

Final Report

PB84-241991



BORRISTON
LABORATORIES, INC.

Co-Carcinogenicity of Foundry Particulates Silica and Silica Sand Substitutes

Volume 3

NIOSH Contract No. 21-79-0036
Borrison Project No. 0105

Initiation Date: April 21, 1980
Termination Date: January 26, 1983
Issue Date: March 23, 1984

Submitted to:
Richard W. Niemeier, Ph.D.
NIOSH Project Officer
National Institute of Occupational Safety and Health
Division of Biomedical and Behavioral Science
Experimental Toxicology Branch
4876 Columbia Parkway
Cincinnati, OH 45226

Submitted by:
Borrison Laboratories, Inc.
5050 Beech Place
Temple Hills, MD 20748

A Subsidiary of Dynamac International, Inc.

REPRODUCED BY:
U.S. Department of Commerce
National Technical Information Service
Springfield, Virginia 22161

NTIS

50777-101

REPORT DOCUMENTATION PAGE	1. REPORT NO.	2.	3. Recipient's Accession No. P38 & 241991
4. Title and Subtitle Co-Carcinogenicity Of Foundry Particulates Silica And Silica Sand Substitutes, Volume 3, Final Report		5. Report Date 84/03/23	
7. Author(s) Anonymous		8. Performing Organization Report No.	
9. Performing Organization Name and Address Borrington Laboratories, Inc. 5050 Beech Place Temple Hills, MD 20748		10. Project/Task/Work Unit No.	
		11. Contract/Grant or Order No. (C) 210-79-0036 (G)	
12. Sponsoring Organization Name and Address Division of Biomedical and Behavioral Science, NIOSH, U.S. Department of Health and Human Services, Cincinnati, Ohio		13. Type of Report & Period Covered Final Report 4/21/80 to 1/26/83	
15. Supplementary Notes		14.	
16. Abstract (Limit 200 words) Data from a carcinogenicity study of foundry particulates, silica (14808607) and silica sand substitutes in hamsters are presented. Results indicated that silica sand and 10 silica sand substitutes were found not to be carcinogenic when administered by intratracheal instillation to male Syrian-Golden-hamsters. When given with benzo(a)pyrene (50328), the substances showed a definite cocarcinogenic effect in the hamster respiratory system. A tumor inventory and group and individual summaries of the histopathological findings of the study are provided. Organs and tissues examined for histopathological changes are listed. Tumors observed included squamous cell carcinomas, metastatic adenocarcinomas, polyps, cortical cell adenomas and reticular cell sarcomas. Mortality data is also provided.			
17. Document Analysis a. Descriptors Dis.			
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 425
		20. Security Class (This Page)	22. Price

APPENDIX 4
TUMOR INVENTORY

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 1

17242	DIED ON 01/18/82 WITH NO TUMORS	
17243	DIED ON 12/19/80 WITH NO TUMORS	
17244	DIED ON 02/09/81 WITH NO TUMORS	
17245	DIED ON 01/18/82 WITH 2 TUMORS	
ADRENALS		ADENOMA, CORTICAL CELL
THYROID		CARCINOMA, C-CELL
17246	DIED ON 01/18/82 WITH NO TUMORS	
17247	DIED ON 12/28/81 WITH 1 TUMOR	
PANCREAS		CARCINOMA, ISLET CELL
17248	DIED ON 01/18/82 WITH NO TUMORS	
17249	DIED ON 01/18/82 WITH NO TUMORS	
17250	DIED ON 09/08/81 WITH NO TUMORS	
17251	DIED ON 01/18/82 WITH NO TUMORS	
17252	DIED ON 01/12/81 WITH NO TUMORS	
17253	DIED ON 11/06/81 WITH NO TUMORS	
17254	DIED ON 11/05/81 WITH NO TUMORS	
17255	DIED ON 01/18/82 WITH 1 TUMOR	
SPLEEN		HEMANGIOSARCOMA
17256	DIED ON 10/03/81 WITH NO TUMORS	
17257	DIED ON 06/26/80 WITH NO TUMORS	
17258	DIED ON 06/06/81 WITH NO TUMORS	
17259	DIED ON 12/03/81 WITH NO TUMORS	
17260	DIED ON 09/15/81 WITH NO TUMORS	
17261	DIED ON 11/05/81 WITH NO TUMORS	
17262	DIED ON 01/18/82 WITH NO TUMORS	
17264	DIED ON 05/31/81 WITH NO TUMORS	
17265	DIED ON 01/18/82 WITH NO TUMORS	
17266	DIED ON 09/05/80 WITH NO TUMORS	
17267	DIED ON 02/25/81 WITH NO TUMORS	
17268	DIED ON 01/18/82 WITH NO TUMORS	
17269	DIED ON 01/01/82 WITH 1 TUMOR	
PANCREAS		ADENOMA, ISLET CELL
17270	DIED ON 10/16/80 WITH NO TUMORS	
17271	DIED ON 12/29/80 WITH NO TUMORS	
17272	DIED ON 01/12/81 WITH NO TUMORS	
17273	DIED ON 01/10/81 WITH NO TUMORS	
17274	DIED ON 01/18/82 WITH NO TUMORS	
17276	DIED ON 12/24/81 WITH NO TUMORS	
17277	DIED ON 08/01/80 WITH NO TUMORS	
17278	DIED ON 01/18/82 WITH NO TUMORS	
17279	DIED ON 11/09/81 WITH NO TUMORS	
17280	DIED ON 06/15/81 WITH 2 TUMORS	
LIVER		HEMANGIOSARCOMA
SPLEEN		HEMANGIOSARCOMA
17281	DIED ON 01/18/82 WITH NO TUMORS	
17282	DIED ON 01/18/82 WITH NO TUMORS	
17283	DIED ON 12/07/80 WITH 1 TUMOR	
ADRENALS		ADENOMA, CORTICAL CELL
17284	DIED ON 01/04/82 WITH NO TUMORS	
17285	DIED ON 10/31/81 WITH 2 TUMORS	
ADRENALS		CARCINOMA, C-CELL
THYROID		CARCINOMA, CORTICAL CELL
17286	DIED ON 01/18/82 WITH 1 TUMOR	
ADRENALS		ADENOMA, CORTICAL CELL
17287	DIED ON 01/18/82 WITH 1 TUMOR	
ADRENALS		CARCINOMA, CORTICAL CELL

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP; 1

17288	DIED ON 08/29/81 WITH	1 TUMOR	
	ADRENALS		ADENOCARCINOMA
17289	DIED ON 10/31/81 WITH NO TUMORS		
17290	DIED ON 01/18/82 WITH NO TUMORS		
17291	DIED ON 12/02/81 WITH NO TUMORS		

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 2

17292	DIED ON 07/28/81 WITH NO TUMORS	
17293	DIED ON 09/23/81 WITH 1 TUMOR	PAPILLOMA
	STOMACH	
17294	DIED ON 12/17/81 WITH NO TUMORS	
17295	DIED ON 01/08/81 WITH NO TUMORS	
17296	DIED ON 02/08/81 WITH 2 TUMORS	POLYP
	LARYNX	POLYP
	LUNG & BRONCHI-APICAL	
17297	DIED ON 01/18/82 WITH 3 TUMORS	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC	
17298	DIED ON 06/10/81 WITH NO TUMORS	
17299	DIED ON 10/01/81 WITH NO TUMORS	
17300	DIED ON 01/04/81 WITH 1 TUMOR	POLYP
	TRACHEA	
17301	DIED ON 01/18/82 WITH NO TUMORS	
17302	DIED ON 01/18/82 WITH 1 TUMOR	POLYP
	LUNG & BRONCHI-LEFT	
17303	DIED ON 01/18/82 WITH 2 TUMORS	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	
17304	DIED ON 09/18/81 WITH NO TUMORS	
17305	DIED ON 07/14/81 WITH 2 TUMORS	POLYP
	LARYNX	HEMANGIOSARCOMA
	SPLEEN	
17306	DIED ON 02/06/81 WITH NO TUMORS	
17307	DIED ON 06/08/81 WITH NO TUMORS	
17308	DIED ON 05/31/81 WITH 2 TUMORS	ADENOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	
17309	DIED ON 11/07/81 WITH 1 TUMOR	POLYP
	LARYNX	
17310	DIED ON 07/24/81 WITH 2 TUMORS	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	
17311	DIED ON 06/09/81 WITH 1 TUMOR	POLYP
	LARYNX	
17312	DIED ON 10/20/81 WITH 1 TUMOR	ADENOMA, CORTICAL CELL
	ADRENALS	
17313	DIED ON 01/18/82 WITH 1 TUMOR	SARCOMA
	SPLEEN	
17314	DIED ON 10/11/81 WITH 1 TUMOR	POLYP
	LARYNX	
17316	DIED ON 01/14/81 WITH NO TUMORS	
17317	DIED ON 01/18/82 WITH 2 TUMORS	POLYP
	TRACHEA	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	
17318	DIED ON 01/08/82 WITH NO TUMORS	
17319	DIED ON 04/07/81 WITH 6 TUMORS	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-APICAL	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	LEUKEMIA
	LIVER	LEUKEMIA
	SPLEEN	LEUKEMIA
	PANCREAS	

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 2

17322	DIED ON 01/18/82 WITH 3 TUMORS	
	ADRENALS	CARCINOMA, CORTICAL CELL
	LUNG & BRONCHI-LEFT	POLYP
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS, METASTATIC
17323	DIED ON 01/18/82 WITH 4 TUMORS	
	ADRENALS	CARCINOMA, CORTICAL CELL
	THYMUS	CARCINOMA, ADENOSQUAMOUS, METASTATIC
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
17324	DIED ON 01/18/82 WITH 1 TUMOR	
	COLON/RECTUM	ADENOCARCINOMA
17325	DIED ON 12/17/81 WITH 1 TUMOR	
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
17326	DIED ON 01/18/82 WITH 4 TUMORS	
	THYMUS	LYMPHOMA, MALIGNANT
	MESENTERIC LYMPH NODE	LYMPHOMA, MALIGNANT
	TRACHEA	POLYP
	LIVER	LYMPHOMA, MALIGNANT
17327	DIED ON 04/11/81 WITH 1 TUMOR	
	LIVER	HEMANGIOSARCOMA
17328	DIED ON 01/17/82 WITH 1 TUMOR	
	ADRENALS	CARCINOMA, CORTICAL CELL
17329	DIED ON 01/18/82 WITH NO TUMORS	
17330	DIED ON 12/27/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	NEOPLASM
	LUNG & BRONCHI-DIAPHRAGMATIC	NEOPLASM
17331	DIED ON 05/04/81 WITH 1 TUMOR	
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
17332	DIED ON 10/27/81 WITH 6 TUMORS	
	LUNG & BRONCHI-LEFT	MELANOMA, METASTATIC
	LUNG & BRONCHI-APICAL	MELANOMA, METASTATIC
	LUNG & BRONCHI-AZYGOUS	MELANOMA, METASTATIC
	LUNG & BRONCHI-DIAPHRAGMATIC	MELANOMA, METASTATIC
	LUNG & BRONCHI-CARDIAC	MELANOMA, METASTATIC
	MEDIASTINAL LYMPH NODE	MELANOMA
17333	DIED ON 01/18/82 WITH NO TUMORS	
17334	DIED ON 04/20/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17335	DIED ON 08/16/81 WITH NO TUMORS	
17336	DIED ON 11/09/81 WITH NO TUMORS	
17337	DIED ON 05/18/81 WITH NO TUMORS	
17338	DIED ON 11/10/81 WITH NO TUMORS	
17339	DIED ON 09/01/81 WITH NO TUMORS	
17340	DIED ON 02/16/81 WITH NO TUMORS	
17341	DIED ON 04/20/81 WITH 3 TUMORS	
	LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-CARDIAC	CARCINOMA, SQUAMOUS CELL
	HEART	CARCINOMA, SQUAMOUS CELL, METASTATIC

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 3

17342	DIED ON 01/18/82 WITH NO TUMORS	
17343	DIED ON 12/01/81 WITH NO TUMORS	
17344	DIED ON 01/18/82 WITH 1 TUMOR	CARCINOMA, CORTICAL CELL
ADRENALS		
17345	DIED ON 02/16/81 WITH NO TUMORS	
17346	DIED ON 10/13/81 WITH NO TUMORS	
17347	DIED ON 01/18/82 WITH NO TUMORS	
17348	DIED ON 11/07/81 WITH NO TUMORS	
17349	DIED ON 01/18/82 WITH NO TUMORS	
17350	DIED ON 11/16/81 WITH NO TUMORS	
17351	DIED ON 11/06/81 WITH NO TUMORS	
17352	DIED ON 05/16/81 WITH NO TUMORS	
17353	DIED ON 06/25/81 WITH 1 TUMOR	NEOPLASM
LARYNX		
17354	DIED ON 01/18/82 WITH NO TUMORS	
17355	DIED ON 05/08/81 WITH NO TUMORS	
17356	DIED ON 01/18/82 WITH NO TUMORS	
17357	DIED ON 06/21/81 WITH 1 TUMOR	ADENOCARCINOMA
CECUM		
17358	DIED ON 11/08/81 WITH NO TUMORS	
17359	DIED ON 11/06/81 WITH NO TUMORS	
17360	DIED ON 01/04/82 WITH 1 TUMOR	FIBROSARCOMA
COLON/RECTUM		
17361	DIED ON 02/09/81 WITH 1 TUMOR	POLYP
STOMACH		
17362	DIED ON 04/15/81 WITH NO TUMORS	
17363	DIED ON 01/18/82 WITH NO TUMORS	
17364	DIED ON 10/13/81 WITH NO TUMORS	
17365	DIED ON 12/09/80 WITH NO TUMORS	
17366	DIED ON 12/10/81 WITH NO TUMORS	
17367	DIED ON 11/12/80 WITH NO TUMORS	
17368	DIED ON 06/25/81 WITH NO TUMORS	
17369	DIED ON 01/12/82 WITH NO TUMORS	
17370	DIED ON 01/18/82 WITH NO TUMORS	
17371	DIED ON 10/02/80 WITH NO TUMORS	
17372	DIED ON 01/18/82 WITH NO TUMORS	
17373	DIED ON 09/22/80 WITH NO TUMORS	
17374	DIED ON 01/18/82 WITH NO TUMORS	
17375	DIED ON 01/10/82 WITH NO TUMORS	
17376	DIED ON 01/18/82 WITH NO TUMORS	
17377	DIED ON 01/18/82 WITH NO TUMORS	
17378	DIED ON 03/24/81 WITH NO TUMORS	
17379	DIED ON 11/05/80 WITH NO TUMORS	
17380	DIED ON 11/24/80 WITH NO TUMORS	
17381	DIED ON 08/17/81 WITH NO TUMORS	
17382	DIED ON 12/14/81 WITH NO TUMORS	
17383	DIED ON 11/13/80 WITH NO TUMORS	
17384	DIED ON 01/18/82 WITH NO TUMORS	
17385	DIED ON 10/06/80 WITH NO TUMORS	
17386	DIED ON 01/18/82 WITH NO TUMORS	
17387	DIED ON 08/14/81 WITH NO TUMORS	
17388	DIED ON 12/06/80 WITH NO TUMORS	
17389	DIED ON 10/18/81 WITH NO TUMORS	
17390	DIED ON 09/28/81 WITH NO TUMORS	
17391	DIED ON 11/04/81 WITH NO TUMORS	

