	0.900
79	0	1	15	16.000	0.120	0.880
80	0	1	14	15.000	0.140	0.860
81	1	0	13	14.000	0.140	0.860
83	1	0	12	13.000	0.140	0.860
84	2	0	10	12.000	0.140	0.860
85	1	0	9	10.000	0.140	0.860
86	0	1	8	9.000	0.160	0.840
89	1	0	7	8.000	0.160	0.840
91	1	0	6	7.000	0.160	0.840
92	5	1	0	3.500	0.180	0.820

TOTAL WITHDRAWN (NTBA) = 41 TOTAL TBA'S = 9

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 13

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
9	1	0	49	50.000	0.000	1.000
10	1	0	48	49.000	0.000	1.000
12	1	0	47	48.000	0.000	1.000
13	2	0	45	47.000	0.000	1.000
16	1	0	44	45.000	0.000	1.000
18	1	0	43	44.000	0.000	1.000
24	1	0	42	43.000	0.000	1.000
25	1	0	41	42.000	0.000	1.000
28	1	0	40	41.000	0.000	1.000
35	1	0	39	40.000	0.000	1.000
36	3	0	36	39.000	0.000	1.000
40	1	0	35	36.000	0.000	1.000
43	1	0	34	35.000	0.000	1.000
54	1	0	33	34.000	0.000	1.000
58	1	0	32	33.000	0.000	1.000
69	1	0	31	32.000	0.000	1.000
72	1	0	30	31.000	0.000	1.000
74	1	0	29	30.000	0.000	1.000
79	1	0	28	29.000	0.000	1.000
80	3	0	25	28.000	0.000	1.000
82	1	0	24	25.000	0.000	1.000
84	3	0	21	24.000	0.000	1.000
90	1	0	20	21.000	0.000	1.000
91	2	0	18	20.000	0.000	1.000
92	18	0	0	18.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 14

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	48	48.000	0.000	1.000
14	1	0	47	48.000	0.000	1.000
26	1	0	46	47.000	0.000	1.000
29	1	0	45	46.000	0.000	1.000
31	1	0	44	45.000	0.000	1.000
35	2	0	42	44.000	0.000	1.000
37	1	0	41	42.000	0.000	1.000
39	1	0	40	41.000	0.000	1.000
41	2	0	38	40.000	0.000	1.000
43	1	0	37	38.000	0.000	1.000
44	1	0	36	37.000	0.000	1.000
45	1	0	35	36.000	0.000	1.000
46	0	1	34	35.000	0.021	0.979
48	0	1	33	34.000	0.042	0.958
49	2	0	31	33.000	0.042	0.958
53	1	0	30	31.000	0.042	0.958
54	1	1	28	29.500	0.063	0.938
55	0	1	27	28.000	0.083	0.917
56	3	1	23	25.500	0.104	0.896
58	2	1	20	22.000	0.125	0.875
59	1	0	19	20.000	0.125	0.875
62	1	0	18	19.000	0.125	0.875
63	0	1	17	18.000	0.146	0.854
69	1	0	16	17.000	0.146	0.854
71	1	1	14	15.500	0.167	0.833
72	1	1	12	13.500	0.188	0.813
76	1	0	11	12.000	0.188	0.813
77	2	0	9	11.000	0.188	0.813
79	1	1	7	8.500	0.208	0.792
80	0	2	5	7.000	0.250	0.750
81	1	0	4	5.000	0.250	0.750
85	0	1	3	4.000	0.271	0.729
90	2	0	1	3.000	0.271	0.729
92	1	0	0	1.000	0.271	0.729

TOTAL WITHDRAWN (NTBA) = 35

TOTAL TBA'S = 13

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 15

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	49	49.000	0.000	1.000
16	1	0	48	49.000	0.000	1.000
17	1	0	47	48.000	0.000	1.000
30	1	0	46	47.000	0.000	1.000
33	2	0	44	46.000	0.000	1.000
34	2	0	42	44.000	0.000	1.000
35	1	0	41	42.000	0.000	1.000
38	1	0	40	41.000	0.000	1.000
42	1	0	39	40.000	0.000	1.000
45	2	0	37	39.000	0.000	1.000
46	1	0	36	37.000	0.000	1.000
48	1	0	35	36.000	0.000	1.000
49	1	0	34	35.000	0.000	1.000
50	1	0	33	34.000	0.000	1.000
52	1	0	32	33.000	0.000	1.000
54	1	0	31	32.000	0.000	1.000
58	1	0	30	31.000	0.000	1.000
59	1	0	29	30.000	0.000	1.000
62	1	0	28	29.000	0.000	1.000
64	1	0	27	28.000	0.000	1.000
65	2	0	25	27.000	0.000	1.000
69	1	0	24	25.000	0.000	1.000
72	4	0	20	24.000	0.000	1.000
73	1	0	19	20.000	0.000	1.000
75	1	0	18	19.000	0.000	1.000
79	3	0	15	18.000	0.000	1.000
80	4	0	11	15.000	0.000	1.000
81	2	0	9	11.000	0.000	1.000
83	1	0	8	9.000	0.000	1.000
84	3	0	5	8.000	0.000	1.000
86	1	0	4	5.000	0.000	1.000
90	1	0	3	4.000	0.000	1.000
92	3	0	0	3.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 49

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LARYNX TUMORS

GROUP 16

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
18	1	0	49	50.000	0.000	1.000
22	1	0	48	49.000	0.000	1.000
38	1	0	47	48.000	0.000	1.000
39	3	0	44	47.000	0.000	1.000
40	1	0	43	44.000	0.000	1.000
41	2	0	41	43.000	0.000	1.000
42	1	0	40	41.000	0.000	1.000
43	0	1	39	40.000	0.020	0.980
44	1	0	38	39.000	0.020	0.980
46	1	0	37	38.000	0.020	0.980
48	0	1	36	37.000	0.040	0.960
50	1	0	35	36.000	0.040	0.960
52	1	0	34	35.000	0.040	0.960
53	1	0	33	34.000	0.040	0.960
55	1	0	32	33.000	0.040	0.960
58	1	0	31	32.000	0.060	0.940
59	0	1	30	31.000	0.080	0.920
60	0	1	27	30.000	0.080	0.920
61	3	0	24	26.000	0.100	0.900
63	2	1	23	24.000	0.100	0.900
64	1	0	20	23.000	0.100	0.900
68	3	0	19	20.000	0.100	0.900
69	1	0	16	18.000	0.120	0.880
74	2	1	14	16.000	0.120	0.880
75	2	0	13	14.000	0.120	0.880
76	1	0	12	13.000	0.120	0.880
77	1	0	11	12.000	0.120	0.880
78	1	0	10	11.000	0.120	0.880
80	1	0	7	9.000	0.140	0.860
81	2	1	6	7.000	0.140	0.860
82	1	0	5	6.000	0.140	0.860
83	1	0	3	5.000	0.180	0.820
85	0	2	2	3.000	0.180	0.820
86	1	0	1	2.000	0.200	0.800
87	0	1	0	1.000	0.200	0.800
92	1	0				

TOTAL WITHDRAWN (NTBA) = 40

TOTAL TBA'S = 10

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 17

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
12	1	0	49	50.000	0.000	1.000
34	2	0	47	49.000	0.000	1.000
37	1	0	46	47.000	0.000	1.000
41	1	0	45	46.000	0.000	1.000
42	1	0	44	45.000	0.000	1.000
50	1	0	43	44.000	0.000	1.000
55	1	0	42	43.000	0.000	1.000
65	1	0	41	42.000	0.000	1.000
66	1	0	40	41.000	0.000	1.000
70	1	0	39	40.000	0.000	1.000
72	1	0	38	39.000	0.000	1.000
73	1	0	37	38.000	0.000	1.000
74	1	0	36	37.000	0.000	1.000
75	1	0	35	36.000	0.000	1.000
76	2	0	33	35.000	0.000	1.000
80	2	0	31	33.000	0.000	1.000
82	1	0	30	31.000	0.000	1.000
83	1	0	29	30.000	0.000	1.000
84	1	0	28	29.000	0.000	1.000
87	1	0	27	28.000	0.000	1.000
88	1	0	26	27.000	0.000	1.000
90	1	0	25	26.000	0.000	1.000
91	1	0	24	25.000	0.000	1.000
92	24	0	0	24.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 18