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 4

17392	DIED ON 01/18/82 WITH NO TUMORS	
17393	DIED ON 01/04/82 WITH NO TUMORS	
17394	DIED ON 11/06/81 WITH 3 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	POLYP
17396	DIED ON 04/19/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA
17397	DIED ON 01/18/82 WITH 5 TUMORS	
	ADRENALS	ADENOMA, CORTICAL CELL
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17398	DIED ON 01/23/81 WITH NO TUMORS	
17399	DIED ON 05/23/81 WITH 1 TUMOR	
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
17400	DIED ON 06/04/81 WITH 4 TUMORS	
	LARYNX	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-CARDIAC	CARCINOMA, ADENOSQUAMOUS
17401	DIED ON 05/25/81 WITH 4 TUMORS	
	ESOPHAGUS	CARCINOMA, ADENOSQUAMOUS, INVASIVE
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-CARDIAC	CARCINOMA, SQUAMOUS CELL
17402	DIED ON 11/22/81 WITH 4 TUMORS	
	STOMACH	PAPILLOMA
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	BRONCHIAL LYMPH NODE	ADENOCARCINOMA, METASTATIC

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 4

17403	DIED ON 07/20/81 WITH 16 TUMORS	
	SALIVARY GLAND	LYMPHOMA, MALIGNANT
	MANDIBULAR LYMPH NODE	LYMPHOMA, MALIGNANT
	ADRENALS	LYMPHOMA, MALIGNANT
	THYMUS	LYMPHOMA, MALIGNANT
	COLON/RECTUM	LYMPHOMA, MALIGNANT
	MESENTERIC LYMPH NODE	LYMPHOMA, MALIGNANT
	LUNG & BRONCHI-LEFT	LYMPHOMA, MALIGNANT
	LUNG & BRONCHI-APICAL	LYMPHOMA, MALIGNANT
	LUNG & BRONCHI-AZYGOUS	LYMPHOMA, MALIGNANT
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	LYMPHOMA, MALIGNANT
	LUNG & BRONCHI-CARDIAC	LYMPHOMA, MALIGNANT
	LIVER	LYMPHOMA, MALIGNANT
	SPLEEN	LYMPHOMA, MALIGNANT
	PANCREAS	LYMPHOMA, MALIGNANT
	KIDNEYS	LYMPHOMA, MALIGNANT
17404	DIED ON 07/15/81 WITH NO TUMORS	
17405	DIED ON 03/15/81 WITH NO TUMORS	
17406	DIED ON 07/17/80 WITH NO TUMORS	
17407	DIED ON 12/07/81 WITH 4 TUMORS	
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	KIDNEYS	CARCINOMA, TUBULAR
	BRONCHIAL LYMPH NODE	ADENOCARCINOMA, METASTATIC
17408	DIED ON 04/01/81 WITH NO TUMORS	
17409	DIED ON 03/20/81 WITH NO TUMORS	
17410	DIED ON 06/16/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	ADENOMA
17411	DIED ON 07/29/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
17412	DIED ON 09/20/81 WITH NO TUMORS	
17413	DIED ON 07/22/81 WITH 2 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17414	DIED ON 12/14/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
17415	DIED ON 07/15/80 WITH NO TUMORS	
17416	DIED ON 03/28/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17417	DIED ON 06/23/81 WITH 3 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 4

17418 DIED ON 01/18/82 WITH 1 TUMOR	
LARYNX	CARCINOMA, SQUAMOUS CELL
17419 DIED ON 12/25/80 WITH 1 TUMOR	
LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17420 DIED ON 10/24/81 WITH 1 TUMOR	
LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
17421 DIED ON 04/03/81 WITH 1 TUMOR	
LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
17422 DIED ON 07/05/81 WITH 10 TUMORS	
ADRENALS	ADENOCARCINOMA
COLON/RECTUM	ADENOCARCINOMA
LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-APICAL	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-CARDIAC	CARCINOMA, ADENOSQUAMOUS
LIVER	ADENOCARCINOMA
KIDNEYS	CARCINOMA, ADENOSQUAMOUS, METASTATIC
17423 DIED ON 06/10/81 WITH 3 TUMORS	
LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17424 DIED ON 08/15/81 WITH 4 TUMORS	
MESENTERIC LYMPH NODE	SARCOMA
TRACHEA	POLYP
LIVER	SARCOMA
SPLEEN	SARCOMA
17425 DIED ON 01/18/82 WITH 6 TUMORS	
STOMACH	PAPILLOMA
TRACHEA	POLYP
LUNG & BRONCHI-LEFT	POLYP
LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
LIVER	ADENOMA, HEPATOCELLULAR
17426 DIED ON 05/31/81 WITH 3 TUMORS	
LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
17427 DIED ON 03/30/81 WITH NO TUMORS	
17428 DIED ON 11/07/81 WITH 2 TUMORS	
LARYNX	POLYP
LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA
17429 DIED ON 04/11/81 WITH 3 TUMORS	
LUNG & BRONCHI-LEFT	ADENOCARCINOMA
LUNG & BRONCHI-APICAL	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 4

17430	DIED ON 01/18/82 WITH NO TUMORS	
17431	DIED ON 01/18/82 WITH 1 TUMOR	
	ADRENALS	PHEOCHROMOCYTOMA
17432	DIED ON 09/28/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
17433	DIED ON 05/02/81 WITH 5 TUMORS	
	TRACHEA	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	HEART	CARCINOMA, ADENOSQUAMOUS, INVASIVE
17434	DIED ON 10/25/81 WITH 2 TUMORS	
	STOMACH	PAPILLOMA
	LUNG & BRONCHI-LEFT	FIBROSARCOMA
17435	DIED ON 01/18/82 WITH 1 TUMOR	
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
17436	DIED ON 08/26/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	POLYP
17437	DIED ON 11/12/81 WITH 1 TUMOR	
	TRACHEA	POLYP
17438	DIED ON 11/12/81 WITH 8 TUMORS	
	TRACHEA	ADENOCARCINOMA
	ESOPHAGUS	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
17439	DIED ON 01/18/82 WITH 2 TUMORS	
	STOMACH	PAPILLOMA
	LUNG & BRONCHI-LEFT	ADENOMA
17440	DIED ON 08/19/81 WITH 10 TUMORS	
	CECUM	SARCOMA
	ILEUM	SARCOMA
	COLON/RECTUM	SARCOMA
	MESENTERIC LYMPH NODE	SARCOMA
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	SARCOMA
	LIVER	SARCOMA
	SPLEEN	SARCOMA
	HEART	SARCOMA
	CHEST (MASS)	SARCOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 5

17442	DIED ON 03/24/81 WITH NO TUMORS	
17443	DIED ON 09/20/81 WITH NO TUMORS	
17444	DIED ON 10/29/81 WITH NO TUMORS	
17445	DIED ON 08/29/81 WITH 1 TUMOR	
	ADRENALS	CARCINOMA, CORTICAL CELL
17446	DIED ON 10/03/80 WITH NO TUMORS	
17447	DIED ON 10/13/81 WITH 1 TUMOR	
	ADRENALS	CARCINOMA, CORTICAL CELL
17448	DIED ON 11/09/81 WITH NO TUMORS	
17449	DIED ON 01/18/82 WITH NO TUMORS	
17450	DIED ON 12/26/81 WITH 1 TUMOR	
	MESENTERIC LYMPH NODE	ADENOCARCINOMA, METASTATIC
17451	DIED ON 08/04/81 WITH 1 TUMOR	
	PANCREAS	CARCINOMA, ISLET CELL
17452	DIED ON 12/24/80 WITH NO TUMORS	
17453	DIED ON 01/18/82 WITH NO TUMORS	
17454	DIED ON 11/09/81 WITH NO TUMORS	
17455	DIED ON 12/07/81 WITH NO TUMORS	
17456	DIED ON 09/15/80 WITH NO TUMORS	
17457	DIED ON 06/14/81 WITH NO TUMORS	
17458	DIED ON 02/12/81 WITH NO TUMORS	
17459	DIED ON 08/05/81 WITH NO TUMORS	
17460	DIED ON 11/11/81 WITH NO TUMORS	
17461	DIED ON 08/05/81 WITH NO TUMORS	
17462	DIED ON 11/09/81 WITH 1 TUMOR	
	PANCREAS	CARCINOMA, ISLET CELL
17463	DIED ON 02/05/81 WITH NO TUMORS	
17464	DIED ON 01/18/82 WITH NO TUMORS	
17465	DIED ON 01/03/82 WITH NO TUMORS	
17466	DIED ON 01/03/82 WITH NO TUMORS	

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 5

17467	DIED ON 09/15/81 WITH NO TUMORS	
17468	DIED ON 10/26/81 WITH NO TUMORS	
17469	DIED ON 10/30/80 WITH NO TUMORS	
17470	DIED ON 09/26/81 WITH NO TUMORS	
17471	DIED ON 08/03/81 WITH NO TUMORS	
17472	DIED ON 11/07/81 WITH NO TUMORS	
17473	DIED ON 05/03/81 WITH NO TUMORS	
17474	DIED ON 10/30/80 WITH NO TUMORS	
17475	DIED ON 03/04/81 WITH NO TUMORS	
17476	DIED ON 07/28/80 WITH NO TUMORS	
17477	DIED ON 10/05/81 WITH NO TUMORS	
17478	DIED ON 02/02/81 WITH NO TUMORS	
17479	DIED ON 01/25/81 WITH NO TUMORS	
17480	DIED ON 10/19/81 WITH NO TUMORS	
17481	DIED ON 01/18/82 WITH NO TUMORS	
17482	DIED ON 11/24/80 WITH NO TUMORS	
17483	DIED ON 06/18/81 WITH NO TUMORS	
17484	DIED ON 11/08/81 WITH 1 TUMOR	PAPILLOMA
STOMACH		
17485	DIED ON 08/24/81 WITH NO TUMORS	
17486	DIED ON 10/16/81 WITH NO TUMORS	
17487	DIED ON 05/29/81 WITH NO TUMORS	
17488	DIED ON 10/10/81 WITH NO TUMORS	
17489	DIED ON 07/15/81 WITH NO TUMORS	
17490	DIED ON 08/29/81 WITH NO TUMORS	
17491	DIED ON 06/09/80 WITH NO TUMORS	

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 6

17492	DIED ON 09/15/81 WITH 4 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	CARCINOMA, ADENOSQUAMOUS
	BRONCHIAL LYMPH NODE	CARCINOMA, ADENOSQUAMOUS, METASTATIC
	RIBCAGE	ADENOCARCINOMA, METASTATIC
17493	DIED ON 04/07/81 WITH NO TUMORS	
17494	DIED ON 09/12/81 WITH 6 TUMORS	
	LARYNX	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	ADENOMA
	LUNG & BRONCHI-APICAL	ADENOMA
	LUNG & BRONCHI-AZYGOUS	ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-CARDIAC	ADENOMA
17495	DIED ON 02/01/81 WITH 1 TUMOR	
	TRACHEA	POLYP
17496	DIED ON 07/19/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
17497	DIED ON 01/22/81 WITH NO TUMORS	
17498	DIED ON 06/08/80 WITH NO TUMORS	
17499	DIED ON 11/20/80 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
17500	DIED ON 09/08/80 WITH NO TUMORS	
17501	DIED ON 05/29/81 WITH 5 TUMORS	
	LARYNX	POLYP
	TRACHEA	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
17502	DIED ON 11/18/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
17503	DIED ON 04/03/81 WITH 5 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
17504	DIED ON 05/24/81 WITH 1 TUMOR	
	TRACHEA	POLYP
17505	DIED ON 03/11/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	ADENOMA
17506	DIED ON 06/01/81 WITH 5 TUMORS	
	LARYNX	CARCINOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
17507	DIED ON 01/19/82 WITH NO TUMORS	
17508	DIED ON 02/02/81 WITH 2 TUMORS	
	LARYNX	POLYP
	TRACHEA	CARCINOMA, SQUAMOUS CELL

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 6

17509	DIED ON 01/19/82 WITH NO TUMORS	
17510	DIED ON 05/12/81 WITH NO TUMORS	
17511	DIED ON 08/18/81 WITH 3 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
17512	DIED ON 12/08/81 WITH 2 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
17513	DIED ON 11/27/81 WITH 7 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA
	LUNG & BRONCHI-CARDIAC	ADENOMA
	LIVER	HEMANGIOMA
	SPLEEN	HEMANGIOSARCOMA
17514	DIED ON 01/29/81 WITH 4 TUMORS	
	ADRENALS	ADENOMA, CORTICAL CELL
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
	BRONCHIAL LYMPH NODE	CARCINOMA, SQUAMOUS CELL, METASTATIC
17515	DIED ON 12/16/80 WITH NO TUMORS	
17516	DIED ON 03/06/81 WITH 2 TUMORS	
	TRACHEA	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA
17517	DIED ON 06/01/81 WITH NO TUMORS	
17518	DIED ON 03/10/81 WITH NO TUMORS	
17519	DIED ON 01/19/82 WITH 2 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17520	DIED ON 12/11/81 WITH 8 TUMORS	
	LARYNX	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	ADENOMA
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
	SPLEEN	HEMANGIOSARCOMA
	MEDIASTINAL LYMPH NODE	ADENOCARCINOMA, METASTATIC
17521	DIED ON 01/05/82 WITH 3 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOMA
	SPLEEN	SARCOMA, RETICULUM CELL
17522	DIED ON 10/15/80 WITH NO TUMORS	
17523	DIED ON 02/03/81 WITH 1 TUMOR	
	TRACHEA	POLYP
17524	DIED ON 08/06/81 WITH 5 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-APICAL	ADENOMA
	LUNG & BRONCHI-AZYGOUS	ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA
	LUNG & BRONCHI-CARDIAC	CARCINOMA, ADENOSQUAMOUS
17525	DIED ON 11/10/81 WITH 2 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
17526	DIED ON 11/23/81 WITH 2 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 6

17527	DIED ON 10/07/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA
17528	DIED ON 11/09/81 WITH 5 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	ADENOMA
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
17529	DIED ON 11/10/81 WITH 1 TUMOR	
	LARYNX	POLYP
17530	DIED ON 01/16/81 WITH NO TUMORS	
17531	DIED ON 07/26/81 WITH 2 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17532	DIED ON 12/25/80 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
17533	DIED ON 10/21/81 WITH 4 TUMORS	
	THYMUS	CARCINOMA, SQUAMOUS CELL, INVASIVE
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
	SPLEEN	HEMANGIOSARCOMA
17534	DIED ON 10/19/81 WITH 3 TUMORS	
	ADRENALS	PHEOCHROMOCYTOMA
	LARYNX	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA
17535	DIED ON 06/05/81 WITH 4 TUMORS	
	THYROID	CARCINOMA, C-CELL
	LUNG & BRONCHI-APICAL	ADENOMA
	LUNG & BRONCHI-AZYGOUS	ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
17536	DIED ON 07/04/81 WITH NO TUMORS	
17537	DIED ON 10/14/81 WITH 5 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	GALLBLADDER	ADENOCARCINOMA
17538	DIED ON 05/20/81 WITH 1 TUMOR	
	STOMACH	PAPILLOMA
17539	DIED ON 05/29/81 WITH 1 TUMOR	
	LARYNX	ADENOCARCINOMA
17540	DIED ON 08/25/81 WITH 4 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA
17541	DIED ON 11/01/81 WITH 6 TUMORS	
	MANDIBULAR LYMPH NODE	ADENOCARCINOMA, METASTATIC
	LARYNX	ADENOCARCINOMA
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	ADENOMA
	LUNG & BRONCHI-AZYGOUS	ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 7

17542	DIED ON 12/08/81 WITH	1 TUMOR	
	ADRENALS		ADENOMA, CORTICAL CELL
17543	DIED ON 01/19/82 WITH	NO TUMORS	
17544	DIED ON 11/02/81 WITH	NO TUMORS	
17545	DIED ON 01/19/82 WITH	1 TUMOR	
	PANCREAS		ADENOMA, ISLET CELL
17546	DIED ON 01/21/81 WITH	NO TUMORS	
17547	DIED ON 10/18/80 WITH	NO TUMORS	
17548	DIED ON 07/02/81 WITH	NO TUMORS	
17549	DIED ON 01/19/82 WITH	NO TUMORS	
17550	DIED ON 01/19/82 WITH	1 TUMOR	
	ADRENALS		ADENOMA, CORTICAL CELL
17551	DIED ON 01/19/82 WITH	NO TUMORS	
17552	DIED ON 02/24/81 WITH	NO TUMORS	
17553	DIED ON 11/21/81 WITH	NO TUMORS	
17554	DIED ON 01/19/82 WITH	NO TUMORS	
17555	DIED ON 01/19/82 WITH	NO TUMORS	
17556	DIED ON 01/19/82 WITH	NO TUMORS	
17557	DIED ON 11/24/80 WITH	NO TUMORS	
17558	DIED ON 01/19/82 WITH	NO TUMORS	
17559	DIED ON 11/21/81 WITH	NO TUMORS	
17560	DIED ON 01/19/82 WITH	NO TUMORS	
17561	DIED ON 01/19/82 WITH	NO TUMORS	
17562	DIED ON 10/14/80 WITH	NO TUMORS	
17563	DIED ON 08/08/81 WITH	1 TUMOR	
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
17564	DIED ON 02/25/81 WITH	NO TUMORS	
17565	DIED ON 01/19/82 WITH	NO TUMORS	
17566	DIED ON 01/19/82 WITH	NO TUMORS	
17567	DIED ON 01/19/82 WITH	NO TUMORS	
17568	DIED ON 01/15/81 WITH	NO TUMORS	
17569	DIED ON 01/19/82 WITH	NO TUMORS	
17570	DIED ON 11/05/81 WITH	NO TUMORS	
17571	DIED ON 07/29/81 WITH	NO TUMORS	
17572	DIED ON 09/28/81 WITH	NO TUMORS	
17573	DIED ON 01/19/82 WITH	NO TUMORS	
17574	DIED ON 12/12/80 WITH	NO TUMORS	
17575	DIED ON 01/19/82 WITH	NO TUMORS	
17576	DIED ON 11/29/80 WITH	NO TUMORS	
17577	DIED ON 09/09/81 WITH	NO TUMORS	
17578	DIED ON 01/19/82 WITH	NO TUMORS	
17579	DIED ON 03/11/81 WITH	NO TUMORS	
17580	DIED ON 01/19/82 WITH	NO TUMORS	
17581	DIED ON 01/19/82 WITH	NO TUMORS	
17582	DIED ON 02/16/81 WITH	NO TUMORS	
17583	DIED ON 11/14/81 WITH	NO TUMORS	
17584	DIED ON 01/19/82 WITH	1 TUMOR	
	PANCREAS		ADENOMA, ISLET CELL
17585	DIED ON 10/04/81 WITH	NO TUMORS	
17586	DIED ON 10/29/81 WITH	1 TUMOR	
	MESENTERIC LYMPH NODE		CARCINOMA, METASTATIC
17587	DIED ON 01/07/81 WITH	NO TUMORS	
17588	DIED ON 01/19/82 WITH	NO TUMORS	
17589	DIED ON 05/19/81 WITH	NO TUMORS	
17590	DIED ON 09/17/81 WITH	NO TUMORS	
17591	DIED ON 01/19/82 WITH	NO TUMORS	

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 8

17592	DIED ON 01/19/82 WITH	3 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOMA
	LUNG & BRONCHI-LEFT		CARCINOMA
	LUNG & BRONCHI-AZYGOUS		ADENOMA
17593	DIED ON 08/26/81 WITH	2 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOMA
17594	DIED ON 01/13/82 WITH	4 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-APICAL		ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC		ADENOCARCINOMA
17595	DIED ON 07/22/81 WITH	1 TUMOR	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
17596	DIED ON 08/28/81 WITH	2 TUMORS	
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOMA
17597	DIED ON 09/14/81 WITH	4 TUMORS	
	STOMACH		PAPILLOMA
	LARYNX		POLYP
	LUNG & BRONCHI-AZYGOUS		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-CARDIAC		CARCINOMA, ADENOSQUAMOUS
17598	DIED ON 08/20/81 WITH	6 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-APICAL		ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC		ADENOCARCINOMA
	HEART		CARCINOMA, ADENOSQUAMOUS, METASTATIC
17599	DIED ON 10/26/81 WITH	3 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
17600	DIED ON 09/25/81 WITH	5 TUMORS	
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-APICAL		ADENOMA
	LUNG & BRONCHI-AZYGOUS		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC		ADENOCARCINOMA
17601	DIED ON 01/19/82 WITH	1 TUMOR	
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
17602	DIED ON 03/28/81 WITH	NO TUMORS	

TUMOR INVENTORY
 CD-CARCINOGENICITY OF FOUNDRY PARTICULATES:
 SILICA AND SILICA SAND SUBSTITUTES
 GROUP: 8

17603	DIED ON 08/06/81 WITH	3 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
17604	DIED ON 11/10/81 WITH	3 TUMORS	
	LARYNX		POLYP
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
17605	DIED ON 09/23/80 WITH	1 TUMOR	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
17606	DIED ON 07/15/81 WITH	2 TUMORS	
	LARYNX		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
17607	DIED ON 08/19/81 WITH	4 TUMORS	
	LARYNX		POLYP
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, ADENOSQUAMOUS
17608	DIED ON 06/09/81 WITH	4 TUMORS	
	LARYNX		POLYP
	ESOPHAGUS		POLYP
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
17609	DIED ON 03/27/81 WITH	4 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
	SPLEEN		HEMANGIOSARCOMA
17610	DIED ON 05/05/81 WITH	5 TUMORS	
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-APICAL		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-CARDIAC		CARCINOMA, ADENOSQUAMOUS
17611	DIED ON 06/22/81 WITH	2 TUMORS	
	LUNG & BRONCHI-AZYGOUS		ADENOMA
	LUNG & BRONCHI-CARDIAC		CARCINOMA, ADENOSQUAMOUS
17612	DIED ON 02/02/81 WITH	1 TUMOR	
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, SQUAMOUS CELL
17613	DIED ON 11/03/80 WITH	2 TUMORS	
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, ADENOSQUAMOUS
17614	DIED ON 08/07/81 WITH	6 TUMORS	
	ADRENALS		ADENOMA, CORTICAL CELL
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-APICAL		ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC		ADENOCARCINOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 8

17615	DIED ON 03/10/81 WITH	1 TUMOR	
	LUNG & BRONCHI-CARDIAC		ADENOMA
17616	DIED ON 10/28/81 WITH	4 TUMORS	
	TRACHEA		POLYP
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
17617	DIED ON 09/06/81 WITH	5 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-APICAL		ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC		ADENOCARCINOMA
17618	DIED ON 08/18/81 WITH	1 TUMOR	
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOMA
17619	DIED ON 04/11/81 WITH	3 TUMORS	
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-APICAL		ADENOMA
	HEART		CARCINOMA, SQUAMOUS CELL, METASTATIC
17620	DIED ON 09/20/81 WITH	4 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC		ADENOCARCINOMA
17621	DIED ON 11/28/81 WITH	4 TUMORS	
	LARYNX		POLYP
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
17622	DIED ON 05/08/80 WITH	NO TUMORS	
17623	DIED ON 10/26/81 WITH	1 TUMOR	
	LUNG & BRONCHI-APICAL		ADENOMA
17624	DIED ON 02/04/81 WITH	NO TUMORS	
17625	DIED ON 09/29/80 WITH	NO TUMORS	

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 8

17626 DIED ON 10/06/81 WITH 7 TUMORS	
LUNG & BRONCHI-LEFT	ADENOCARCINOMA
LUNG & BRONCHI-APICAL	ADENOCARCINOMA
LUNG & BRONCHI-azygous	ADENOCARCINOMA
LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-CARDIAC	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
17627 DIED ON 07/29/81 WITH 3 TUMORS	
LARYNX	POLYP
LUNG & BRONCHI-LEFT	ADENOMA
LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA
17628 DIED ON 01/19/82 WITH 5 TUMORS	
LUNG & BRONCHI-APICAL	ADENOCARCINOMA
LUNG & BRONCHI-azygous	ADENOCARCINOMA
LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
HEART	CARCINOMA, ADENOSQUAMOUS, METASTATIC
17629 DIED ON 11/28/81 WITH 1 TUMOR	
LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
17630 DIED ON 01/08/82 WITH 7 TUMORS	
ADRENALS	CARCINOMA, CORTICAL CELL
STOMACH	PAPILLOMA
LARYNX	POLYP
LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-azygous	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
17631 DIED ON 03/24/81 WITH 2 TUMORS	
LARYNX	CARCINOMA, SQUAMOUS CELL
LUNG & BRONCHI-APICAL	ADENOMA
17632 DIED ON 10/23/81 WITH 2 TUMORS	
LARYNX	POLYP
TRACHEA	ADENOCARCINOMA
17633 DIED ON 07/10/81 WITH NO TUMORS	

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 8

17634	DIED ON 05/31/81 WITH	3 TUMORS	
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS		ADENOMA
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
17635	DIED ON 11/23/81 WITH	3 TUMORS	
	ADRENALS		ADENOMA, CORTICAL CELL
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	BRONCHIAL LYMPH NODE		ADENOCARCINOMA, METASTATIC
17636	DIED ON 10/17/81 WITH	3 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOMA
	LUNG & BRONCHI-CARDIAC		ADENOMA
17637	DIED ON 10/29/81 WITH	3 TUMORS	
	ADRENALS		ADENOMA, CORTICAL CELL
	LUNG & BRONCHI-LEFT		ADENOMA
	LUNG & BRONCHI-APICAL		ADENOMA
17638	DIED ON 04/18/81 WITH	1 TUMOR	
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
17639	DIED ON 08/25/81 WITH	2 TUMORS	
	LUNG & BRONCHI-AZYGOUS		ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOMA
17640	DIED ON 03/20/81 WITH	2 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
17641	DIED ON 05/27/81 WITH	17 TUMORS	
	SALIVARY GLAND		LYMPHOMA, MALIGNANT
	BRAIN		LYMPHOMA
	ADRENALS		LYMPHOMA, MALIGNANT
	THYMUS		LYMPHOMA, MALIGNANT
	ESOPHAGUS		CARCINOMA, SQUAMOUS CELL
	ESOPHAGUS		LYMPHOMA, MALIGNANT
	LUNGS & BRONCHI-LEFT		LYMPHOMA, MALIGNANT
	LUNGS & BRONCHI-APICAL		LYMPHOMA, MALIGNANT
	LUNGS & BRONCHI-AZYGOUS		LYMPHOMA, MALIGNANT
	LUNGS & BRONCHI-DIAPHRAGMATIC		LYMPHOMA, MALIGNANT
	LUNGS & BRONCHI-CARDIAC		LYMPHOMA, MALIGNANT
	SPLEEN		LYMPHOMA, MALIGNANT
	PANCREAS		LYMPHOMA, MALIGNANT
	HEART		LYMPHOMA, MALIGNANT
	KIDNEYS		LYMPHOMA, MALIGNANT
	SEMINAL VESICLES		LYMPHOMA, MALIGNANT
	FEMUR/BONE MARROW		LYMPHOMA, MALIGNANT

NOTE: NOT INCLUDED AS A RESPIRATORY TRACT TUMOR-BEARING ANIMAL

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 9

17642	DIED ON 11/09/81 WITH NO TUMORS	
17643	DIED ON 01/12/82 WITH NO TUMORS	
17644	DIED ON 01/19/82 WITH NO TUMORS	
17645	DIED ON 01/19/82 WITH NO TUMORS	
17646	DIED ON 01/05/82 WITH NO TUMORS	
17647	DIED ON 02/16/81 WITH NO TUMORS	
17648	DIED ON 02/26/81 WITH NO TUMORS	
17649	DIED ON 01/19/82 WITH 1 TUMOR	
	LIVER	CYSTADENOMA
17650	DIED ON 01/14/82 WITH 1 TUMOR	
	ADRENALS	ADENOMA, CORTICAL CELL
17651	DIED ON 01/19/82 WITH NO TUMORS	
17652	DIED ON 10/06/80 WITH NO TUMORS	
17653	DIED ON 03/10/81 WITH NO TUMORS	
17654	DIED ON 01/19/82 WITH NO TUMORS	
17655	DIED ON 02/05/81 WITH NO TUMORS	
17656	DIED ON 01/13/82 WITH NO TUMORS	
17657	DIED ON 07/01/81 WITH NO TUMORS	
17658	DIED ON 01/19/82 WITH NO TUMORS	
17659	DIED ON 01/19/82 WITH NO TUMORS	
17660	DIED ON 09/29/81 WITH NO TUMORS	
17661	DIED ON 01/19/82 WITH NO TUMORS	
17662	DIED ON 01/19/82 WITH NO TUMORS	
17663	DIED ON 04/26/81 WITH NO TUMORS	
17664	DIED ON 08/16/81 WITH NO TUMORS	
17665	DIED ON 08/16/81 WITH NO TUMORS	
17666	DIED ON 03/01/81 WITH NO TUMORS	
17667	DIED ON 01/19/82 WITH NO TUMORS	
17668	DIED ON 11/01/81 WITH NO TUMORS	
17669	DIED ON 04/04/81 WITH NO TUMORS	
17670	DIED ON 06/21/81 WITH NO TUMORS	
17671	DIED ON 01/19/82 WITH NO TUMORS	
17672	DIED ON 06/02/81 WITH NO TUMORS	
17673	DIED ON 01/19/82 WITH NO TUMORS	
17674	DIED ON 04/07/81 WITH NO TUMORS	
17675	DIED ON 09/17/81 WITH 1 TUMOR	
	MANDIBULAR LYMPH NODE	LYMPHOMA, MALIGNANT
17676	DIED ON 05/11/81 WITH NO TUMORS	
17677	DIED ON 01/19/82 WITH NO TUMORS	
17678	DIED ON 11/05/81 WITH NO TUMORS	
17679	DIED ON 01/19/82 WITH NO TUMORS	
17680	DIED ON 01/19/82 WITH NO TUMORS	
17681	DIED ON 11/10/80 WITH NO TUMORS	
17682	DIED ON 12/03/80 WITH NO TUMORS	
17683	DIED ON 03/05/81 WITH NO TUMORS	
17684	DIED ON 12/03/80 WITH NO TUMORS	
17685	DIED ON 08/18/81 WITH NO TUMORS	
17686	DIED ON 01/19/82 WITH NO TUMORS	
17687	DIED ON 01/07/82 WITH 1 TUMOR	
	ADRENALS	ADENOMA, CORTICAL CELL
17688	DIED ON 01/19/82 WITH 1 TUMOR	
	ADRENALS	ADENOMA, CORTICAL CELL
17689	DIED ON 04/19/81 WITH NO TUMORS	
17690	DIED ON 01/15/82 WITH NO TUMORS	
17691	DIED ON 01/27/81 WITH NO TUMORS	

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 10

17692 DIED ON 10/27/81 WITH 5 TUMORS	
TRACHEA	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-APICAL	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-CARDIAC	CARCINOMA, ADENOSQUAMOUS
17693 DIED ON 11/19/81 WITH 5 TUMORS	
TRACHEA	POLYP
LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
LUNG & BRONCHI-CARDIAC	CARCINOMA, SQUAMOUS CELL
17694 DIED ON 09/24/81 WITH 6 TUMORS	
LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-APICAL	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
LUNG & BRONCHI-CARDIAC	CARCINOMA, ADENOSQUAMOUS
17695 DIED ON 06/03/81 WITH 3 TUMORS	
LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
LUNG & BRONCHI-CARDIAC	CARCINOMA, SQUAMOUS CELL
17696 DIED ON 11/24/80 WITH NO TUMORS	
17697 DIED ON 07/19/81 WITH 5 TUMORS	
TRACHEA	ADENOCARCINOMA
TRACHEA	POLYP
LUNG & BRONCHI-LEFT	ADENOMA
LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
LUNG & BRONCHI-DIAPHRAGMATIC	POLYP
17698 DIED ON 01/19/82 WITH 2 TUMORS	
LUNG & BRONCHI-AZYGOUS	ADENOMA
LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17699 DIED ON 10/15/81 WITH 1 TUMOR	
LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA
17700 DIED ON 01/11/82 WITH 5 TUMORS	
ADRENALS	ADENOMA, CORTICAL CELL
STOMACH	PAPILLOMA
LUNG & BRONCHI-LEFT	ADENOCARCINOMA
LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA
LUNG & BRONCHI-CARDIAC	POLYP
17701 DIED ON 09/24/81 WITH 3 TUMORS	
LUNG & BRONCHI-LEFT	ADENOCARCINOMA
LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17702 DIED ON 04/19/81 WITH 3 TUMORS	
LARYNX	POLYP
LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
LUNG & BRONCHI-CARDIAC	CARCINOMA, SQUAMOUS CELL