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
14	1	0	49	50.000	0.000	1.000
20	1	0	48	49.000	0.000	1.000
23	1	0	47	48.000	0.000	1.000
26	1	0	46	47.000	0.000	1.000
32	2	0	44	46.000	0.000	1.000
35	1	0	43	44.000	0.000	1.000
38	1	1	41	42.500	0.020	0.980
40	2	0	39	41.000	0.020	0.980
43	1	0	38	39.000	0.020	0.980
44	1	0	37	38.000	0.020	0.980
50	1	0	36	37.000	0.020	0.980
51	1	0	35	36.000	0.020	0.980
53	1	0	34	35.000	0.020	0.980
54	1	0	33	34.000	0.020	0.980
55	2	0	31	33.000	0.020	0.980
56	1	0	30	31.000	0.020	0.980
57	1	0	29	30.000	0.020	0.980
58	1	0	28	29.000	0.020	0.980
60	2	1	25	27.000	0.040	0.960
62	1	0	24	25.000	0.040	0.960
63	1	0	23	24.000	0.040	0.960
64	2	0	21	23.000	0.040	0.960
67	0	1	20	21.000	0.060	0.940
69	2	0	18	20.000	0.060	0.940
70	1	0	17	18.000	0.060	0.940
71	0	1	16	17.000	0.080	0.920
73	1	0	15	16.000	0.080	0.920
75	2	1	12	14.000	0.100	0.900
76	1	0	11	12.000	0.100	0.900
79	1	0	10	11.000	0.100	0.900
80	2	0	8	10.000	0.100	0.900
85	1	1	6	7.500	0.120	0.880
86	0	1	5	6.000	0.140	0.860
87	2	0	3	5.000	0.140	0.860
92	3	0	0	3.000	0.140	0.860

TOTAL WITHDRAWN (NTBA) = 43 TOTAL TBA'S = 7

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 19

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
7	1	0	49	50.000	0.000	1.000
9	1	0	48	49.000	0.000	1.000
18	1	0	47	48.000	0.000	1.000
19	1	0	46	47.000	0.000	1.000
28	1	0	45	46.000	0.000	1.000
32	1	0	44	45.000	0.000	1.000
33	2	0	42	44.000	0.000	1.000
34	1	0	41	42.000	0.000	1.000
38	2	0	39	41.000	0.000	1.000
40	1	0	38	39.000	0.000	1.000
41	1	0	37	38.000	0.000	1.000
45	1	0	36	37.000	0.000	1.000
47	1	0	35	36.000	0.000	1.000
49	1	0	34	35.000	0.000	1.000
50	1	0	33	34.000	0.000	1.000
55	1	0	32	33.000	0.000	1.000
57	1	0	31	32.000	0.000	1.000
58	1	0	30	31.000	0.000	1.000
62	1	0	29	30.000	0.000	1.000
63	1	0	28	29.000	0.000	1.000
67	1	0	27	28.000	0.000	1.000
68	2	0	25	27.000	0.000	1.000
72	1	0	24	25.000	0.000	1.000
78	1	0	23	24.000	0.000	1.000
81	1	0	22	23.000	0.000	1.000
85	2	0	20	22.000	0.000	1.000
88	1	0	19	20.000	0.000	1.000
89	1	0	18	19.000	0.000	1.000
90	4	0	14	18.000	0.000	1.000
91	3	0	11	14.000	0.000	1.000
92	11	0	0	11.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 20

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
12	1	0	49	50.000	0.000	1.000
16	1	0	48	49.000	0.000	1.000
21	1	0	47	48.000	0.000	1.000
22	1	0	46	47.000	0.000	1.000
28	1	2	43	45.500	0.040	0.960
31	0	1	42	43.000	0.060	0.940
32	0	1	41	42.000	0.080	0.920
34	1	0	40	41.000	0.080	0.920
35	3	0	37	40.000	0.080	0.920
37	1	0	36	37.000	0.080	0.920
39	2	0	34	36.000	0.080	0.920
41	3	0	31	34.000	0.080	0.920
45	2	0	29	31.000	0.080	0.920
46	1	0	28	29.000	0.080	0.920
47	1	0	27	28.000	0.080	0.920
49	2	0	25	27.000	0.080	0.920
52	2	0	23	25.000	0.080	0.920
53	1	0	22	23.000	0.080	0.920
58	1	0	21	22.000	0.080	0.920
60	1	0	20	21.000	0.080	0.920
61	1	0	19	20.000	0.080	0.920
62	0	1	18	19.000	0.100	0.900
63	1	0	17	18.000	0.100	0.900
64	1	0	16	17.000	0.100	0.900
68	1	0	15	16.000	0.100	0.900
72	1	0	14	15.000	0.100	0.900
77	0	1	13	14.000	0.120	0.880
78	1	0	12	13.000	0.120	0.880
79	1	1	10	11.500	0.140	0.860
83	0	1	9	10.000	0.160	0.840
84	1	0	8	9.000	0.160	0.840
89	1	1	6	7.500	0.180	0.820
90	0	2	4	6.000	0.220	0.780
91	2	0	2	4.000	0.220	0.780
92	2	0	0	2.000	0.220	0.780

TOTAL WITHDRAWN (NTBA) = 39

TOTAL TBA'S = 11

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 21

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
5	1	0	49	50.000	0.000	1.000
20	1	0	48	49.000	0.000	1.000
21	1	0	47	48.000	0.000	1.000
25	1	0	46	47.000	0.000	1.000
29	1	0	45	46.000	0.000	1.000
39	1	0	44	45.000	0.000	1.000
40	1	0	43	44.000	0.000	1.000
43	1	0	42	43.000	0.000	1.000
50	1	0	41	42.000	0.000	1.000
51	1	0	40	41.000	0.000	1.000
59	1	0	39	40.000	0.000	1.000
66	1	0	38	39.000	0.000	1.000
68	1	0	37	38.000	0.000	1.000
69	1	0	36	37.000	0.000	1.000
72	1	0	35	36.000	0.000	1.000
74	2	0	33	35.000	0.000	1.000
76	1	0	32	33.000	0.000	1.000
77	1	0	31	32.000	0.000	1.000
80	1	0	30	31.000	0.000	1.000
81	1	0	29	30.000	0.000	1.000
84	1	0	28	29.000	0.000	1.000
86	2	0	26	28.000	0.000	1.000
88	2	0	24	26.000	0.000	1.000
91	1	0	23	24.000	0.000	1.000
92	23	0	0	23.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 22

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
17	1	0	49	50.000	0.000	1.000
18	1	0	48	49.000	0.000	1.000
21	1	0	47	48.000	0.000	1.000
24	1	0	46	47.000	0.000	1.000
31	1	0	45	46.000	0.000	1.000
32	1	0	44	45.000	0.000	1.000
35	1	0	43	44.000	0.000	1.000
36	1	0	42	43.000	0.000	1.000
39	2	0	40	42.000	0.000	1.000
46	1	0	39	40.000	0.000	1.000
51	1	1	37	38.500	0.020	0.980
52	1	0	36	37.000	0.020	0.980
53	1	0	35	36.000	0.020	0.980
55	1	0	34	35.000	0.020	0.980
56	0	1	33	34.000	0.040	0.960
57	1	0	32	33.000	0.040	0.960
59	2	1	29	31.000	0.060	0.940
60	0	1	28	29.000	0.080	0.920
63	2	0	26	28.000	0.080	0.920
64	0	2	24	26.000	0.120	0.880
66	1	0	23	24.000	0.120	0.880
67	2	0	21	23.000	0.120	0.880
68	1	0	20	21.000	0.120	0.880
70	1	0	19	20.000	0.120	0.880
72	1	0	18	19.000	0.120	0.880
73	1	1	16	17.500	0.140	0.860
74	0	1	15	16.000	0.160	0.840
76	2	0	13	15.000	0.160	0.840
77	1	1	11	12.500	0.180	0.820
81	1	0	10	11.000	0.180	0.820
82	1	1	8	9.500	0.200	0.800
83	1	0	7	8.000	0.200	0.800
89	1	0	6	7.000	0.200	0.800
90	1	0	5	6.000	0.200	0.800
91	1	0	4	5.000	0.200	0.800
92	2	2	0	3.000	0.240	0.760