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 10

17703	DIED ON 12/14/81 WITH	4 TUMORS
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
17704	DIED ON 07/20/81 WITH	2 TUMORS
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17705	DIED ON 05/18/81 WITH	5 TUMORS
	THYMUS	CARCINOMA, SQUAMOUS CELL, INVASIVE
	LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-CARDIAC	CARCINOMA, SQUAMOUS CELL
	MEDIASTINAL LYMPH NODE	CARCINOMA, SQUAMOUS CELL
17706	DIED ON 04/16/81 WITH	6 TUMORS
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-CARDIAC	CARCINOMA, SQUAMOUS CELL
	MEDIASTINAL LYMPH NODE	CARCINOMA, SQUAMOUS CELL, METASTATIC
17707	DIED ON 03/02/81 WITH	8 TUMORS
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL, METASTATIC
	LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL, METASTATIC
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL, METASTATIC
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL, METASTATIC
	LUNG & BRONCHI-CARDIAC	CARCINOMA, SQUAMOUS CELL, METASTATIC
	LIVER	SARCOMA, RETICULUM CELL
	HEART	SARCOMA, RETICULUM CELL
	KIDNEYS	SARCOMA, RETICULUM CELL
17708	DIED ON 12/22/81 WITH	3 TUMORS
	TRACHEA	CARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
17709	DIED ON 05/16/81 WITH	10 TUMORS
	ADRENALS	SARCOMA
	CECUM	SARCOMA
	MESENTERIC LYMPH NODE	TUMOR EMBOLUS
	LARYNX	POLYP
	THYROID	TUMOR EMBOLUS
	LUNG & BRONCHI-LEFT	SARCOMA, METASTATIC
	LUNG & BRONCHI-DIAPHRAGMATIC	SARCOMA
	HEART	SARCOMA, METASTATIC
	KIDNEYS	SARCOMA, METASTATIC
	CECAL NODULE	SARCOMA
17710	DIED ON 09/06/81 WITH	2 TUMORS
	ADRENALS	NEOPLASM
	LARYNX	POLYP
17711	DIED ON 03/20/81 WITH	1 TUMOR
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
17712	DIED ON 04/14/81 WITH	3 TUMORS
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC	CARCINOMA, SQUAMOUS CELL
17713	DIED ON 01/19/82 WITH	3 TUMORS
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS	ADENOMA
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 10

17714	DIED ON 09/22/81 WITH NO TUMORS	
17715	DIED ON 01/23/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	POLYP
17716	DIED ON 12/15/80 WITH 3 TUMORS	
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
17717	DIED ON 12/01/80 WITH 5 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA, METASTATIC
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA, METASTATIC
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA, METASTATIC
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA, METASTATIC
	LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA, METASTATIC
17718	DIED ON 07/17/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	POLYP
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
17719	DIED ON 05/28/81 WITH 5 TUMORS	
	LARYNX	CARCINOMA, SQUAMOUS CELL
	TRACHEA	CARCINOSARCOMA
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
17720	DIED ON 11/05/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
17721	DIED ON 12/01/80 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	CARCINOMA, ANAPLASTIC
17722	DIED ON 04/10/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
17723	DIED ON 01/01/82 WITH 4 TUMORS	
	MANDIBULAR LYMPH NODE	LYMPHOMA, MALIGNANT
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
17724	DIED ON 06/22/81 WITH NO TUMORS	
17725	DIED ON 04/03/81 WITH 5 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
17726	DIED ON 04/16/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
17727	DIED ON 05/25/81 WITH 2 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 10

17728	DIED ON 05/31/81 WITH	3 TUMORS	
	TRACHEA		POLYP
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA, INVASIVE
	LUNG & BRONCHI-CARDIAC		CARCINOMA, ADENOSQUAMOUS
17729	DIED ON 10/03/81 WITH	3 TUMORS	
	LUNG & BRONCHI-APICAL		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC		ADENOCARCINOMA
17730	DIED ON 01/19/82 WITH	1 TUMOR	
	MESENTERIC LYMPH NODE		FIBROSARCOMA
17731	DIED ON 03/15/81 WITH	6 TUMORS	
	LARYNX		POLYP
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-CARDIAC		CARCINOMA, SQUAMOUS CELL
17732	DIED ON 07/04/81 WITH	1 TUMOR	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
17733	DIED ON 08/24/81 WITH	NO TUMORS	
17734	DIED ON 03/16/81 WITH	3 TUMORS	
	LUNG & BRONCHI-APICAL		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOS		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOS		CARCINOMA, SQUAMOUS CELL
17735	DIED ON 03/01/81 WITH	NO TUMORS	
17736	DIED ON 12/24/80 WITH	2 TUMORS	
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOS		CARCINOMA, ADENOSQUAMOUS
17737	DIED ON 05/06/81 WITH	1 TUMOR	
	LUNG & BRONCHI-CARDIAC		CARCINOMA, SQUAMOUS CELL, METASTATIC
17738	DIED ON 02/16/81 WITH	NO TUMORS	
17739	DIED ON 01/15/82 WITH	3 TUMORS	
	STOMACH		PAPILLOMA
	LARYNX		ADENOCARCINOMA, INVASIVE
	TRACHEA		ADENOCARCINOMA
17740	DIED ON 12/19/81 WITH	3 TUMORS	
	STOMACH		PAPILLOMA
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, SQUAMOUS CELL
17741	DIED ON 12/17/80 WITH	2 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC		ADENOCARCINOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 11

17742	DIED ON 01/20/82 WITH NO TUMORS	
17743	DIED ON 12/07/81 WITH NO TUMORS	
17744	DIED ON 01/20/82 WITH 1 TUMOR	CARCINOMA
	THYMUS	
17745	DIED ON 01/20/82 WITH NO TUMORS	
17746	DIED ON 01/20/82 WITH 1 TUMOR	ADENOMA, CORTICAL CELL
	ADRENALS	
17747	DIED ON 04/20/81 WITH NO TUMORS	
17748	DIED ON 04/26/81 WITH NO TUMORS	
17749	DIED ON 01/20/82 WITH NO TUMORS	
17750	DIED ON 12/15/80 WITH NO TUMORS	
17751	DIED ON 09/27/80 WITH NO TUMORS	
17752	DIED ON 01/20/82 WITH NO TUMORS	
17753	DIED ON 11/04/81 WITH NO TUMORS	
17754	DIED ON 01/20/82 WITH NO TUMORS	
17755	DIED ON 09/06/81 WITH NO TUMORS	
17756	DIED ON 12/30/80 WITH NO TUMORS	
17757	DIED ON 09/02/81 WITH NO TUMORS	
17758	DIED ON 12/09/81 WITH 4 TUMORS	
	LUNG & BRONCHI-AZYGOUS	NEOPLASM
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC	NEOPLASM
	AXILLARY MASS	NEOPLASM
17759	DIED ON 01/20/82 WITH NO TUMORS	
17760	DIED ON 01/20/82 WITH NO TUMORS	
17761	DIED ON 10/23/81 WITH NO TUMORS	
17762	DIED ON 03/31/81 WITH 1 TUMOR	ADENOCARCINOMA
	COLON/RECTUM	
17763	DIED ON 10/10/81 WITH NO TUMORS	
17764	DIED ON 12/11/81 WITH 6 TUMORS	
	LUNGS & BRONCHI-LEFT	OSTEOSARCOMA, METASTATIC
	LUNGS & BRONCHI-APICAL	OSTEOSARCOMA, METASTATIC
	LUNGS & BRONCHI-DIAPHRAGMATIC	OSTEOSARCOMA, METASTATIC
	LUNGS & BRONCHI-CARDIAC	OSTEOSARCOMA, METASTATIC
	CHEST (MASS)	OSTEOSARCOMA
	MEDIASTINAL LYMPH NODE	OSTEOSARCOMA, METASTATIC
NOTE: NOT INCLUDED AS A RESPIRATORY TRACT TUMOR-BEARING ANIMAL		
17765	DIED ON 11/04/81 WITH NO TUMORS	
17766	DIED ON 10/06/81 WITH NO TUMORS	
17767	DIED ON 12/01/81 WITH NO TUMORS	
17768	DIED ON 04/29/81 WITH NO TUMORS	
17769	DIED ON 11/03/81 WITH NO TUMORS	
17770	DIED ON 01/20/82 WITH NO TUMORS	
17771	DIED ON 01/20/82 WITH NO TUMORS	
17772	DIED ON 07/22/80 WITH NO TUMORS	
17773	DIED ON 01/20/82 WITH NO TUMORS	
17774	DIED ON 10/09/81 WITH 1 TUMOR	CARCINOMA, CORTICAL CELL
	ADRENALS	
17775	DIED ON 02/09/81 WITH NO TUMORS	
17776	DIED ON 01/09/81 WITH NO TUMORS	
17777	DIED ON 12/12/81 WITH NO TUMORS	
17778	DIED ON 01/05/81 WITH NO TUMORS	
17779	DIED ON 01/24/81 WITH NO TUMORS	
17780	DIED ON 10/26/81 WITH 1 TUMOR	ADENOMA, CORTICAL CELL
	ADRENALS	

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 11

17781	DIED ON 10/15/81 WITH NO TUMORS	
17782	DIED ON 01/14/82 WITH 11 TUMORS	
	MANDIBULAR LYMPH NODE	NEOPLASM
	THYMUS	LEUKEMIA
	MESENTERIC LYMPH NODE	LEUKEMIA
	LUNGS & BRONCHI-LEFT	LEUKEMIA
	LUNGS & BRONCHI-APICAL	LEUKEMIA
	LUNGS & BRONCHI-AZYGOUS	LEUKEMIA
	LUNGS & BRONCHI-DIAPHRAGMATIC	LEUKEMIA
	LUNGS & BRONCHI-CARDIAC	LEUKEMIA
	STERNUM & RIB JUNCTION	LEUKEMIA
	FEMUR/BONE MARROW	LEUKEMIA

NOTE: NOT INCLUDED AS A RESPIRATORY TRACT TUMOR-BEARING ANIMAL

17783	DIED ON 11/10/80 WITH NO TUMORS	
17784	DIED ON 01/20/82 WITH 2 TUMORS	
	ADRENALS	ADENOMA, CORTICAL CELL
	LUNG & BRONCHI-LEFT	SARCOMA
17785	DIED ON 01/20/82 WITH NO TUMORS	
17786	DIED ON 10/07/81 WITH NO TUMORS	
17787	DIED ON 11/20/81 WITH 3 TUMORS	
	SKIN/SUBCUTIS	SARCOMA, GRANULOCYTIC
	MANDIBULAR LYMPH NODE	SARCOMA, GRANULOCYTIC
	LIVER	SARCOMA, GRANULOCYTIC
17788	DIED ON 01/20/82 WITH NO TUMORS	
17789	DIED ON 09/30/80 WITH NO TUMORS	
17790	DIED ON 01/20/82 WITH NO TUMORS	
17791	DIED ON 01/20/82 WITH 1 TUMOR	
	STOMACH	PAPILLOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 12

17792	DIED ON 07/09/80 WITH NO TUMORS	
17793	DIED ON 08/24/81 WITH 4 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17794	DIED ON 02/03/81 WITH 3 TUMORS	
	LARYNX	CARCINOMA
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17795	DIED ON 09/01/81 WITH 3 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
17796	DIED ON 06/03/81 WITH 1 TUMOR	
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
17797	DIED ON 07/13/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	CARCINOMA, ADENOSQUAMOUS
17798	DIED ON 07/30/80 WITH NO TUMORS	
17799	DIED ON 01/20/82 WITH 1 TUMOR	
	LARYNX	POLYP
17800	DIED ON 10/21/81 WITH 3 TUMORS	
	TRACHEA	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17801	DIED ON 03/02/81 WITH 4 TUMORS	
	LARYNX	CARCINOMA, SQUAMOUS CELL
	TRACHEA	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
17802	DIED ON 05/04/81 WITH 5 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-APICAL	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-CARDIAC	CARCINOMA, ADENOSQUAMOUS
17803	DIED ON 06/22/81 WITH 4 TUMORS	
	THYMUS	CARCINOMA, INVASIVE
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
	RIBCAGE	CARCINOMA, SQUAMOUS CELL
17804	DIED ON 11/20/81 WITH 4 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17805	DIED ON 07/31/81 WITH 3 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17806	DIED ON 01/27/81 WITH NO TUMORS	
17807	DIED ON 01/20/82 WITH 1 TUMOR	
	ADRENALS	ADENOMA, CORTICAL CELL
17808	DIED ON 11/30/81 WITH 5 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	MEDIASTINAL LYMPH NODE	CARCINOMA, SQUAMOUS CELL, METASTATIC

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 12

17809	DIED ON 03/09/81 WITH NO TUMORS	
17810	DIED ON 08/21/81 WITH 4 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-APICAL	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-CARDIAC	CARCINOMA, ADENOSQUAMOUS
17811	DIED ON 05/03/81 WITH NO TUMORS	
17812	DIED ON 01/31/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17813	DIED ON 04/20/81 WITH 3 TUMORS	
	ADRENALS	CARCINOMA, ANAPLASTIC, INVASIVE
	LUNG & BRONCHI-LEFT	CARCINOMA, ANAPLASTIC, METASTATIC
	KIDNEYS	CARCINOMA, ANAPLASTIC
17814	DIED ON 08/03/81 WITH NO TUMORS	
17815	DIED ON 03/15/81 WITH 1 TUMOR	
	TRACHEA	POLYP
17816	DIED ON 01/27/81 WITH NO TUMORS	
17817	DIED ON 05/12/81 WITH 3 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
	MEDIASTINAL LYMPH NODE	CARCINOMA, SQUAMOUS CELL, METASTATIC
17818	DIED ON 11/01/81 WITH 5 TUMORS	
	LARYNX	POLYP
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
17819	DIED ON 01/15/82 WITH 5 TUMORS	
	MESENTERIC LYMPH NODE	SARCOMA
	THYROID	CARCINOMA
	LUNG & BRONCHI-LEFT	ADENOMA
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17820	DIED ON 07/21/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
17821	DIED ON 10/13/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
17822	DIED ON 10/26/80 WITH NO TUMORS	
17823	DIED ON 07/26/81 WITH 4 TUMORS	
	LUNG & BRONCHI-LEFT	NEOPLASM
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
17824	DIED ON 10/15/81 WITH 3 TUMORS	
	LARYNX	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
17825	DIED ON 11/29/81 WITH 3 TUMORS	
	ADRENALS	ADENOMA, CORTICAL CELL
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 12

17826	DIED ON 01/20/82 WITH	2 TUMORS	
	LARYNX		POLYP
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
17827	DIED ON 07/21/81 WITH	2 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
17828	DIED ON 01/21/81 WITH	1 TUMOR	
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
17829	DIED ON 12/09/81 WITH	6 TUMORS	
	TRACHEA		POLYP
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-APICAL		ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC		ADENOCARCINOMA
17830	DIED ON 01/20/82 WITH	NO TUMORS	
17831	DIED ON 03/20/81 WITH	2 TUMORS	
	STOMACH		PAPILLOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, SQUAMOUS CELL
17832	DIED ON 12/31/81 WITH	4 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOMA
	LUNG & BRONCHI-APICAL		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
17833	DIED ON 11/09/81 WITH	NO TUMORS	
17834	DIED ON 01/20/82 WITH	2 TUMORS	
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
	SPLEEN		HEMANGIOSARCOMA
17835	DIED ON 02/16/81 WITH	NO TUMORS	
17836	DIED ON 01/20/82 WITH	3 TUMORS	
	LARYNX		POLYP
	TRACHEA		POLYP
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
17837	DIED ON 05/14/81 WITH	3 TUMORS	
	TRACHEA		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, SQUAMOUS CELL
17838	DIED ON 05/16/81 WITH	3 TUMORS	
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, SQUAMOUS CELL
	HEART		CARCINOMA, SQUAMOUS CELL, INVASIVE
17839	DIED ON 08/15/81 WITH	NO TUMORS	
17840	DIED ON 07/18/81 WITH	2 TUMORS	
	STOMACH		PAPILLOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, ADENOSQUAMOUS
17841	DIED ON 12/07/81 WITH	1 TUMOR	
	STOMACH		PAPILLOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 13

17842	DIED ON 07/15/80 WITH NO TUMORS	
17843	DIED ON 11/28/81 WITH NO TUMORS	
17844	DIED ON 08/20/80 WITH NO TUMORS	
17845	DIED ON 12/27/80 WITH NO TUMORS	
17846	DIED ON 01/20/82 WITH NO TUMORS	
17847	DIED ON 11/28/81 WITH NO TUMORS	
17848	DIED ON 06/25/80 WITH NO TUMORS	
17849	DIED ON 01/20/82 WITH 1 TUMOR	
ADRENALS		ADENOMA, CORTICAL CELL
17850	DIED ON 01/20/82 WITH NO TUMORS	
17851	DIED ON 08/17/81 WITH NO TUMORS	
17852	DIED ON 10/29/80 WITH NO TUMORS	
17853	DIED ON 01/20/82 WITH NO TUMORS	
17854	DIED ON 11/11/81 WITH NO TUMORS	
17855	DIED ON 09/20/81 WITH 5 TUMORS	
SALIVARY GLAND		LYMPHOMA, MALIGNANT
MESENTERIC LYMPH NODE		LYMPHOMA, MALIGNANT
LIVER		LYMPHOMA, MALIGNANT
HEART		LYMPHOMA, MALIGNANT
MEDIASTINAL LYMPH NODE		LYMPHOMA, MALIGNANT
17856	DIED ON 01/20/82 WITH 1 TUMOR	
ADRENALS		ADENOMA, CORTICAL CELL
17857	DIED ON 01/20/82 WITH NO TUMORS	
17858	DIED ON 01/20/82 WITH NO TUMORS	
17859	DIED ON 05/02/81 WITH NO TUMORS	
17860	DIED ON 01/20/82 WITH NO TUMORS	
17861	DIED ON 10/13/80 WITH NO TUMORS	
17862	DIED ON 01/20/82 WITH NO TUMORS	
17863	DIED ON 05/27/81 WITH 1 TUMOR	
ADRENALS		ADENOMA, CORTICAL CELL
17864	DIED ON 08/10/80 WITH NO TUMORS	
17865	DIED ON 12/01/81 WITH 1 TUMOR	
MESENTERIC LYMPH NODE		CARCINOMA, METASTATIC
17866	DIED ON 01/14/82 WITH NO TUMORS	
17867	DIED ON 10/04/80 WITH NO TUMORS	
17868	DIED ON 11/02/81 WITH NO TUMORS	
17869	DIED ON 01/12/82 WITH NO TUMORS	
17870	DIED ON 01/20/82 WITH NO TUMORS	
17871	DIED ON 01/20/82 WITH NO TUMORS	
17872	DIED ON 09/06/81 WITH NO TUMORS	
17873	DIED ON 07/11/80 WITH NO TUMORS	
17874	DIED ON 12/17/80 WITH NO TUMORS	
17875	DIED ON 07/18/80 WITH NO TUMORS	
17876	DIED ON 06/17/80 WITH NO TUMORS	
17877	DIED ON 01/20/82 WITH 2 TUMORS	
ADRENALS		ADENOMA, CORTICAL CELL
MESENTERIC LYMPH NODE		SARCOMA
17878	DIED ON 11/01/81 WITH NO TUMORS	
17879	DIED ON 01/20/82 WITH NO TUMORS	
17880	DIED ON 01/20/82 WITH NO TUMORS	
17881	DIED ON 12/29/80 WITH NO TUMORS	

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 13

17882	DIED ON 11/01/81 WITH	1 TUMOR	
	THYROID		NEOPLASM
17883	DIED ON 01/20/82 WITH	NO TUMORS	
17884	DIED ON 02/16/81 WITH	NO TUMORS	
17885	DIED ON 12/29/80 WITH	NO TUMORS	
17886	DIED ON 10/26/81 WITH	1 TUMOR	
	ADRENALS		ADENOMA, CORTICAL CELL
17887	DIED ON 01/20/82 WITH	NO TUMORS	
17888	DIED ON 01/20/82 WITH	NO TUMORS	
17889	DIED ON 01/16/82 WITH	NO TUMORS	
17890	DIED ON 01/22/81 WITH	NO TUMORS	
17891	DIED ON 01/20/82 WITH	4 TUMORS	
	ILEUM		CARCINOMA
	MESENTERIC LYMPH NODE		CARCINOMA, METASTATIC
	SPLEEN		HEMANGIOSARCOMA
	MEDIASTINAL LYMPH NODE		CARCINOMA, METASTATIC

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 14

17892	DIED ON 12/17/80 WITH 2 TUMORS	
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
17893	DIED ON 04/29/81 WITH 5 TUMORS	
	ADRENALS	ADENOMA, CORTICAL CELL
	LARYNX	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	TUMOR EMBOLUS
	LUNG & BRONCHI-CARDIAC	TUMOR EMBOLUS
17894	DIED ON 09/06/81 WITH 3 TUMORS	
	STOMACH	PAPILLOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17895	DIED ON 07/06/81 WITH 3 TUMORS	
	LARYNX	CARCINOMA, SQUAMOUS CELL
	TRACHEA	CARCINOMA, SQUAMOUS CELL
	HEART	CARCINOMA, SQUAMOUS CELL, METASTATIC
17896	DIED ON 06/01/81 WITH 3 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17897	DIED ON 06/07/81 WITH 5 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
17898	DIED ON 03/02/81 WITH NO TUMORS	
17899	DIED ON 05/29/81 WITH 3 TUMORS	
	LARYNX	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
17900	DIED ON 03/23/81 WITH 2 TUMORS	
	TRACHEA	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
17901	DIED ON 05/09/81 WITH 1 TUMOR	
	TRACHEA	POLYP
17902	DIED ON 01/28/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
17903	DIED ON 01/02/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
17904	DIED ON 10/23/81 WITH 3 TUMORS	
	LARYNX	CARCINOMA, SQUAMOUS CELL
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	ADENOMA
17905	DIED ON 01/07/82 WITH 5 TUMORS	
	STOMACH	PAPILLOMA
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-CARDIAC	POLYP

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 14

17906	DIED ON 10/11/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
17907	DIED ON 09/06/81 WITH 3 TUMORS	
	TRACHEA	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17908	DIED ON 09/01/81 WITH 3 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC	CARCINOMA, ADENOSQUAMOUS
17909	DIED ON 05/19/81 WITH 3 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
17910	DIED ON 02/16/81 WITH 2 TUMORS	
	LARYNX	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
17911	DIED ON 05/13/81 WITH NO TUMORS	
17912	DIED ON 05/02/81 WITH 3 TUMORS	
	TRACHEA	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17913	DIED ON 03/26/81 WITH NO TUMORS	
17914	DIED ON 03/30/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
17915	DIED ON 12/18/80 WITH NO TUMORS	
17916	DIED ON 07/27/80 WITH NO TUMORS	
17918	DIED ON 01/28/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA
17919	DIED ON 10/17/80 WITH NO TUMORS	
17920	DIED ON 11/21/80 WITH NO TUMORS	
17921	DIED ON 11/08/81 WITH NO TUMORS	
17923	DIED ON 08/12/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17924	DIED ON 02/20/81 WITH 1 TUMOR	
	LUNG & BRONCHI-DIAPHRAGMATIC	POLYP
17925	DIED ON 09/01/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
17926	DIED ON 11/07/80 WITH 1 TUMOR	
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17927	DIED ON 10/30/81 WITH 1 TUMOR	
	TRACHEA	POLYP
17928	DIED ON 05/16/81 WITH NO TUMORS	
17929	DIED ON 01/19/81 WITH NO TUMORS	

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 14

17930	DIED ON 06/26/81 WITH 19 TUMORS	
	MANDIBULAR LYMPH NODE	SARCOMA, RETICULUM CELL
	ADRENALS	SARCOMA, RETICULUM CELL
	THYRUS	SARCOMA, RETICULUM CELL
	DUODENUM	SARCOMA, RETICULUM CELL
	LARYNX	SARCOMA, RETICULUM CELL
	LUNG & BRONCHI-LEFT	SARCOMA, RETICULUM CELL
	LUNG & BRONCHI-APICAL	SARCOMA, RETICULUM CELL
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	SARCOMA, RETICULUM CELL
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	SARCOMA, RETICULUM CELL
	LUNG & BRONCHI-CARDIAC	SARCOMA, RETICULUM CELL
	LIVER	SARCOMA, RETICULUM CELL
	HEART	SARCOMA, RETICULUM CELL
	KIDNEYS	SARCOMA, RETICULUM CELL
	STERNUM & RIB JUNCTION	SARCOMA, RETICULUM CELL
	FEMUR/BONE MARROW	SARCOMA, RETICULUM CELL
17931	DIED ON 10/06/81 WITH 2 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOMA
17932	DIED ON 10/23/81 WITH 6 TUMORS	
	MANDIBULAR LYMPH NODE	LYMPHOMA, MALIGNANT
	MESENTERIC LYMPH NODE	LYMPHOMA, MALIGNANT
	LUNG & BRONCHI-LEFT	ADENOMA
	LIVER	LYMPHOMA, MALIGNANT
	LIVER	LYMPHOMA, MALIGNANT
	LIVER	LYMPHOMA, MALIGNANT
17933	DIED ON 05/19/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
17934	DIED ON 12/05/81 WITH 2 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	ADENOMA
17935	DIED ON 10/09/81 WITH 2 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
17936	DIED ON 10/28/81 WITH 3 TUMORS	
	STOMACH	PAPILLOMA
	LARYNX	POLYP
	TRACHEA	POLYP
17937	DIED ON 01/11/82 WITH 3 TUMORS	
	STOMACH	PAPILLOMA
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17938	DIED ON 03/05/81 WITH 2 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
17939	DIED ON 05/31/81 WITH 4 TUMORS	
	LARYNX	CARCINOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
17940	DIED ON 04/24/81 WITH NO TUMORS	
17941	DIED ON 01/20/82 WITH 2 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 15

17942	DIED ON	12/09/81	WITH NO TUMORS	
17943	DIED ON	08/08/80	WITH NO TUMORS	
17944	DIED ON	01/13/81	WITH NO TUMORS	
17945	DIED ON	06/03/81	WITH NO TUMORS	
17946	DIED ON	01/20/82	WITH NO TUMORS	
17947	DIED ON	11/01/81	WITH 1 TUMOR	
				HEMANGIOSARCOMA

SPLEEN				
17948	DIED ON	09/02/81	WITH NO TUMORS	
17949	DIED ON	12/12/80	WITH NO TUMORS	
17950	DIED ON	08/12/81	WITH NO TUMORS	
17951	DIED ON	04/21/81	WITH NO TUMORS	
17952	DIED ON	10/29/81	WITH NO TUMORS	
17953	DIED ON	10/24/81	WITH NO TUMORS	
17954	DIED ON	05/28/81	WITH NO TUMORS	
17955	DIED ON	09/02/81	WITH NO TUMORS	
17956	DIED ON	03/03/81	WITH NO TUMORS	
17957	DIED ON	01/11/82	WITH NO TUMORS	
17958	DIED ON	02/09/81	WITH NO TUMORS	
17959	DIED ON	10/24/81	WITH NO TUMORS	
17960	DIED ON	01/20/82	WITH NO TUMORS	
17961	DIED ON	09/07/81	WITH NO TUMORS	
17962	DIED ON	09/24/81	WITH NO TUMORS	
17963	DIED ON	11/16/80	WITH NO TUMORS	
17964	DIED ON	04/29/81	WITH NO TUMORS	
17965	DIED ON	09/07/81	WITH NO TUMORS	
17966	DIED ON	11/03/81	WITH NO TUMORS	
17967	DIED ON	07/21/81	WITH NO TUMORS	
17968	DIED ON	07/16/81	WITH NO TUMORS	
17969	DIED ON	10/26/81	WITH NO TUMORS	
17970	DIED ON	09/09/81	WITH NO TUMORS	
17971	DIED ON	11/05/81	WITH NO TUMORS	
17972	DIED ON	11/30/81	WITH NO TUMORS	
17973	DIED ON	12/03/80	WITH NO TUMORS	
17974	DIED ON	12/18/80	WITH NO TUMORS	
17975	DIED ON	03/06/81	WITH NO TUMORS	
17976	DIED ON	03/18/81	WITH NO TUMORS	
17977	DIED ON	08/15/80	WITH NO TUMORS	
17978	DIED ON	12/10/80	WITH NO TUMORS	
17979	DIED ON	11/24/81	WITH NO TUMORS	
17980	DIED ON	11/02/81	WITH NO TUMORS	
17981	DIED ON	01/20/82	WITH NO TUMORS	
17983	DIED ON	03/29/81	WITH NO TUMORS	
17984	DIED ON	11/28/81	WITH NO TUMORS	
17985	DIED ON	11/30/81	WITH NO TUMORS	
17986	DIED ON	04/04/81	WITH NO TUMORS	
17987	DIED ON	12/03/80	WITH NO TUMORS	
17988	DIED ON	11/07/81	WITH 1 TUMOR	

ADRENALS

ADENOMA, CORTICAL CELL

17989	DIED ON	03/03/81	WITH NO TUMORS	
17990	DIED ON	06/26/81	WITH NO TUMORS	
17991	DIED ON	07/08/81	WITH NO TUMORS	

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 16

18003	DIED ON 06/21/81 WITH	6 TUMORS
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
18004	DIED ON 03/05/81 WITH	5 TUMORS
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
18005	DIED ON 08/10/81 WITH	2 TUMORS
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
18006	DIED ON 07/07/81 WITH	1 TUMOR
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
18007	DIED ON 11/12/81 WITH	2 TUMORS
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA
18008	DIED ON 08/12/81 WITH	1 TUMOR
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
18009	DIED ON 11/11/81 WITH	1 TUMOR
	LARYNX	POLYP
18010	DIED ON 02/16/81 WITH	3 TUMORS
	LARYNX	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
18011	DIED ON 02/04/81 WITH	1 TUMOR
	LIVER	LEUKEMIA
18012	DIED ON 08/22/80 WITH	NO TUMORS
18013	DIED ON 11/05/81 WITH	NO TUMORS
18014	DIED ON 07/02/81 WITH	1 TUMOR
	ADRENALS	ADENOMA, CORTICAL CELL
18015	DIED ON 04/08/81 WITH	1 TUMOR
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
18016	DIED ON 12/07/81 WITH	4 TUMORS
	STOMACH	PAPILLOMA
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA
18017	DIED ON 02/10/81 WITH	NO TUMORS
18018	DIED ON 02/19/81 WITH	1 TUMOR
	LUNG & BRONCHI-AZYGOUS	NEOPLASM