TOTAL WITHDRAWN (NTBA) = 38

TOTAL TBA'S = 12

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 23

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	49	49.000	0.000	1.000
15	1	0	48	49.000	0.000	1.000
22	1	0	47	48.000	0.000	1.000
28	1	0	46	47.000	0.000	1.000
29	2	0	44	46.000	0.000	1.000
31	1	0	43	44.000	0.000	1.000
32	1	0	42	43.000	0.000	1.000
33	1	0	41	42.000	0.000	1.000
36	1	0	40	41.000	0.000	1.000
43	1	0	39	40.000	0.000	1.000
44	1	0	38	39.000	0.000	1.000
46	1	0	37	38.000	0.000	1.000
47	1	0	36	37.000	0.000	1.000
54	2	0	34	36.000	0.000	1.000
61	1	0	33	34.000	0.000	1.000
62	1	0	32	33.000	0.000	1.000
67	2	0	30	32.000	0.000	1.000
69	1	0	29	30.000	0.000	1.000
73	2	0	27	29.000	0.000	1.000
74	1	0	26	27.000	0.000	1.000
78	1	0	25	26.000	0.000	1.000
79	1	0	24	25.000	0.000	1.000
80	1	0	23	24.000	0.000	1.000
81	1	0	22	23.000	0.000	1.000
82	1	0	21	22.000	0.000	1.000
83	1	0	20	21.000	0.000	1.000
85	2	0	18	20.000	0.000	1.000
86	1	0	17	18.000	0.000	1.000
89	1	0	16	17.000	0.000	1.000
90	2	0	14	16.000	0.000	1.000
92	14	0	0	14.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 49

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 24

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
12	1	0	49	50.000	0.000	1.000
14	1	0	48	49.000	0.000	1.000
17	1	0	47	48.000	0.000	1.000
25	1	0	46	47.000	0.000	1.000
28	1	0	45	46.000	0.000	1.000
31	1	0	44	45.000	0.000	1.000
32	2	0	42	44.000	0.000	1.000
33	1	0	41	42.000	0.000	1.000
35	1	0	40	41.000	0.000	1.000
37	1	0	39	40.000	0.000	1.000
38	1	0	38	39.000	0.000	1.000
41	1	0	37	38.000	0.000	1.000
46	1	0	36	37.000	0.000	1.000
49	1	0	35	36.000	0.000	1.000
50	1	0	34	35.000	0.000	1.000
54	1	0	33	34.000	0.000	1.000
56	1	0	32	33.000	0.000	1.000
59	1	0	31	32.000	0.000	1.000
60	2	0	29	31.000	0.000	1.000
61	0	1	28	29.000	0.020	0.980
62	1	1	26	27.500	0.040	0.960
65	1	0	25	26.000	0.040	0.960
66	1	0	24	25.000	0.040	0.960
70	1	0	23	24.000	0.040	0.960
72	2	1	20	22.000	0.060	0.940
76	1	0	19	20.000	0.060	0.940
79	1	0	18	19.000	0.060	0.940
80	2	0	16	18.000	0.060	0.940
81	1	3	12	15.500	0.120	0.880
83	0	1	11	12.000	0.140	0.860
86	1	0	10	11.000	0.140	0.860
87	1	0	9	10.000	0.140	0.860
88	1	0	8	9.000	0.140	0.860
89	1	0	7	8.000	0.140	0.860
90	2	0	5	7.000	0.140	0.860
91	2	0	3	5.000	0.140	0.860
92	3	0	0	3.000	0.140	0.860

TOTAL WITHDRAWN (NTBA) = 43

TOTAL TBA'S = 7

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 25

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
14	1	0	49	50.000	0.000	1.000
29	1	0	48	49.000	0.000	1.000
32	2	0	46	48.000	0.000	1.000
33	1	0	45	46.000	0.000	1.000
34	1	0	44	45.000	0.000	1.000
37	1	0	43	44.000	0.000	1.000
38	1	0	42	43.000	0.000	1.000
41	1	0	41	42.000	0.000	1.000
42	1	0	40	41.000	0.000	1.000
45	1	0	39	40.000	0.000	1.000
53	1	0	38	39.000	0.000	1.000
54	1	0	37	38.000	0.000	1.000
57	1	0	36	37.000	0.000	1.000
59	2	0	34	36.000	0.000	1.000
62	1	0	33	34.000	0.000	1.000
67	1	0	32	33.000	0.000	1.000
69	1	0	31	32.000	0.000	1.000
70	1	0	30	31.000	0.000	1.000
71	2	0	28	30.000	0.000	1.000
72	1	0	27	28.000	0.000	1.000
73	2	0	25	27.000	0.000	1.000
74	1	0	24	25.000	0.000	1.000
77	1	0	23	24.000	0.000	1.000
78	1	0	22	23.000	0.000	1.000
79	1	0	21	22.000	0.000	1.000
81	2	0	19	21.000	0.000	1.000
83	1	0	18	19.000	0.000	1.000
86	1	0	17	18.000	0.000	1.000
88	1	0	16	17.000	0.000	1.000
89	3	0	13	16.000	0.000	1.000
92	13	0	0	13.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 26

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
4	1	0	49	50.000	0.000	1.000
6	1	0	48	49.000	0.000	1.000
7	1	0	47	48.000	0.000	1.000
12	1	0	46	47.000	0.000	1.000
22	1	0	45	46.000	0.000	1.000
29	0	1	44	45.000	0.020	0.980
30	0	1	43	44.000	0.040	0.960
31	0	2	41	43.000	0.080	0.920
43	1	0	40	41.000	0.080	0.920
45	3	0	37	40.000	0.080	0.920
46	0	1	36	37.000	0.100	0.900
50	1	0	35	36.000	0.100	0.900
53	1	0	34	35.000	0.100	0.900
56	1	0	33	34.000	0.100	0.900
57	2	0	31	33.000	0.100	0.900
60	1	0	30	31.000	0.100	0.900
61	1	0	29	30.000	0.100	0.900
62	1	0	28	29.000	0.100	0.900
66	0	1	27	28.000	0.120	0.880
67	1	0	26	27.000	0.120	0.880
69	1	0	25	26.000	0.120	0.880
70	2	0	23	25.000	0.120	0.880
71	1	0	22	23.000	0.120	0.880
73	2	0	20	22.000	0.120	0.880
75	1	0	19	20.000	0.120	0.880
76	0	1	18	19.000	0.140	0.860
77	1	0	17	18.000	0.140	0.860
78	2	0	15	17.000	0.140	0.860
80	1	0	14	15.000	0.140	0.860
81	3	0	11	14.000	0.140	0.860
82	2	0	9	11.000	0.140	0.860
83	1	0	8	9.000	0.140	0.860
84	1	0	7	8.000	0.140	0.860
89	1	0	6	7.000	0.140	0.860
91	1	0	5	6.000	0.140	0.860
92	4	1	0	3.000	0.160	0.840

TOTAL WITHDRAWN (NTBA) = 42

TOTAL TBA'S = 8

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 1

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	48	48.000	0.000	1.000
10	1	0	47	48.000	0.000	1.000
15	1	0	46	47.000	0.000	1.000
20	1	0	45	46.000	0.000	1.000
26	1	0	44	45.000	0.000	1.000
34	1	0	43	44.000	0.000	1.000
35	1	0	42	43.000	0.000	1.000
37	1	0	41	42.000	0.000	1.000
38	1	0	40	41.000	0.000	1.000
39	2	0	38	40.000	0.000	1.000
43	1	0	37	38.000	0.000	1.000
45	1	0	36	37.000	0.000	1.000
58	1	0	35	36.000	0.000	1.000
59	1	0	34	35.000	0.000	1.000
61	1	0	33	34.000	0.000	1.000
71	1	0	32	33.000	0.000	1.000
73	1	0	31	32.000	0.000	1.000
74	1	0	30	31.000	0.000	1.000
76	1	0	29	30.000	0.000	1.000
80	2	0	27	29.000	0.000	1.000
81	3	0	24	27.000	0.000	1.000
82	1	0	23	24.000	0.000	1.000
85	2	0	21	23.000	0.000	1.000
88	1	0	20	21.000	0.000	1.000
89	2	0	18	20.000	0.000	1.000
90	1	0	17	18.000	0.000	1.000
92	17	0	0	17.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 48