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 16

18019	DIED ON 04/20/81 WITH 5 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	MEDIASTINAL LYMPH NODE	ADENOCARCINOMA, METASTATIC
18020	DIED ON 10/31/81 WITH 4 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-APICAL	ADENOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
18021	DIED ON 01/11/81 WITH 3 TUMORS	
	ILEUM	ADENOCARCINOMA
	COLON/RECTUM	ADENOCARCINOMA, METASTATIC
	MESENTERIC LYMPH NODE	ADENOCARCINOMA, METASTATIC
18022	DIED ON 01/21/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18023	DIED ON 09/18/80 WITH NO TUMORS	
18024	DIED ON 05/13/81 WITH 4 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
	STERNUM & RIB JUNCTION	OSTEOSARCOMA
	FEMUR/BONE MARROW	OSTEOSARCOMA
18025	DIED ON 09/20/81 WITH 1 TUMOR	
	LUNG & BRONCHI-AZYGOUS	ADENOMA
18026	DIED ON 09/17/81 WITH 5 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
	BRONCHIAL LYMPH NODE	ADENOCARCINOMA, METASTATIC
18027	DIED ON 01/21/82 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOMA
	LUNG & BRONCHI-AZYGOUS	ADENOMA
18028	DIED ON 06/14/81 WITH 3 TUMORS	
	LARYNX	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
18029	DIED ON 10/07/81 WITH 5 TUMORS	
	MESENTERIC LYMPH NODE	SARCOMA
	ESOPHAGUS	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	ADENOMA
	LIVER	SARCOMA
18030	DIED ON 12/13/81 WITH 1 TUMOR	
	LUNG & BRONCHI-DIAPHRAGMATIC	POLYP

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 16

17992	DIED ON 01/31/81 WITH NO TUMORS	
17993	DIED ON 07/11/81 WITH 3 TUMORS	
	ADRENALS	ADENOMA, CORTICAL CELL
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA
	LIVER	HEMANGIOSARCOMA
17994	DIED ON 01/16/81 WITH 2 TUMORS	
	TRACHEA	CARCINOMA, SQUAMOUS CELL
	BRONCHIAL LYMPH NODE	CARCINOMA, SQUAMOUS CELL, INVASIVE
17995	DIED ON 07/06/81 WITH 6 TUMORS	
	LARYNX	CARCINOMA, SQUAMOUS CELL
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA
	LUNG & BRONCHI-azygous	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
17996	DIED ON 08/10/81 WITH 8 TUMORS	
	LUNGS & BRONCHI-LEFT	LYMPHOMA, MALIGNANT
	LUNGS & BRONCHI-APICAL	LYMPHOMA, MALIGNANT
	LUNGS & BRONCHI-azygous	LYMPHOMA, MALIGNANT
	LUNGS & BRONCHI-DIAPHRAGMATIC	LYMPHOMA, MALIGNANT
	LUNGS & BRONCHI-CARDIAC	LYMPHOMA, MALIGNANT
	LIVER	LYMPHOMA, MALIGNANT
	HEART	LYMPHOMA, MALIGNANT
	STERNUM & RIB JUNCTION	LYMPHOMA, MALIGNANT
NOTE: NOT INCLUDED AS A RESPIRATORY TRACT TUMOR-BEARING ANIMAL		
17997	DIED ON 06/23/81 WITH 1 TUMOR	
	SPLEEN	HEMANGIOSARCOMA
17998	DIED ON 10/15/81 WITH 3 TUMORS	
	PITUITARY	CARCINOMA, SQUAMOUS CELL, METASTATIC
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
17999	DIED ON 01/20/81 WITH NO TUMORS	
18000	DIED ON 03/20/81 WITH 2 TUMORS	
	LARYNX	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
18001	DIED ON 06/10/81 WITH 7 TUMORS	
	THYMUS	PAPILLOMA
	LARYNX	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-azygous	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-CARDIAC	CARCINOMA, SQUAMOUS CELL
18002	DIED ON 01/26/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 16

18031	DIED ON 06/19/81 WITH NO TUMORS	
18032	DIED ON 12/17/81 WITH 2 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
18033	DIED ON 12/09/81 WITH 4 TUMORS	
	LARYNX	CARCINOMA
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	ADENOMA
	LUNG & BRONCHI-AZYGOUS	ADENOMA
18034	DIED ON 09/21/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA
18035	DIED ON 11/24/81 WITH 2 TUMORS	
	LUNG & BRONCHI-APICAL	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-CARDIAC	CARCINOMA, ADENOSQUAMOUS
18036	DIED ON 05/30/81 WITH 4 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-CARDIAC	CARCINOMA, SQUAMOUS CELL
18037	DIED ON 10/08/81 WITH 2 TUMORS	
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18038	DIED ON 09/25/81 WITH 7 TUMORS	
	STOMACH	PAPILLOMA
	LUNG & BRONCHI-LEFT	ADENOMA
	LUNG & BRONCHI-LEFT	SARCOMA
	LUNG & BRONCHI-APICAL	SARCOMA
	LUNG & BRONCHI-AZYGOUS	SARCOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	SARCOMA
	LUNG & BRONCHI-CARDIAC	SARCOMA
18039	DIED ON 09/24/81 WITH 2 TUMORS	
	STOMACH	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
18040	DIED ON 08/16/81 WITH 2 TUMORS	
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
	HEART	ADENOCARCINOMA, METASTATIC
18041	DIED ON 11/06/81 WITH 2 TUMORS	
	STOMACH	PAPILLOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 17

18042	DIED	ON	01/21/82	WITH	NO	TUMORS	
18043	DIED	ON	07/15/80	WITH	NO	TUMORS	
18044	DIED	ON	08/23/81	WITH	NO	TUMORS	
18045	DIED	ON	11/03/81	WITH	NO	TUMORS	
18046	DIED	ON	01/21/82	WITH	NO	TUMORS	
18047	DIED	ON	11/24/81	WITH	2	TUMORS	
							LIVER
							LIVER
							SARCOMA, RETICULUM CELL
							SARCOMA, RETICULUM CELL
18048	DIED	ON	10/05/81	WITH	NO	TUMORS	
18049	DIED	ON	01/21/82	WITH	NO	TUMORS	
18050	DIED	ON	01/21/82	WITH	NO	TUMORS	
18051	DIED	ON	12/28/81	WITH	NO	TUMORS	
18052	DIED	ON	01/21/82	WITH	NO	TUMORS	
18053	DIED	ON	01/21/82	WITH	NO	TUMORS	
18054	DIED	ON	01/21/82	WITH	NO	TUMORS	
18055	DIED	ON	07/24/81	WITH	NO	TUMORS	
18056	DIED	ON	01/21/82	WITH	NO	TUMORS	
18057	DIED	ON	01/21/82	WITH	1	TUMOR	
							ADRENALS
							ADENOMA, CORTICAL CELL
18058	DIED	ON	01/21/82	WITH	NO	TUMORS	
18059	DIED	ON	01/21/82	WITH	1	TUMOR	
							GALLBLADDER
							PAPILLOMA
18060	DIED	ON	01/21/82	WITH	NO	TUMORS	
18061	DIED	ON	04/02/81	WITH	NO	TUMORS	
18062	DIED	ON	01/21/82	WITH	NO	TUMORS	
18063	DIED	ON	01/21/82	WITH	NO	TUMORS	
18064	DIED	ON	02/04/81	WITH	NO	TUMORS	
18065	DIED	ON	09/10/81	WITH	NO	TUMORS	
18066	DIED	ON	12/19/81	WITH	NO	TUMORS	
18067	DIED	ON	02/05/81	WITH	NO	TUMORS	
18068	DIED	ON	01/14/82	WITH	NO	TUMORS	
18069	DIED	ON	12/16/80	WITH	NO	TUMORS	
18070	DIED	ON	12/15/80	WITH	NO	TUMORS	
18071	DIED	ON	01/21/82	WITH	NO	TUMORS	
18072	DIED	ON	01/21/82	WITH	NO	TUMORS	
18073	DIED	ON	09/28/81	WITH	NO	TUMORS	
18074	DIED	ON	01/12/82	WITH	NO	TUMORS	
18075	DIED	ON	01/21/82	WITH	NO	TUMORS	
18076	DIED	ON	01/21/82	WITH	1	TUMOR	
							CECUM
							ADENOCARCINOMA
18077	DIED	ON	11/04/81	WITH	NO	TUMORS	
18078	DIED	ON	09/09/81	WITH	NO	TUMORS	
18079	DIED	ON	01/21/82	WITH	NO	TUMORS	
18080	DIED	ON	11/16/81	WITH	NO	TUMORS	
18081	DIED	ON	09/23/81	WITH	NO	TUMORS	
18082	DIED	ON	01/21/82	WITH	NO	TUMORS	
18083	DIED	ON	10/01/81	WITH	1	TUMOR	
							ADRENALS
							ADENOMA, CORTICAL CELL
18084	DIED	ON	01/21/82	WITH	NO	TUMORS	
18085	DIED	ON	01/07/81	WITH	NO	TUMORS	
18086	DIED	ON	05/10/81	WITH	NO	TUMORS	
18087	DIED	ON	01/21/82	WITH	NO	TUMORS	
18088	DIED	ON	07/20/81	WITH	NO	TUMORS	
18089	DIED	ON	01/21/82	WITH	NO	TUMORS	
18090	DIED	ON	11/28/81	WITH	NO	TUMORS	
18091	DIED	ON	01/21/82	WITH	NO	TUMORS	

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 18

18092	DIED ON 11/29/80 WITH 5 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-CARDIAC	CARCINOMA, SQUAMOUS CELL
18093	DIED ON 05/15/81 WITH 4 TUMORS	
	ADRENALS	ADENOMA, CORTICAL CELL
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18094	DIED ON 07/07/81 WITH 1 TUMOR	
	LARYNX	POLYP
18095	DIED ON 08/03/81 WITH 3 TUMORS	
	LARYNX	POLYP
	TRACHEA	NEOPLASM
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18096	DIED ON 08/28/81 WITH 4 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
	HEART	ADENOCARCINOMA, INVASIVE
18097	DIED ON 04/06/81 WITH 3 TUMORS	
	LARYNX	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOID
18098	DIED ON 09/30/81 WITH 3 TUMORS	
	TRACHEA	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	ADENOMA
18099	DIED ON 02/22/81 WITH NO TUMORS	
18100	DIED ON 06/11/81 WITH 3 TUMORS	
	TRACHEA	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
18101	DIED ON 01/21/82 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
18102	DIED ON 08/25/81 WITH 3 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
18103	DIED ON 01/10/81 WITH NO TUMORS	
18104	DIED ON 06/25/81 WITH 4 TUMORS	
	THYMUS	SARCOMA
	LARYNX	POLYP
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
18105	DIED ON 01/21/82 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 18

18106	DIED ON 06/15/81 WITH 4 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-APICAL	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
18107	DIED ON 05/13/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
18108	DIED ON 09/15/81 WITH 4 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
18109	DIED ON 08/19/81 WITH 5 TUMORS	
	THYMUS	ADENOCARCINOMA, METASTATIC
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18110	DIED ON 01/13/81 WITH 6 TUMORS	
	LARYNX	POLYP
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
18111	DIED ON 10/01/81 WITH 2 TUMORS	
	STOMACH	PAPILLOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
18112	DIED ON 09/24/81 WITH 1 TUMOR	
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18113	DIED ON 01/21/82 WITH 2 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
18114	DIED ON 10/16/80 WITH 1 TUMOR	
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
18115	DIED ON 04/13/81 WITH NO TUMORS	
18116	DIED ON 05/09/81 WITH NO TUMORS	
18117	DIED ON 11/01/81 WITH 5 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA, METASTATIC
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA, METASTATIC
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
	HEART	ADENOCARCINOMA, METASTATIC
18118	DIED ON 12/06/81 WITH 5 TUMORS	
	LARYNX	POLYP
	TRACHEA	POLYP
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
	BRONCHIAL LYMPH NODE	ADENOCARCINOMA, METASTATIC

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 18

18119	DIED ON 01/27/81 WITH	4 TUMORS	
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-APICAL		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-CARDIAC		CARCINOMA, SQUAMOUS CELL
18120	DIED ON 06/11/81 WITH	1 TUMOR	
	LUNG & BRONCHI-LEFT		SARCOMA
18121	DIED ON 12/13/81 WITH	3 TUMORS	
	TRACHEA		POLYP
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LIVER		SARCOMA
18122	DIED ON 12/21/81 WITH	3 TUMORS	
	LARYNX		POLYP
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA, METASTATIC
	LUNG & BRONCHI-CARDIAC		ADENOCARCINOMA
18123	DIED ON 12/02/80 WITH	NO TUMORS	
18124	DIED ON 09/09/80 WITH	NO TUMORS	
18125	DIED ON 07/24/80 WITH	NO TUMORS	
18126	DIED ON 01/22/81 WITH	1 TUMOR	
	LARYNX		POLYP
18127	DIED ON 02/16/81 WITH	4 TUMORS	
	LARYNX		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-APICAL		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC		POLYP
18128	DIED ON 12/23/81 WITH	2 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
18129	DIED ON 07/13/81 WITH	3 TUMORS	
	ADRENALS		PHEOCHROMOCYTOMA
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
	JAW		CARCINOMA, SQUAMOUS CELL
18130	DIED ON 09/29/80 WITH	NO TUMORS	
18131	DIED ON 05/25/81 WITH	1 TUMOR	
	LUNG & BRONCHI-APICAL		CARCINOMA, SQUAMOUS CELL
18132	DIED ON 10/29/81 WITH	2 TUMORS	
	LUNG & BRONCHI-APICAL		ADENOMA
	LUNG & BRONCHI-CARDIAC		ADENOCARCINOMA
18133	DIED ON 07/13/81 WITH	1 TUMOR	
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
18134	DIED ON 05/05/81 WITH	NO TUMORS	
18135	DIED ON 09/26/81 WITH	4 TUMORS	
	ESOPHAGUS		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-CARDIAC		CARCINOMA, ADENOSQUAMOUS
18136	DIED ON 12/07/81 WITH	3 TUMORS	
	LARYNX		POLYP
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS		CARCINOMA, ADENOSQUAMOUS

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 18

18137 DIED ON 05/29/81 WITH 6 TUMORS	
LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
LUNG & BRONCHI-CARDIAC	CARCINOMA, SQUAMOUS CELL
KIDNEYS	CARCINOMA, SQUAMOUS CELL, METASTATIC
18138 DIED ON 12/18/80 WITH 4 TUMORS	
LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
HEART	CARCINOMA, SQUAMOUS CELL, METASTATIC
18139 DIED ON 10/24/81 WITH 4 TUMORS	
LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
18140 DIED ON 04/29/81 WITH NO TUMORS	
18141 DIED ON 08/19/81 WITH 4 TUMORS	
THYROID	CARCINOMA
LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 19

18142 DIED ON 01/21/82 WITH NO TUMORS
18143 DIED ON 08/09/81 WITH NO TUMORS
18144 DIED ON 05/31/81 WITH NO TUMORS
18145 DIED ON 06/30/81 WITH NO TUMORS
18146 DIED ON 01/14/81 WITH NO TUMORS
18147 DIED ON 03/13/81 WITH NO TUMORS
18148 DIED ON 01/21/82 WITH 1 TUMOR

ADRENALS

ADENOMA, CORTICAL CELL

18149 DIED ON 11/03/80 WITH NO TUMORS
18150 DIED ON 06/22/80 WITH NO TUMORS
18151 DIED ON 01/23/81 WITH NO TUMORS
18152 DIED ON 08/29/80 WITH NO TUMORS
18153 DIED ON 12/31/81 WITH 1 TUMOR

ADRENALS

ADENOMA, CORTICAL CELL

18154 DIED ON 08/21/80 WITH NO TUMORS
18155 DIED ON 01/08/82 WITH 6 TUMORS

LUNGS & BRONCHI-LEFT
LUNGS & BRONCHI-APICAL
LUNGS & BRONCHI-azygous
LUNGS & BRONCHI-DIAPHRAGMATIC
LUNGS & BRONCHI-CARDIAC
STERNUM & RIB JUNCTION

OSTEOSARCOMA, METASTATIC
OSTEOSARCOMA, METASTATIC
OSTEOSARCOMA, METASTATIC
OSTEOSARCOMA, METASTATIC
OSTEOSARCOMA, METASTATIC
OSTEOSARCOMA

NOTE: NOT INCLUDED AS A RESPIRATORY TRACT TUMOR-BEARING ANIMAL

18156 DIED ON 01/21/82 WITH NO TUMORS
18157 DIED ON 02/02/81 WITH NO TUMORS
18158 DIED ON 07/02/81 WITH NO TUMORS
18159 DIED ON 12/03/80 WITH NO TUMORS
18160 DIED ON 01/21/82 WITH NO TUMORS
18161 DIED ON 01/07/82 WITH NO TUMORS
18162 DIED ON 12/08/80 WITH NO TUMORS
18163 DIED ON 01/07/82 WITH NO TUMORS
18164 DIED ON 01/21/82 WITH NO TUMORS
18165 DIED ON 05/25/81 WITH NO TUMORS
18166 DIED ON 12/03/81 WITH NO TUMORS
18167 DIED ON 08/10/81 WITH NO TUMORS
18168 DIED ON 01/21/82 WITH NO TUMORS
18169 DIED ON 10/21/81 WITH NO TUMORS
18170 DIED ON 04/03/81 WITH NO TUMORS
18171 DIED ON 05/07/81 WITH NO TUMORS
18172 DIED ON 03/26/81 WITH NO TUMORS
18173 DIED ON 12/30/81 WITH NO TUMORS
18174 DIED ON 01/21/82 WITH 1 TUMOR

THYROID

CARCINOMA, C-CELL

18175 DIED ON 01/21/82 WITH NO TUMORS
18176 DIED ON 12/12/80 WITH NO TUMORS
18177 DIED ON 08/01/81 WITH NO TUMORS
18178 DIED ON 02/27/81 WITH NO TUMORS
18179 DIED ON 12/08/81 WITH NO TUMORS
18180 DIED ON 01/11/82 WITH NO TUMORS

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 19

18181	DIED ON 01/19/82 WITH	1 TUMOR	
	ADRENALS		CARCINOMA, CORTICAL CELL
18182	DIED ON 11/26/80 WITH NO TUMORS		
18183	DIED ON 11/10/81 WITH NO TUMORS		
18184	DIED ON 01/08/81 WITH NO TUMORS		
18185	DIED ON 06/07/80 WITH NO TUMORS		
18186	DIED ON 09/06/81 WITH NO TUMORS		
18187	DIED ON 01/20/82 WITH NO TUMORS		
18188	DIED ON 01/21/82 WITH NO TUMORS		
18189	DIED ON 01/21/82 WITH NO TUMORS		
18190	DIED ON 01/20/82 WITH	1 TUMOR	
	ADRENALS		ADENOMA, CORTICAL CELL
18191	DIED ON 01/21/82 WITH NO TUMORS		

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 20

18192	DIED ON 01/29/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
18193	DIED ON 11/29/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
18194	DIED ON 08/07/80 WITH NO TUMORS	
18195	DIED ON 10/14/81 WITH 5 TUMORS	
	STOMACH	PAPILLOMA
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
18196	DIED ON 04/17/81 WITH 1 TUMOR	
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18197	DIED ON 12/19/80 WITH NO TUMORS	
18198	DIED ON 11/19/81 WITH 3 TUMORS	
	TRACHEA	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	AXILLARY MASS	LYMPHOMA, MALIGNANT
18199	DIED ON 02/27/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
18200	DIED ON 07/14/81 WITH 4 TUMORS	
	LUNG & BRONCHI-APICAL	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-CARDIAC	CARCINOMA, ADENOSQUAMOUS
18201	DIED ON 12/16/80 WITH 3 TUMORS	
	LARYNX	PAPILLOMA
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	MEDIASTINAL LYMPH NODE	CARCINOMA, SQUAMOUS CELL
18202	DIED ON 12/18/80 WITH 2 TUMORS	
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-CARDIAC	CARCINOMA, SQUAMOUS CELL
18203	DIED ON 11/24/80 WITH 2 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
18204	DIED ON 03/26/81 WITH 1 TUMOR	
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18205	DIED ON 01/20/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	POLYP

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 20

18204	DIED ON 10/31/80 WITH NO TUMORS	
18207	DIED ON 09/12/80 WITH NO TUMORS	
18208	DIED ON 01/02/82 WITH 2 TUMORS	
	LARYNX	POLYP
	TRACHEA	POLYP
18209	DIED ON 01/09/82 WITH 3 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA, METASTATIC
18210	DIED ON 03/27/81 WITH 1 TUMOR	
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
18211	DIED ON 01/20/82 WITH 3 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18212	DIED ON 03/18/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
18213	DIED ON 07/15/80 WITH NO TUMORS	
18214	DIED ON 01/21/82 WITH 2 TUMORS	
	LARYNX	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
18215	DIED ON 04/14/81 WITH NO TUMORS	
18216	DIED ON 02/03/81 WITH 1 TUMOR	
	LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
18217	DIED ON 10/30/80 WITH 1 TUMOR	
	TRACHEA	CARCINOMA
18218	DIED ON 01/09/82 WITH 11 TUMORS	
	ADRENALS	CARCINOMA, CORTICAL CELL
	TRACHEA	POLYP
	PARATHYROID	ADENOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	CARCINOMA, ADRENOCORTICAL
	LUNG & BRONCHI-APICAL	CARCINOMA, ADRENOCORTICAL
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADRENOCORTICAL
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADRENOCORTICAL
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC	CARCINOMA, ADRENOCORTICAL
18219	DIED ON 11/28/80 WITH 1 TUMOR	
	TRACHEA	CARCINOMA
18220	DIED ON 09/06/81 WITH 3 TUMORS	
	ADRENALS	NEOPLASM
	LARYNX	POLYP
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 20

18221	DIED ON 01/21/82 WITH	2 TUMORS	
	LARYNX		POLYP
	LUNG & BRONCHI-AZYGOUS		POLYP
18222	DIED ON 10/28/81 WITH	8 TUMORS	
	STOMACH		PAPILLOMA
	TRACHEA		ADENOCARCINOMA
	THYROID		NEOPLASM
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-APICAL		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC		ADENOCARCINOMA
	MEDIASTINAL LYMPH NODE		ADENOCARCINOMA, METASTATIC
18223	DIED ON 06/02/81 WITH	1 TUMOR	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
18224	DIED ON 04/27/81 WITH	1 TUMOR	
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
18225	DIED ON 10/26/81 WITH	1 TUMOR	
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
18226	DIED ON 01/31/81 WITH	3 TUMORS	
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-APICAL		CARCINOMA, ADENOSQUAMOUS
	SPLEEN		SARCOMA, RETICULUM CELL
18227	DIED ON 06/12/81 WITH	1 TUMOR	
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
18228	DIED ON 08/12/81 WITH	5 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-APICAL		ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC		ADENOCARCINOMA
18229	DIED ON 06/26/81 WITH	1 TUMOR	
	TRACHEA		ADENOCARCINOMA
18230	DIED ON 01/03/82 WITH	2 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
18231	DIED ON 07/08/81 WITH	2 TUMORS	
	LARYNX		POLYP
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
18232	DIED ON 12/20/80 WITH	NO TUMORS	
18233	DIED ON 03/06/81 WITH	1 TUMOR	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
18234	DIED ON 11/04/80 WITH	2 TUMORS	
	TRACHEA		SARCOMA
	MEDIASTINAL LYMPH NODE		SARCOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 20

18235	DIED ON 06/18/81 WITH NO TUMORS	
18236	DIED ON 01/16/81 WITH 1 TUMOR	
	LARYNX	CARCINOMA, SQUAMOUS CELL
18237	DIED ON 01/07/81 WITH 6 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-CARDIAC	CARCINOMA, SQUAMOUS CELL
18238	DIED ON 10/19/81 WITH NO TUMORS	
18239	DIED ON 09/23/80 WITH NO TUMORS	
18240	DIED ON 01/19/82 WITH 2 TUMORS	
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18241	DIED ON 03/03/81 WITH NO TUMORS	

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 21.

18242 DIED ON 10/14/81 WITH NO TUMORS
18243 DIED ON 01/25/82 WITH NO TUMORS
18244 DIED ON 12/17/81 WITH NO TUMORS
18245 DIED ON 09/21/81 WITH NO TUMORS
18246 DIED ON 04/08/81 WITH 1 TUMOR

ADRENALS

ADENOMA, CORTICAL CELL

18247 DIED ON 08/18/81 WITH NO TUMORS
18248 DIED ON 10/02/81 WITH NO TUMORS
18249 DIED ON 01/25/82 WITH NO TUMORS
18250 DIED ON 05/24/80 WITH NO TUMORS
18251 DIED ON 01/25/82 WITH NO TUMORS
18252 DIED ON 01/25/82 WITH NO TUMORS
18253 DIED ON 01/25/82 WITH NO TUMORS
18254 DIED ON 01/25/82 WITH NO TUMORS
18255 DIED ON 01/28/81 WITH NO TUMORS
18256 DIED ON 12/29/81 WITH NO TUMORS
18257 DIED ON 01/25/82 WITH NO TUMORS
18258 DIED ON 01/25/82 WITH NO TUMORS
18259 DIED ON 11/02/81 WITH NO TUMORS
18260 DIED ON 01/25/82 WITH 1 TUMOR

ADRENALS

NEOPLASM

18261 DIED ON 11/12/81 WITH NO TUMORS
18262 DIED ON 09/08/81 WITH NO TUMORS
18263 DIED ON 08/10/81 WITH NO TUMORS
18264 DIED ON 07/26/81 WITH NO TUMORS
18265 DIED ON 01/25/82 WITH NO TUMORS
18266 DIED ON 01/25/82 WITH NO TUMORS
18267 DIED ON 01/25/82 WITH NO TUMORS
18268 DIED ON 09/18/81 WITH NO TUMORS
18269 DIED ON 06/07/81 WITH NO TUMORS
18270 DIED ON 12/17/81 WITH NO TUMORS
18271 DIED ON 11/07/80 WITH NO TUMORS
18272 DIED ON 01/25/82 WITH NO TUMORS
18273 DIED ON 01/25/82 WITH NO TUMORS
18274 DIED ON 01/25/82 WITH NO TUMORS
18275 DIED ON 12/26/81 WITH NO TUMORS
18276 DIED ON 09/04/80 WITH NO TUMORS
18277 DIED ON 01/22/81 WITH NO TUMORS
18278 DIED ON 01/25/82 WITH NO TUMORS
18279 DIED ON 01/16/82 WITH NO TUMORS
18280 DIED ON 01/25/82 WITH NO TUMORS
18281 DIED ON 10/10/80 WITH NO TUMORS
18282 DIED ON 01/25/82 WITH NO TUMORS
18283 DIED ON 01/25/82 WITH NO TUMORS
18284 DIED ON 01/25/82 WITH 1 TUMOR

THYROID

CARCINOMA, C-CELL

18285 DIED ON 09/11/80 WITH NO TUMORS
18286 DIED ON 02/16/81 WITH NO TUMORS
18287 DIED ON 11/28/81 WITH NO TUMORS
18288 DIED ON 01/25/82 WITH NO TUMORS
18289 DIED ON 01/25/82 WITH NO TUMORS
18290 DIED ON 01/25/82 WITH NO TUMORS
18291 DIED ON 04/16/81 WITH NO TUMORS

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 22

18292	DIED ON 10/14/81 WITH	5 TUMORS	
	TRACHEA		POLYP
	LUNG & BRONCHI-LEFT		POLYP
	LUNG & BRONCHI-LEFT		ADENOMA
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, SQUAMOUS CELL
18293	DIED ON 11/10/81 WITH	1 TUMOR	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
18294	DIED ON 05/16/81 WITH	3 TUMORS	
	TRACHEA		POLYP
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
18295	DIED ON 08/22/80 WITH	NO TUMORS	
18296	DIED ON 04/10/81 WITH	2 TUMORS	
	TRACHEA		POLYP
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
18297	DIED ON 09/08/81 WITH	3 TUMORS	
	LARYNX		POLYP
	LUNG & BRONCHI-APICAL		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
18298	DIED ON 04/30/81 WITH	1 TUMOR	
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
18299	DIED ON 01/25/82 WITH	3 TUMORS	
	STOMACH		ADENOCARCINOMA
	STOMACH		PAPILLOMA
	MESENTERIC LYMPH NODE		ADENOCARCINOMA, METASTATIC
18300	DIED ON 08/05/81 WITH	4 TUMORS	
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-APICAL		CARCINOMA, ANAPLASTIC
	LUNG & BRONCHI-AZYGOUS		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, ANAPLASTIC
18301	DIED ON 10/03/80 WITH	NO TUMORS	
18302	DIED ON 06/09/81 WITH	5 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-APICAL		ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC		ADENOCARCINOMA
18303	DIED ON 01/22/81 WITH	NO TUMORS	
18304	DIED ON 01/25/82 WITH	4 TUMORS	
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-APICAL		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOMA
	SPLEEN		HEMANGIOSARCOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 22

18305	DIED ON 08/04/81 WITH	3 TUMORS	
	ADRENALS		ADENOMA, CORTICAL CELL
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
18306	DIED ON 11/23/80 WITH	NO TUMORS	
18307	DIED ON 10/11/81 WITH	7 TUMORS	
	LARYNX		POLYP
	LUNG & BRONCHI-APICAL		ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
	HEART		SARCOMA
	STERNUM & RIB JUNCTION		SARCOMA
	SUBCUTANEOUS MASS		SARCOMA
18308	DIED ON 08/25/81 WITH	1 TUMOR	
	LARYNX		POLYP
18309	DIED ON 09/14/81 WITH	4 TUMORS	
	LARYNX		POLYP
	TRACHEA		POLYP
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOMA
18310	DIED ON 01/14/82 WITH	5 TUMORS	
	STOMACH		PAPILLOMA
	LARYNX		POLYP
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, ADENOSQUAMOUS
18311	DIED ON 01/05/82 WITH	1 TUMOR	
	ADRENALS		ADENOMA, CORTICAL CELL
18312	DIED ON 05/22/81 WITH	3 TUMORS	
	LARYNX		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
18313	DIED ON 08/12/81 WITH	1 TUMOR	
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
18314	DIED ON 11/15/81 WITH	2 TUMORS	
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS		ADENOMA
18315	DIED ON 07/03/81 WITH	1 TUMOR	
	LUNG & BRONCHI-LEFT		ADENOMA
18316	DIED ON 04/18/81 WITH	2 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 22