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 2

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	47	47.000	0.000	1.000
37	1	0	46	47.000	0.000	1.000
38	1	0	45	46.000	0.000	1.000
39	1	0	44	45.000	0.000	1.000
42	1	1	42	43.500	0.021	0.979
44	1	0	41	42.000	0.021	0.979
51	1	1	39	40.500	0.043	0.957
53	0	2	37	39.000	0.085	0.915
55	0	1	36	37.000	0.106	0.894
57	1	0	35	36.000	0.106	0.894
58	0	1	34	35.000	0.128	0.872
60	3	0	31	34.000	0.128	0.872
65	1	0	30	31.000	0.128	0.872
66	0	1	29	30.000	0.149	0.851
67	1	0	28	29.000	0.149	0.851
69	1	0	27	28.000	0.149	0.851
72	1	0	26	27.000	0.149	0.851
74	1	0	25	26.000	0.149	0.851
75	1	0	24	25.000	0.149	0.851
76	1	0	23	24.000	0.149	0.851
77	1	0	22	23.000	0.149	0.851
79	1	0	21	22.000	0.149	0.851
80	0	1	20	21.000	0.170	0.830
81	1	0	19	20.000	0.170	0.830
82	2	0	17	19.000	0.170	0.830
87	1	1	15	16.500	0.191	0.809
88	0	1	14	15.000	0.213	0.787
90	1	0	13	14.000	0.213	0.787
91	1	0	12	13.000	0.213	0.787
92	6	6	0	9.000	0.340	0.660

TOTAL WITHDRAWN (NTBA) = 31

TOTAL TBA'S = 16

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 3

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
23	1	0	49	50.000	0.000	1.000
24	1	0	48	49.000	0.000	1.000
25	1	0	47	48.000	0.000	1.000
29	1	0	46	47.000	0.000	1.000
30	2	0	44	46.000	0.000	1.000
32	1	0	43	44.000	0.000	1.000
33	1	0	42	43.000	0.000	1.000
34	1	0	41	42.000	0.000	1.000
43	1	0	40	41.000	0.000	1.000
44	1	0	39	40.000	0.000	1.000
49	1	0	38	39.000	0.000	1.000
52	1	0	37	38.000	0.000	1.000
55	1	0	36	37.000	0.000	1.000
56	1	0	35	36.000	0.000	1.000
61	1	0	34	35.000	0.000	1.000
62	2	0	32	34.000	0.000	1.000
69	1	0	31	32.000	0.000	1.000
70	1	0	30	31.000	0.000	1.000
76	1	0	29	30.000	0.000	1.000
78	3	0	26	29.000	0.000	1.000
81	5	0	21	26.000	0.000	1.000
83	1	0	20	21.000	0.000	1.000
85	1	0	19	20.000	0.000	1.000
86	1	0	18	19.000	0.000	1.000
87	1	0	17	18.000	0.000	1.000
90	2	0	15	17.000	0.000	1.000
91	1	0	14	15.000	0.000	1.000
92	14	0	0	14.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 4

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	48	48.000	0.000	1.000
13	2	0	46	48.000	0.000	1.000
36	0	1	45	46.000	0.021	0.979
40	1	0	44	45.000	0.021	0.979
47	1	0	43	44.000	0.021	0.979
48	1	0	42	43.000	0.021	0.979
49	0	1	41	42.000	0.042	0.958
50	2	1	38	40.000	0.063	0.938
51	0	1	37	38.000	0.083	0.917
52	0	1	36	37.000	0.104	0.896
54	0	1	35	36.000	0.125	0.875
57	0	1	34	35.000	0.146	0.854
58	0	2	32	34.000	0.188	0.813
59	0	1	31	32.000	0.208	0.792
60	0	1	30	31.000	0.229	0.771
61	0	1	29	30.000	0.250	0.750
62	0	1	28	29.000	0.271	0.729
63	0	1	27	28.000	0.292	0.708
65	1	0	26	27.000	0.292	0.708
66	0	2	24	26.000	0.333	0.667
67	0	1	23	24.000	0.354	0.646
69	1	0	22	23.000	0.354	0.646
70	0	1	21	22.000	0.375	0.625
71	0	1	20	21.000	0.396	0.604
74	1	0	19	20.000	0.396	0.604
76	0	1	18	19.000	0.417	0.583
79	0	2	16	18.000	0.458	0.542
81	0	2	14	16.000	0.500	0.500
82	1	1	12	13.500	0.521	0.479
83	0	1	11	12.000	0.542	0.458
86	0	1	10	11.000	0.563	0.438
87	0	1	9	10.000	0.583	0.417
90	1	0	8	9.000	0.583	0.417
92	4	4	0	6.000	0.667	0.333

TOTAL WITHDRAWN (NTBA) = 16

TOTAL TBA'S = 32

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 5

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
8	1	0	49	50.000	0.000	1.000
15	1	0	48	49.000	0.000	1.000
22	1	0	47	48.000	0.000	1.000
24	1	0	46	47.000	0.000	1.000
28	2	0	44	46.000	0.000	1.000
32	1	0	43	44.000	0.000	1.000
36	1	0	42	43.000	0.000	1.000
40	1	0	41	42.000	0.000	1.000
42	2	0	39	41.000	0.000	1.000
43	1	0	38	39.000	0.000	1.000
46	1	0	37	38.000	0.000	1.000
49	1	0	36	37.000	0.000	1.000
54	1	0	35	36.000	0.000	1.000
58	1	0	34	35.000	0.000	1.000
60	1	0	33	34.000	0.000	1.000
61	1	0	32	33.000	0.000	1.000
65	1	0	31	32.000	0.000	1.000
68	4	0	27	31.000	0.000	1.000
71	3	0	24	27.000	0.000	1.000
74	2	0	22	24.000	0.000	1.000
75	1	0	21	22.000	0.000	1.000
77	2	0	19	21.000	0.000	1.000
78	2	0	17	19.000	0.000	1.000
79	1	0	16	17.000	0.000	1.000
80	2	0	14	16.000	0.000	1.000
81	2	0	12	14.000	0.000	1.000
82	4	0	8	12.000	0.000	1.000
86	1	0	7	8.000	0.000	1.000
88	1	0	6	7.000	0.000	1.000
89	2	0	4	6.000	0.000	1.000
92	4	0	0	4.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 6

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
7	1	0	49	50.000	0.000	1.000
21	1	0	48	49.000	0.000	1.000
26	1	0	47	48.000	0.000	1.000
31	0	1	46	47.000	0.020	0.980
35	1	0	45	46.000	0.020	0.980
36	0	1	44	45.000	0.040	0.960
39	1	0	43	44.000	0.040	0.960
40	1	0	42	43.000	0.040	0.960
41	2	1	39	41.000	0.060	0.940
42	1	0	38	39.000	0.060	0.940
46	0	1	37	38.000	0.080	0.920
47	1	1	35	36.500	0.100	0.900
50	0	1	34	35.000	0.120	0.880
51	1	0	33	34.000	0.120	0.880
56	1	0	32	33.000	0.120	0.880
57	2	0	30	32.000	0.120	0.880
58	2	2	26	29.000	0.160	0.840
59	0	1	25	26.000	0.180	0.820
63	1	0	24	25.000	0.180	0.820
65	0	1	23	24.000	0.200	0.800
66	0	1	22	23.000	0.220	0.780
68	0	1	21	22.000	0.240	0.760
70	0	1	20	21.000	0.260	0.740
71	0	1	19	20.000	0.280	0.720
73	0	1	18	19.000	0.300	0.700
74	0	1	17	18.000	0.320	0.680
77	0	1	16	17.000	0.340	0.660
78	0	2	14	16.000	0.380	0.620
79	0	1	13	14.000	0.400	0.600
80	0	1	12	13.000	0.420	0.580
81	0	1	11	12.000	0.440	0.560
82	1	1	9	10.500	0.460	0.540
83	0	2	7	9.000	0.500	0.500
84	0	1	6	7.000	0.520	0.480
86	0	2	4	6.000	0.560	0.440
90	0	1	3	4.000	0.580	0.420
92	2	1	0	2.000	0.600	0.400

TOTAL WITHDRAWN (NTBA) = 20

TOTAL TBA'S = 30

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 7

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
26	2	0	48	50.000	0.000	1.000
32	2	0	46	48.000	0.000	1.000
34	1	0	45	46.000	0.000	1.000
38	1	0	44	45.000	0.000	1.000
39	1	0	43	44.000	0.000	1.000
40	1	0	42	43.000	0.000	1.000
43	1	0	41	42.000	0.000	1.000
45	2	0	39	41.000	0.000	1.000
47	1	0	38	39.000	0.000	1.000
57	1	0	37	38.000	0.000	1.000
63	1	0	36	37.000	0.000	1.000
67	1	0	35	36.000	0.000	1.000
68	0	1	34	35.000	0.020	0.980
73	1	0	33	34.000	0.020	0.980
74	1	0	32	33.000	0.020	0.980
75	1	0	31	32.000	0.020	0.980
76	1	0	30	31.000	0.020	0.980
80	2	0	28	30.000	0.020	0.980
81	1	0	27	28.000	0.020	0.980
82	1	0	26	27.000	0.020	0.980
83	2	0	24	26.000	0.020	0.980
86	1	0	23	24.000	0.020	0.980
92	23	0	0	23.000	0.020	0.980

TOTAL WITHDRAWN (NTBA) = 49

TOTAL TBA'S = 1

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 8

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
3	1	0	49	50.000	0.000	1.000
23	0	1	48	49.000	0.020	0.980
24	1	0	47	48.000	0.020	0.980
29	0	1	46	47.000	0.040	0.960
41	0	1	45	46.000	0.060	0.940
42	1	0	44	45.000	0.060	0.940
47	0	1	43	44.000	0.080	0.920
48	0	1	42	43.000	0.100	0.900
49	1	2	39	41.500	0.140	0.860
51	0	1	38	39.000	0.160	0.840
52	0	1	37	38.000	0.180	0.820
55	0	1	36	37.000	0.200	0.800
58	1	1	34	35.500	0.220	0.780
60	0	1	33	34.000	0.240	0.760
61	0	1	32	33.000	0.260	0.740
64	1	0	31	32.000	0.260	0.740
65	0	1	30	31.000	0.280	0.720
66	0	1	29	30.000	0.300	0.700
67	0	1	28	29.000	0.320	0.680
68	0	2	26	28.000	0.360	0.640
70	0	3	23	26.000	0.420	0.580
71	0	3	20	23.000	0.480	0.520
72	0	1	19	20.000	0.500	0.500
73	0	1	18	19.000	0.520	0.480
74	0	1	17	18.000	0.540	0.460
75	0	1	16	17.000	0.560	0.440
77	0	1	15	16.000	0.580	0.420
78	0	1	14	15.000	0.600	0.400
79	1	2	11	13.500	0.640	0.360
80	0	2	9	11.000	0.680	0.320
82	0	1	8	9.000	0.700	0.300
83	0	1	7	8.000	0.720	0.280
84	0	2	5	7.000	0.760	0.240
90	0	1	4	5.000	0.780	0.220
91	0	1	3	4.000	0.800	0.200
92	0	3	0	3.000	0.860	0.140

TOTAL WITHDRAWN (NTBA) = 7 TOTAL TBA'S = 43

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 9

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
25	1	0	49	50.000	0.000	1.000
30	1	0	48	49.000	0.000	1.000
33	2	0	46	48.000	0.000	1.000
41	1	0	45	46.000	0.000	1.000
42	1	0	44	45.000	0.000	1.000
43	1	0	43	44.000	0.000	1.000
45	2	0	41	43.000	0.000	1.000
46	1	0	40	41.000	0.000	1.000
47	1	0	39	40.000	0.000	1.000
50	1	0	38	39.000	0.000	1.000
51	1	0	37	38.000	0.000	1.000
52	1	0	36	37.000	0.000	1.000
53	1	0	35	36.000	0.000	1.000
55	1	0	34	35.000	0.000	1.000
59	1	0	33	34.000	0.000	1.000
61	1	0	32	33.000	0.000	1.000
63	1	0	31	32.000	0.000	1.000
69	2	0	29	31.000	0.000	1.000
70	1	0	28	29.000	0.000	1.000
74	1	0	27	28.000	0.000	1.000
76	1	0	26	27.000	0.000	1.000
80	1	0	25	26.000	0.000	1.000
81	2	0	23	25.000	0.000	1.000
90	2	0	21	23.000	0.000	1.000
91	4	0	17	21.000	0.000	1.000
92	17	0	0	17.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 10

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
32	1	0	49	50.000	0.000	1.000
33	0	2	47	49.000	0.040	0.960
35	0	2	45	47.000	0.080	0.920
36	0	1	44	45.000	0.100	0.900
40	0	1	43	44.000	0.120	0.880
43	1	0	42	43.000	0.120	0.880
45	1	1	40	41.500	0.140	0.860
47	0	2	38	40.000	0.180	0.820
48	0	1	37	38.000	0.200	0.800
50	0	1	36	37.000	0.220	0.780
51	0	1	35	36.000	0.240	0.760
52	0	4	31	35.000	0.320	0.680
55	0	1	30	31.000	0.340	0.660
56	0	2	28	30.000	0.380	0.620
57	0	1	27	28.000	0.400	0.600
58	0	2	25	27.000	0.440	0.560
59	0	1	24	25.000	0.460	0.540
61	1	0	23	24.000	0.460	0.540
63	0	1	22	23.000	0.480	0.520
65	0	3	19	22.000	0.540	0.460
70	1	0	18	19.000	0.540	0.460
72	1	0	17	18.000	0.540	0.460
75	1	2	14	16.500	0.580	0.420
76	0	1	13	14.000	0.600	0.400
78	0	1	12	13.000	0.620	0.380
80	0	1	11	12.000	0.640	0.360
81	0	1	10	11.000	0.660	0.340
83	0	1	9	10.000	0.680	0.320
84	0	1	8	9.000	0.700	0.300
87	0	1	7	8.000	0.720	0.280
88	0	1	6	7.000	0.740	0.260
89	0	1	5	6.000	0.760	0.240
90	0	1	4	5.000	0.780	0.220
91	1	0	3	4.000	0.780	0.220
92	1	2	0	2.500	0.820	0.180

TOTAL WITHDRAWN (NTBA) = 9

TOTAL TBA'S = 41

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 11

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
14	1	0	49	50.000	0.000	1.000
23	1	0	48	49.000	0.000	1.000
24	1	0	47	48.000	0.000	1.000
29	1	0	46	47.000	0.000	1.000
34	1	0	45	46.000	0.000	1.000
37	2	0	43	45.000	0.000	1.000
38	1	0	42	43.000	0.000	1.000
40	1	0	41	42.000	0.000	1.000
42	1	0	40	41.000	0.000	1.000
49	1	0	39	40.000	0.000	1.000
52	1	0	38	39.000	0.000	1.000
54	1	0	37	38.000	0.000	1.000
62	1	0	36	37.000	0.000	1.000
72	2	0	34	36.000	0.000	1.000
76	1	0	33	34.000	0.000	1.000
77	3	0	30	33.000	0.000	1.000
78	1	0	29	30.000	0.000	1.000
79	2	0	27	29.000	0.000	1.000
80	1	0	26	27.000	0.000	1.000
81	2	0	24	26.000	0.000	1.000
83	1	0	23	24.000	0.000	1.000
84	1	0	22	23.000	0.000	1.000
85	1	0	21	22.000	0.000	1.000
86	2	1	18	20.000	0.020	0.980
91	1	0	17	18.000	0.020	0.980
92	16	1	0	9.000	0.040	0.960

TOTAL WITHDRAWN (NTBA) = 48

TOTAL TBA'S = 2

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 12

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
12	1	0	49	50.000	0.000	1.000
15	1	0	48	49.000	0.000	1.000
27	1	0	47	48.000	0.000	1.000
40	2	1	44	46.000	0.020	0.980
41	0	2	42	44.000	0.060	0.940
43	1	0	41	42.000	0.060	0.940
45	0	1	40	41.000	0.080	0.920
46	1	0	39	40.000	0.080	0.920
47	1	0	38	39.000	0.080	0.920
48	0	1	37	38.000	0.100	0.900
52	0	1	36	37.000	0.120	0.880
54	1	1	34	35.500	0.140	0.860
55	0	1	33	34.000	0.160	0.840
56	0	2	31	33.000	0.200	0.800
59	0	1	30	31.000	0.220	0.780
61	0	1	29	30.000	0.240	0.760
64	0	1	28	29.000	0.260	0.740
65	0	3	25	28.000	0.320	0.680
66	0	1	24	25.000	0.340	0.660
67	1	1	22	23.500	0.360	0.640
69	1	0	21	22.000	0.360	0.640
70	0	2	19	21.000	0.400	0.600
71	0	1	18	19.000	0.420	0.580
77	0	1	17	18.000	0.440	0.560
78	0	1	16	17.000	0.460	0.540
79	0	1	15	16.000	0.480	0.520
80	0	1	14	15.000	0.500	0.500
81	1	0	13	14.000	0.500	0.500
83	0	1	12	13.000	0.520	0.480
84	0	2	10	12.000	0.560	0.440
85	1	0	9	10.000	0.560	0.440
86	0	1	8	9.000	0.580	0.420
89	0	1	7	8.000	0.600	0.400
91	0	1	6	7.000	0.620	0.380
92	3	3	0	4.500	0.680	0.320

TOTAL WITHDRAWN (NTBA) = 16

TOTAL TBA'S = 34

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 13

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
9	1	0	49	50.000	0.000	1.000
10	1	0	48	49.000	0.000	1.000
12	1	0	47	48.000	0.000	1.000
13	2	0	45	47.000	0.000	1.000
16	1	0	44	45.000	0.000	1.000
18	1	0	43	44.000	0.000	1.000
24	1	0	42	43.000	0.000	1.000
25	1	0	41	42.000	0.000	1.000
28	1	0	40	41.000	0.000	1.000
35	1	0	39	40.000	0.000	1.000
36	3	0	36	39.000	0.000	1.000
40	1	0	35	36.000	0.000	1.000
43	1	0	34	35.000	0.000	1.000
54	1	0	33	34.000	0.000	1.000
58	1	0	32	33.000	0.000	1.000
69	1	0	31	32.000	0.000	1.000
72	1	0	30	31.000	0.000	1.000
74	1	0	29	30.000	0.000	1.000
79	1	0	28	29.000	0.000	1.000
80	3	0	25	28.000	0.000	1.000
82	1	0	24	25.000	0.000	1.000
84	3	0	21	24.000	0.000	1.000
90	1	0	20	21.000	0.000	1.000
91	2	0	18	20.000	0.000	1.000
92	18	0	0	18.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 14

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	48	48.000	0.000	1.000
14	1	0	47	48.000	0.000	1.000
26	1	0	46	47.000	0.000	1.000
29	0	1	45	46.000	0.021	0.979
31	1	0	44	45.000	0.021	0.979
35	1	1	42	43.500	0.042	0.958
37	0	1	41	42.000	0.063	0.938
39	1	0	40	41.000	0.063	0.938
41	0	2	38	40.000	0.104	0.896
43	0	1	37	38.000	0.125	0.875
44	0	1	36	37.000	0.146	0.854
45	1	0	35	36.000	0.146	0.854
46	0	1	34	35.000	0.167	0.833
48	0	1	33	34.000	0.188	0.813
49	1	1	31	32.500	0.208	0.792
53	1	0	30	31.000	0.208	0.792
54	0	2	28	30.000	0.250	0.750
55	1	0	27	28.000	0.250	0.750
56	2	2	23	26.000	0.292	0.708
58	0	3	20	23.000	0.354	0.646
59	0	1	19	20.000	0.375	0.625
62	0	1	18	19.000	0.396	0.604
63	1	0	17	18.000	0.396	0.604
69	0	1	16	17.000	0.417	0.583
71	0	2	14	16.000	0.458	0.542
72	0	2	12	14.000	0.500	0.500
76	0	1	11	12.000	0.521	0.479
77	0	2	9	11.000	0.563	0.438
79	0	2	7	9.000	0.604	0.396
80	2	0	5	7.000	0.604	0.396
81	1	0	4	5.000	0.604	0.396
85	0	1	3	4.000	0.625	0.375
90	0	2	1	3.000	0.667	0.333
92	0	1	0	1.000	0.688	0.313

TOTAL WITHDRAWN (NTBA) = 15

TOTAL TBA'S = 33

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 15

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	49	49.000	0.000	1.000
16	1	0	48	49.000	0.000	1.000
17	1	0	47	48.000	0.000	1.000
30	1	0	46	47.000	0.000	1.000
33	2	0	44	46.000	0.000	1.000
34	2	0	42	44.000	0.000	1.000
35	1	0	41	42.000	0.000	1.000
38	1	0	40	41.000	0.000	1.000
42	1	0	39	40.000	0.000	1.000
45	2	0	37	39.000	0.000	1.000
46	1	0	36	37.000	0.000	1.000
48	1	0	35	36.000	0.000	1.000
49	1	0	34	35.000	0.000	1.000
50	1	0	33	34.000	0.000	1.000
52	1	0	32	33.000	0.000	1.000
54	1	0	31	32.000	0.000	1.000
58	1	0	30	31.000	0.000	1.000
59	1	0	29	30.000	0.000	1.000
62	1	0	28	29.000	0.000	1.000
64	1	0	27	28.000	0.000	1.000
65	2	0	25	27.000	0.000	1.000
69	1	0	24	25.000	0.000	1.000
72	4	0	20	24.000	0.000	1.000
73	1	0	19	20.000	0.000	1.000
75	1	0	18	19.000	0.000	1.000
79	3	0	15	18.000	0.000	1.000
80	4	0	11	15.000	0.000	1.000
81	2	0	9	11.000	0.000	1.000
83	1	0	8	9.000	0.000	1.000
84	3	0	5	8.000	0.000	1.000
86	1	0	4	5.000	0.000	1.000
90	1	0	3	4.000	0.000	1.000
92	3	0	0	3.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 49

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

TRACHEA TUMORS

GROUP 16

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
18	1	0	49	50.000	0.000	1.000
22	1	0	48	49.000	0.000	1.000
38	1	0	47	48.000	0.000	1.000
39	2	1	44	46.000	0.020	0.980
40	1	0	43	44.000	0.020	0.980
41	2	0	41	43.000	0.020	0.980
42	1	0	40	41.000	0.020	0.980
43	1	0	39	40.000	0.020	0.980
44	1	0	38	39.000	0.020	0.980
46	1	0	37	38.000	0.020	0.980
48	1	0	36	37.000	0.020	0.980
50	1	0	35	36.000	0.020	0.980
52	1	0	34	35.000	0.020	0.980
55	1	0	33	34.000	0.020	0.980
58	1	0	32	33.000	0.020	0.980
59	1	0	31	32.000	0.020	0.980
60	1	0	30	31.000	0.020	0.980
61	2	1	27	29.000	0.040	0.960
63	2	1	24	26.000	0.060	0.940
64	1	0	23	24.000	0.060	0.940
68	3	0	20	23.000	0.060	0.940
69	1	0	19	20.000	0.060	0.940
74	3	0	16	19.000	0.060	0.940
75	2	0	14	16.000	0.060	0.940
76	1	0	13	14.000	0.060	0.940
77	1	0	12	13.000	0.060	0.940
78	1	0	11	12.000	0.060	0.940
80	1	0	10	11.000	0.060	0.940
81	3	0	7	10.000	0.060	0.940
82	1	0	6	7.000	0.060	0.940
83	1	0	5	6.000	0.060	0.940
85	1	1	3	4.500	0.080	0.920
86	1	0	2	3.000	0.080	0.920
87	1	0	1	2.000	0.080	0.920
92	1	0	0	1.000	0.080	0.920

TOTAL WITHDRAWN (NTBA) = 46

TOTAL TBA'S = 4

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 17

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
12	1	0	49	50.000	0.000	1.000
34	2	0	47	49.000	0.000	1.000
37	1	0	46	47.000	0.000	1.000
41	1	0	45	46.000	0.000	1.000
42	1	0	44	45.000	0.000	1.000
50	1	0	43	44.000	0.000	1.000
55	1	0	42	43.000	0.000	1.000
65	1	0	41	42.000	0.000	1.000
66	1	0	40	41.000	0.000	1.000
70	1	0	39	40.000	0.000	1.000
72	1	0	38	39.000	0.000	1.000
73	1	0	37	38.000	0.000	1.000
74	1	0	36	37.000	0.000	1.000
75	1	0	35	36.000	0.000	1.000
76	2	0	33	35.000	0.000	1.000
80	2	0	31	33.000	0.000	1.000
82	1	0	30	31.000	0.000	1.000
83	1	0	29	30.000	0.000	1.000
84	1	0	28	29.000	0.000	1.000
87	1	0	27	28.000	0.000	1.000
88	1	0	26	27.000	0.000	1.000
90	1	0	25	26.000	0.000	1.000
91	1	0	24	25.000	0.000	1.000
92	24	0	0	24.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 18

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
14	1	0	49	50.000	0.000	1.000
20	1	0	48	49.000	0.000	1.000
23	1	0	47	48.000	0.000	1.000
26	0	1	46	47.000	0.020	0.980
32	1	1	44	45.500	0.040	0.960
35	0	1	43	44.000	0.060	0.940
38	1	1	41	42.500	0.080	0.920
40	1	1	39	40.500	0.100	0.900
43	0	1	38	39.000	0.120	0.880
44	1	0	37	38.000	0.120	0.880
50	0	1	36	37.000	0.140	0.860
51	1	0	35	36.000	0.140	0.860
53	1	0	34	35.000	0.140	0.860
54	1	0	33	34.000	0.140	0.860
55	1	1	31	32.500	0.160	0.840
56	0	1	30	31.000	0.180	0.820
57	0	1	29	30.000	0.200	0.800
58	0	1	28	29.000	0.220	0.780
60	0	3	25	28.000	0.280	0.720
62	0	1	24	25.000	0.300	0.700
63	1	0	23	24.000	0.300	0.700
64	0	2	21	23.000	0.340	0.660
67	0	1	20	21.000	0.360	0.640
69	0	2	18	20.000	0.400	0.600
70	0	1	17	18.000	0.420	0.580
71	0	1	16	17.000	0.440	0.560
73	0	1	15	16.000	0.460	0.540
75	0	3	12	15.000	0.520	0.480
76	0	1	11	12.000	0.540	0.460
79	0	1	10	11.000	0.560	0.440
80	0	2	8	10.000	0.600	0.400
85	0	2	6	8.000	0.640	0.360
86	0	1	5	6.000	0.660	0.340
87	0	2	3	5.000	0.700	0.300
92	0	3	0	3.000	0.760	0.240

TOTAL WITHDRAWN (NTBA) = 12

TOTAL TBA'S = 38

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 19

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
7	1	0	49	50.000	0.000	1.000
9	1	0	48	49.000	0.000	1.000
18	1	0	47	48.000	0.000	1.000
19	1	0	46	47.000	0.000	1.000
28	1	0	45	46.000	0.000	1.000
32	1	0	44	45.000	0.000	1.000
33	2	0	42	44.000	0.000	1.000
34	1	0	41	42.000	0.000	1.000
38	2	0	39	41.000	0.000	1.000
40	1	0	38	39.000	0.000	1.000
41	1	0	37	38.000	0.000	1.000
45	1	0	36	37.000	0.000	1.000
47	1	0	35	36.000	0.000	1.000
49	1	0	34	35.000	0.000	1.000
50	1	0	33	34.000	0.000	1.000
55	1	0	32	33.000	0.000	1.000
57	1	0	31	32.000	0.000	1.000
58	1	0	30	31.000	0.000	1.000
62	1	0	29	30.000	0.000	1.000
63	1	0	28	29.000	0.000	1.000
67	1	0	27	28.000	0.000	1.000
68	2	0	25	27.000	0.000	1.000
72	1	0	24	25.000	0.000	1.000
78	1	0	23	24.000	0.000	1.000
81	1	0	22	23.000	0.000	1.000
85	2	0	20	22.000	0.000	1.000
88	1	0	19	20.000	0.000	1.000
89	1	0	18	19.000	0.000	1.000
90	4	0	14	18.000	0.000	1.000
91	3	0	11	14.000	0.000	1.000
92	11	0	0	11.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 20

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
12	1	0	49	50.000	0.000	1.000
16	1	0	48	49.000	0.000	1.000
21	1	0	47	48.000	0.000	1.000
22	1	0	46	47.000	0.000	1.000
28	3	0	43	46.000	0.000	1.000
31	0	1	42	43.000	0.020	0.980
32	1	0	41	42.000	0.020	0.980
34	0	1	40	41.000	0.040	0.960
35	2	1	37	39.000	0.060	0.940
37	0	1	36	37.000	0.080	0.920
39	1	1	34	35.500	0.100	0.900
41	0	3	31	34.000	0.160	0.840
45	1	1	29	30.500	0.180	0.820
46	0	1	28	29.000	0.200	0.800
47	0	1	27	28.000	0.220	0.780
49	0	2	25	27.000	0.260	0.740
52	1	1	23	24.500	0.280	0.720
53	0	1	22	23.000	0.300	0.700
58	0	1	21	22.000	0.320	0.680
60	0	1	20	21.000	0.340	0.660
61	1	0	19	20.000	0.340	0.660
62	1	0	18	19.000	0.340	0.660
63	0	1	17	18.000	0.360	0.640
64	0	1	16	17.000	0.380	0.620
68	0	1	15	16.000	0.400	0.600
72	0	1	14	15.000	0.420	0.580
77	0	1	13	14.000	0.440	0.560
78	1	0	12	13.000	0.440	0.560
79	0	2	10	12.000	0.480	0.520
83	0	1	9	10.000	0.500	0.500
84	0	1	8	9.000	0.520	0.480
89	1	1	6	7.500	0.540	0.460
90	0	2	4	6.000	0.580	0.420
91	0	2	2	4.000	0.620	0.380
92	0	2	0	2.000	0.660	0.340

TOTAL WITHDRAWN (NTBA) = 17

TOTAL TBA'S = 33

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 21

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
5	1	0	49	50.000	0.000	1.000
20	1	0	48	49.000	0.000	1.000
21	1	0	47	48.000	0.000	1.000
25	1	0	46	47.000	0.000	1.000
29	1	0	45	46.000	0.000	1.000
39	1	0	44	45.000	0.000	1.000
40	1	0	43	44.000	0.000	1.000
43	1	0	42	43.000	0.000	1.000
50	1	0	41	42.000	0.000	1.000
51	1	0	40	41.000	0.000	1.000
59	1	0	39	40.000	0.000	1.000
66	1	0	38	39.000	0.000	1.000
68	1	0	37	38.000	0.000	1.000
69	1	0	36	37.000	0.000	1.000
72	1	0	35	36.000	0.000	1.000
74	2	0	33	35.000	0.000	1.000
76	1	0	32	33.000	0.000	1.000
77	1	0	31	32.000	0.000	1.000
80	1	0	30	31.000	0.000	1.000
81	1	0	29	30.000	0.000	1.000
84	1	0	28	29.000	0.000	1.000
86	2	0	26	28.000	0.000	1.000
88	2	0	24	26.000	0.000	1.000
91	1	0	23	24.000	0.000	1.000
92	23	0	0	23.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 50

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 22

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
17	0	1	49	50.000	0.020	0.980
18	1	0	48	49.000	0.020	0.980
21	1	0	47	48.000	0.020	0.980
24	1	0	46	47.000	0.020	0.980
31	1	0	45	46.000	0.020	0.980
32	1	0	44	45.000	0.020	0.980
35	1	0	43	44.000	0.020	0.980
36	1	0	42	43.000	0.020	0.980
39	1	1	40	41.500	0.040	0.960
46	1	0	39	40.000	0.040	0.960
51	0	2	37	39.000	0.080	0.920
52	0	1	36	37.000	0.100	0.900
53	0	1	35	36.000	0.120	0.880
55	0	1	34	35.000	0.140	0.860
56	0	1	33	34.000	0.160	0.840
57	0	1	32	33.000	0.180	0.820
59	1	2	29	31.500	0.220	0.780
60	0	1	28	29.000	0.240	0.760
63	1	1	26	27.500	0.260	0.740
64	1	1	24	25.500	0.280	0.720
66	0	1	23	24.000	0.300	0.700
67	0	2	21	23.000	0.340	0.660
68	0	1	20	21.000	0.360	0.640
70	1	0	19	20.000	0.360	0.640
72	0	1	18	19.000	0.380	0.620
73	0	2	16	18.000	0.420	0.580
74	0	1	15	16.000	0.440	0.560
76	0	2	13	15.000	0.480	0.520
77	0	2	11	13.000	0.520	0.480
81	0	1	10	11.000	0.540	0.460
82	0	2	8	10.000	0.580	0.420
83	0	1	7	8.000	0.600	0.400
89	1	0	6	7.000	0.600	0.400
90	0	1	5	6.000	0.620	0.380
91	0	1	4	5.000	0.640	0.360
92	1	3	0	3.500	0.700	0.300

TOTAL WITHDRAWN (NTBA) = 15

TOTAL TBA'S = 35

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 23

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	49	49.000	0.000	1.000
15	1	0	48	49.000	0.000	1.000
22	1	0	47	48.000	0.000	1.000
28	1	0	46	47.000	0.000	1.000
29	2	0	44	46.000	0.000	1.000
31	1	0	43	44.000	0.000	1.000
32	1	0	42	43.000	0.000	1.000
33	1	0	41	42.000	0.000	1.000
36	1	0	40	41.000	0.000	1.000
43	1	0	39	40.000	0.000	1.000
44	1	0	38	39.000	0.000	1.000
46	1	0	37	38.000	0.000	1.000
47	1	0	36	37.000	0.000	1.000
54	2	0	34	36.000	0.000	1.000
61	1	0	33	34.000	0.000	1.000
62	1	0	32	33.000	0.000	1.000
67	2	0	30	32.000	0.000	1.000
69	1	0	29	30.000	0.000	1.000
73	2	0	27	29.000	0.000	1.000
74	1	0	26	27.000	0.000	1.000
78	1	0	25	26.000	0.000	1.000
79	1	0	24	25.000	0.000	1.000
80	1	0	23	24.000	0.000	1.000
81	1	0	22	23.000	0.000	1.000
82	1	0	21	22.000	0.000	1.000
83	1	0	20	21.000	0.000	1.000
85	2	0	18	20.000	0.000	1.000
86	1	0	17	18.000	0.000	1.000
89	1	0	16	17.000	0.000	1.000
90	2	0	14	16.000	0.000	1.000
92	14	0	0	14.000	0.000	1.000

TOTAL WITHDRAWN (NTBA) = 49

TOTAL TBA'S = 0

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 24

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
12	1	0	49	50.000	0.000	1.000
14	1	0	48	49.000	0.000	1.000
17	1	0	47	48.000	0.000	1.000
25	1	0	46	47.000	0.000	1.000
28	1	0	45	46.000	0.000	1.000
31	1	0	44	45.000	0.000	1.000
32	1	1	42	43.500	0.020	0.980
33	1	0	41	42.000	0.020	0.980
35	1	0	40	41.000	0.020	0.980
37	0	1	39	40.000	0.040	0.960
38	1	0	38	39.000	0.040	0.960
41	1	0	37	38.000	0.040	0.960
46	1	0	36	37.000	0.040	0.960
49	1	0	35	36.000	0.040	0.960
50	1	0	34	35.000	0.040	0.960
54	0	1	33	34.000	0.060	0.940
56	0	1	32	33.000	0.080	0.920
59	1	0	31	32.000	0.080	0.920
60	1	1	29	30.500	0.100	0.900
61	0	1	28	29.000	0.120	0.880
62	0	2	26	28.000	0.160	0.840
65	0	1	25	26.000	0.180	0.820
66	0	1	24	25.000	0.200	0.800
70	0	1	23	24.000	0.220	0.780
72	0	3	20	23.000	0.280	0.720
76	0	1	19	20.000	0.300	0.700
79	1	0	18	19.000	0.300	0.700
80	2	0	16	18.000	0.300	0.700
81	1	3	12	15.500	0.360	0.640
83	0	1	11	12.000	0.380	0.620
86	0	1	10	11.000	0.400	0.600
87	0	1	9	10.000	0.420	0.580
88	0	1	8	9.000	0.440	0.560
89	1	0	7	8.000	0.440	0.560
90	0	2	5	7.000	0.480	0.520
91	1	1	3	4.500	0.500	0.500
92	2	1	0	2.000	0.520	0.480

TOTAL WITHDRAWN (NTBA) = 24

TOTAL TBA'S = 26

TBA (TUMOR-BEARING ANIMAL)

NTBA (NON-TUMOR-BEARING ANIMAL)

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 25

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TRA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
14	1	0	49	50.000	0.000	1.000
29	1	0	48	49.000	0.000	1.000
32	2	0	46	48.000	0.000	1.000
33	1	0	45	46.000	0.000	1.000
34	1	0	44	45.000	0.000	1.000
37	1	0	43	44.000	0.000	1.000
38	1	0	42	43.000	0.000	1.000
41	1	0	41	42.000	0.000	1.000
42	1	0	40	41.000	0.000	1.000
45	1	0	39	40.000	0.000	1.000
53	1	0	38	39.000	0.000	1.000
54	1	0	37	38.000	0.000	1.000
57	1	0	36	37.000	0.000	1.000
59	2	0	34	36.000	0.000	1.000
62	1	0	33	34.000	0.000	1.000
67	1	0	32	33.000	0.000	1.000
69	1	0	31	32.000	0.000	1.000
70	1	0	30	31.000	0.000	1.000
71	2	0	28	30.000	0.000	1.000
72	1	0	27	28.000	0.000	1.000
73	2	0	25	27.000	0.000	1.000
74	1	0	24	25.000	0.000	1.000
77	1	0	23	24.000	0.000	1.000
78	1	0	22	23.000	0.000	1.000
79	1	0	21	22.000	0.000	1.000
81	2	0	19	21.000	0.000	1.000
83	1	0	18	19.000	0.000	1.000
86	1	0	17	18.000	0.000	1.000
88	1	0	16	17.000	0.000	1.000
89	3	0	13	16.000	0.000	1.000
92	12	1	0	7.000	0.020	0.980

TOTAL WITHDRAWN (NTBA) = 49

TOTAL TBA'S = 1

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)

CD-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

LUNG TUMORS

GROUP 26

WEEK	NTBA WITHDRAWN DURING WEEK	TBA DURING WEEK	ALIVE AT START OF WEEK	ADJUSTED ALIVE	PROBABILITY OF TBA DURING WEEK	PROBABILITY OF NTBA DURING WEEK
0	0	0	50	50.000	0.000	1.000
4	1	0	49	50.000	0.000	1.000
6	1	0	48	49.000	0.000	1.000
7	1	0	47	48.000	0.000	1.000
12	1	0	46	47.000	0.000	1.000
22	1	0	45	46.000	0.000	1.000
29	0	1	44	45.000	0.020	0.980
30	1	0	43	44.000	0.020	0.980
31	1	1	41	42.500	0.040	0.960
43	0	1	40	41.000	0.060	0.940
45	1	2	37	39.500	0.100	0.900
46	0	1	36	37.000	0.120	0.880
50	1	0	35	36.000	0.120	0.880
53	0	1	34	35.000	0.140	0.860
56	1	0	33	34.000	0.140	0.860
57	1	1	31	32.500	0.160	0.840
60	0	1	30	31.000	0.180	0.820
61	0	1	29	30.000	0.200	0.800
62	0	1	28	29.000	0.220	0.780
66	0	1	27	28.000	0.240	0.760
67	0	1	26	27.000	0.260	0.740
69	0	1	25	26.000	0.280	0.720
70	0	2	23	25.000	0.320	0.680
71	0	1	22	23.000	0.340	0.660
73	0	2	20	22.000	0.380	0.620
75	0	1	19	20.000	0.400	0.600
76	0	1	18	19.000	0.420	0.580
77	0	1	17	18.000	0.440	0.560
78	1	1	15	16.500	0.460	0.540
80	0	1	14	15.000	0.480	0.520
81	0	3	11	14.000	0.540	0.460
82	0	2	9	11.000	0.580	0.420
83	0	1	8	9.000	0.600	0.400
84	0	1	7	8.000	0.620	0.380
89	0	1	6	7.000	0.640	0.360
91	0	1	5	6.000	0.660	0.340
92	3	2	0	3.500	0.700	0.300

TOTAL WITHDRAWN (NTBA) = 15

TOTAL TBA'S = 35

TBA (TUMOR-BEARING ANIMAL) NTBA (NON-TUMOR-BEARING ANIMAL)