18317	DIED ON 10/03/81 WITH	4 TUMORS	
	LARYNX		POLYP
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, ADENOSQUAMOUS
18318	DIED ON 06/08/81 WITH	3 TUMORS	
	TRACHEA		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
18319	DIED ON 06/09/81 WITH	1 TUMOR	
	LARYNX		CARCINOMA, SQUAMOUS CELL
18320	DIED ON 08/18/80 WITH	8 TUMORS	
	THIGH MUSCLE		SARCOMA, METASTATIC
	THYMUS		SARCOMA, METASTATIC
	LUNG & BRONCHI-LEFT		SARCOMA, METASTATIC
	LUNG & BRONCHI-APICAL		SARCOMA, METASTATIC
	LUNG & BRONCHI-AZYGOUS		SARCOMA, METASTATIC
	LUNG & BRONCHI-DIAPHRAGMATIC		SARCOMA, METASTATIC
	LUNG & BRONCHI-CARDIAC		SARCOMA, METASTATIC
	LIVER		SARCOMA, METASTATIC
18321	DIED ON 06/16/81 WITH	3 TUMORS	
	ADRENALS		ADENOMA, CORTICAL CELL
	TRACHEA		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT		ADENOMA
18322	DIED ON 04/16/81 WITH	1 TUMOR	
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
18323	DIED ON 12/24/80 WITH	1 TUMOR	
	HEART		CARCINOMA, INVASIVE
18324	DIED ON 05/12/81 WITH	4 TUMORS	
	LARYNX		ADENOCARCINOMA
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, ADENOSQUAMOUS
18325	DIED ON 09/18/81 WITH	4 TUMORS	
	TRACHEA		ADENOCARCINOMA
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, ADENOSQUAMOUS
	SPLEEN		HEMANGIOMA
18326	DIED ON 01/25/82 WITH	6 TUMORS	
	TRACHEA		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-APICAL		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-CARDIAC		CARCINOMA, ADENOSQUAMOUS
18327	DIED ON 01/18/82 WITH	4 TUMORS	
	LARYNX		POLYP
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 22

18328	DIED ON 12/27/80 WITH NO TUMORS	
18329	DIED ON 09/11/80 WITH NO TUMORS	
18330	DIED ON 11/29/80 WITH NO TUMORS	
18331	DIED ON 01/20/81 WITH 1 TUMOR	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	
18332	DIED ON 11/14/81 WITH 4 TUMORS	
	TRACHEA	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	POLYP
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18333	DIED ON 07/28/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18334	DIED ON 07/10/81 WITH 2 TUMORS	
	LARYNX	CARCINOMA, SQUAMOUS CELL
	TRACHEA	POLYP
18335	DIED ON 03/10/81 WITH NO TUMORS	
18336	DIED ON 10/05/81 WITH 3 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
18337	DIED ON 07/03/81 WITH 1 TUMOR	
	STOMACH	PAPILLOMA
18338	DIED ON 09/12/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18339	DIED ON 07/11/81 WITH 4 TUMORS	
	TRACHEA	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC	ADENOCARCINOMA
18340	DIED ON 11/25/81 WITH 3 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
18341	DIED ON 01/25/82 WITH 3 TUMORS	
	LARYNX	POLYP
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 23

18342	DIED ON 11/16/81	WITH NO TUMORS	
18343	DIED ON 09/23/81	WITH NO TUMORS	
18344	DIED ON 03/08/81	WITH NO TUMORS	
18345	DIED ON 12/04/81	WITH 1 TUMOR	
ADRENALS			ADENOMA, CORTICAL CELL
18346	DIED ON 01/25/82	WITH NO TUMORS	
18347	DIED ON 01/14/82	WITH NO TUMORS	
18348	DIED ON 08/06/80	WITH NO TUMORS	
18349	DIED ON 01/25/82	WITH NO TUMORS	
18350	DIED ON 09/15/81	WITH NO TUMORS	
18351	DIED ON 11/21/80	WITH NO TUMORS	
18352	DIED ON 11/12/81	WITH NO TUMORS	
18353	DIED ON 02/25/81	WITH NO TUMORS	
18354	DIED ON 12/26/80	WITH NO TUMORS	
18355	DIED ON 01/25/82	WITH NO TUMORS	
18356	DIED ON 06/29/81	WITH NO TUMORS	
18357	DIED ON 12/09/81	WITH NO TUMORS	
18358	DIED ON 02/19/81	WITH 1 TUMOR	
THYROID			NEOPLASM
18359	DIED ON 09/24/80	WITH NO TUMORS	
18360	DIED ON 01/25/82	WITH NO TUMORS	
18361	DIED ON 10/20/81	WITH 1 TUMOR	
ADRENALS			ADENOMA, CORTICAL CELL
18362	DIED ON 11/20/81	WITH 1 TUMOR	
ADRENALS			ADENOMA, CORTICAL CELL
18363	DIED ON 11/07/80	WITH NO TUMORS	
18364	DIED ON 09/11/81	WITH NO TUMORS	
18365	DIED ON 10/27/81	WITH NO TUMORS	
18366	DIED ON 08/01/81	WITH NO TUMORS	
18367	DIED ON 06/19/81	WITH NO TUMORS	
18368	DIED ON 01/25/82	WITH NO TUMORS	
18369	DIED ON 01/25/82	WITH 1 TUMOR	
ADRENALS			ADENOMA, CORTICAL CELL
18370	DIED ON 11/10/80	WITH NO TUMORS	
18371	DIED ON 01/05/82	WITH NO TUMORS	
18372	DIED ON 01/25/82	WITH NO TUMORS	
18373	DIED ON 12/10/80	WITH NO TUMORS	
18374	DIED ON 01/25/82	WITH 1 TUMOR	
LIVER			ADENOMA, HEPATOCELLULAR
18375	DIED ON 12/14/81	WITH NO TUMORS	
18376	DIED ON 01/25/82	WITH NO TUMORS	
18377	DIED ON 05/01/81	WITH NO TUMORS	
18378	DIED ON 01/25/82	WITH NO TUMORS	
18379	DIED ON 10/30/80	WITH NO TUMORS	
18380	DIED ON 03/18/81	WITH NO TUMORS	
18381	DIED ON 01/11/82	WITH NO TUMORS	
18382	DIED ON 08/03/81	WITH 1 TUMOR	
MEDIASTINAL LYMPH NODE			ADENOCARCINOMA, METASTATIC
18383	DIED ON 11/29/80	WITH NO TUMORS	
18385	DIED ON 01/25/82	WITH 2 TUMORS	
LIVER			LYMPHOMA, MALIGNANT
SPLEEN			LYMPHOMA, MALIGNANT
18386	DIED ON 10/30/81	WITH NO TUMORS	
18387	DIED ON 01/25/82	WITH NO TUMORS	
18388	DIED ON 08/18/81	WITH NO TUMORS	
18389	DIED ON 01/25/82	WITH NO TUMORS	
18390	DIED ON 05/02/81	WITH NO TUMORS	
18391	DIED ON 01/25/82	WITH NO TUMORS	

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 24

18392	DIED ON 03/31/81 WITH NO TUMORS	
18393	DIED ON 12/02/80 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
18394	DIED ON 10/29/81 WITH NO TUMORS	
18395	DIED ON 06/17/81 WITH 1 TUMOR	
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
18396	DIED ON 01/31/81 WITH NO TUMORS	
18397	DIED ON 12/29/81 WITH 3 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18398	DIED ON 07/12/80 WITH NO TUMORS	
18399	DIED ON 10/09/80 WITH NO TUMORS	
18400	DIED ON 01/19/82 WITH 2 TUMORS	
	ADRENALS	ADENOMA, CORTICAL CELL
	STOMACH	PAPILLOMA
18401	DIED ON 10/30/80 WITH NO TUMORS	
18402	DIED ON 06/29/81 WITH 8 TUMORS	
	THYMUS	CARCINOMA
	TRACHEA	CARCINOMA, SQUAMOUS CELL, INVASIVE
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOS	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-CARDIAC	CARCINOMA, SQUAMOUS CELL
18403	DIED ON 11/24/81 WITH 3 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18404	DIED ON 06/27/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-APICAL	CARCINOMA, ADENOSQUAMOUS
18405	DIED ON 07/28/80 WITH 1 TUMOR	
	LARYNX	POLYP
18406	DIED ON 06/25/81 WITH 3 TUMORS	
	TRACHEA	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18407	DIED ON 11/21/80 WITH NO TUMORS	
18408	DIED ON 11/09/81 WITH 5 TUMORS	
	LARYNX	POLYP
	TRACHEA	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA
18409	DIED ON 01/26/82 WITH 1 TUMOR	
	LARYNX	POLYP

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 24

18410	DIED ON 08/22/81 WITH 6 TUMORS	
	STOMACH	PAPILLOMA
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-APICAL	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-CARDIAC	CARCINOMA, ADENOSQUAMOUS
18411	DIED ON 11/08/81 WITH 4 TUMORS	
	ADRENALS	ADENOMA, CORTICAL CELL
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
18412	DIED ON 12/13/81 WITH 5 TUMORS	
	STOMACH	PAPILLOMA
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-APICAL	POLYP
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS, METASTATIC
18413	DIED ON 12/07/80 WITH NO TUMORS	
18414	DIED ON 12/22/81 WITH 2 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
18415	DIED ON 10/30/81 WITH NO TUMORS	
18416	DIED ON 04/04/81 WITH NO TUMORS	
18417	DIED ON 10/05/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
18418	DIED ON 12/03/80 WITH NO TUMORS	
18419	DIED ON 03/10/81 WITH 1 TUMOR	
	LARYNX	POLYP
18420	DIED ON 01/15/81 WITH NO TUMORS	
18421	DIED ON 01/26/82 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	ADENOMA
18422	DIED ON 07/20/81 WITH 2 TUMORS	
	ADRENALS	ADENOMA, CORTICAL CELL
	LUNG & BRONCHI-LEFT	ADENOMA
18423	DIED ON 05/01/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOMA
18424	DIED ON 12/21/80 WITH NO TUMORS	
18425	DIED ON 01/03/81 WITH 2 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-APICAL	CARCINOMA
18426	DIED ON 08/15/80 WITH 2 TUMORS	
	LIVER	SARCOMA
	SPLEEN	SARCOMA
18427	DIED ON 01/15/82 WITH 4 TUMORS	
	ADRENALS	CARCINOMA, CORTICAL CELL
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	ADENOCARCINOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 24

18428	DIED ON 01/13/82 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
18429	DIED ON 06/15/81 WITH NO TUMORS	
18430	DIED ON 07/26/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
18431	DIED ON 05/15/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
18432	DIED ON 11/06/81 WITH 5 TUMORS	
	BRAIN	CARCINOMA, ADENOSQUAMOUS, METASTATIC
	THYMUS	CARCINOMA, ADENOSQUAMOUS, METASTATIC
	TRACHEA	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	BRONCHIAL LYMPH NODE	CARCINOMA, ADENOSQUAMOUS, METASTATIC
18433	DIED ON 11/05/81 WITH 1 TUMOR	
	LARYNX	POLYP
18434	DIED ON 06/09/81 WITH 1 TUMOR	
	LARYNX	CARCINOMA, SQUAMOUS CELL
18435	DIED ON 09/08/81 WITH 1 TUMOR	
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18436	DIED ON 01/03/82 WITH NO TUMORS	
18437	DIED ON 11/11/81 WITH NO TUMORS	
18438	DIED ON 09/10/81 WITH 12 TUMORS	
	ADRENALS	CARCINOMA, CORTICAL CELL

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 25

18442	DIED ON 12/31/81 WITH NO TUMORS	
18443	DIED ON 01/26/82 WITH NO TUMORS	
18444	DIED ON 11/10/80 WITH NO TUMORS	
18445	DIED ON 08/31/81 WITH NO TUMORS	
18446	DIED ON 10/18/81 WITH NO TUMORS	
18447	DIED ON 03/02/81 WITH NO TUMORS	
18448	DIED ON 11/24/81 WITH NO TUMORS	
18449	DIED ON 09/11/81 WITH NO TUMORS	
18450	DIED ON 01/26/82 WITH 3 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-CARDIAC	CARCINOMA, ADENOSQUAMOUS
18451	DIED ON 12/15/80 WITH NO TUMORS	
18452	DIED ON 01/30/81 WITH NO TUMORS	
18453	DIED ON 09/07/81 WITH NO TUMORS	
18454	DIED ON 06/09/81 WITH NO TUMORS	
18455	DIED ON 01/06/82 WITH NO TUMORS	
18456	DIED ON 08/03/81 WITH NO TUMORS	
18457	DIED ON 11/29/80 WITH NO TUMORS	
18458	DIED ON 05/04/81 WITH NO TUMORS	
18459	DIED ON 10/09/81 WITH NO TUMORS	
18460	DIED ON 01/26/82 WITH NO TUMORS	
18461	DIED ON 10/23/81 WITH 6 TUMORS	
	MESENTERIC LYMPH NODE	ADENOCARCINOMA, METASTATIC
	GALLBLADDER	ADENOCARCINOMA, INVASIVE
	SPLEEN	ADENOCARCINOMA, INVASIVE
	PANCREAS	ADENOCARCINOMA, INVASIVE
	SEMINAL VESICLES	ADENOCARCINOMA, INVASIVE
	ABDOMEN (MASS)	ADENOCARCINOMA
18462	DIED ON 02/12/81 WITH NO TUMORS	
18463	DIED ON 01/26/82 WITH NO TUMORS	
18464	DIED ON 06/07/81 WITH NO TUMORS	
18465	DIED ON 11/12/81 WITH NO TUMORS	
18466	DIED ON 08/30/81 WITH NO TUMORS	
18467	DIED ON 01/26/82 WITH NO TUMORS	
18468	DIED ON 06/27/81 WITH NO TUMORS	
18469	DIED ON 01/26/82 WITH NO TUMORS	
18470	DIED ON 01/06/82 WITH NO TUMORS	
18471	DIED ON 01/26/82 WITH NO TUMORS	
18472	DIED ON 01/26/82 WITH NO TUMORS	
18473	DIED ON 01/15/81 WITH NO TUMORS	
18474	DIED ON 01/07/82 WITH NO TUMORS	
18475	DIED ON 05/25/81 WITH NO TUMORS	
18476	DIED ON 09/23/81 WITH NO TUMORS	
18477	DIED ON 01/26/82 WITH 1 TUMOR	
	ADRENALS	ADENOMA, CORTICAL CELL
18478	DIED ON 04/30/81 WITH NO TUMORS	
18479	DIED ON 09/11/81 WITH NO TUMORS	
18480	DIED ON 01/22/82 WITH NO TUMORS	
18481	DIED ON 12/08/80 WITH NO TUMORS	
18482	DIED ON 07/25/80 WITH NO TUMORS	
18483	DIED ON 08/14/81 WITH 1 TUMOR	
	ADRENALS	ADENOMA, CORTICAL CELL
18484	DIED ON 01/26/82 WITH 1 TUMOR	
	ADRENALS	CARCINOMA, CORTICAL CELL
18485	DIED ON 01/24/82 WITH NO TUMORS	
18486	DIED ON 01/26/82 WITH NO TUMORS	
18487	DIED ON 08/25/81 WITH NO TUMORS	
18488	DIED ON 01/08/81 WITH NO TUMORS	
18489	DIED ON 11/09/81 WITH NO TUMORS	
18490	DIED ON 11/27/80 WITH NO TUMORS	
18491	DIED ON 12/17/81 WITH 1 TUMOR	
	ADRENALS	ADENOMA, CORTICAL CELL

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 26

18492	DIED ON 08/22/81 WITH	2 TUMORS	
	LARYNX		POLYP
	LUNG & BRONCHI-LEFT		CARCINOMA, SQUAMOUS CELL
18493	DIED ON 06/14/81 WITH	1 TUMOR	
	LUNG & BRONCHI-APICAL		ADENOCARCINOMA
18494	DIED ON 03/05/81 WITH	2 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOMA
18495	DIED ON 03/04/81 WITH	NO TUMORS	
18496	DIED ON 07/28/81 WITH	4 TUMORS	
	LARYNX		CARCINOMA, SQUAMOUS CELL
	TRACHEA		CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-LEFT		ADENOMA
18497	DIED ON 01/26/82 WITH	1 TUMOR	
	KIDNEYS		CARCINOMA, TUBULAR
18498	DIED ON 01/26/82 WITH	3 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA
	LUNG & BRONCHI-CARDIAC		ADENOMA
18499	DIED ON 11/18/80 WITH	1 TUMOR	
	TRACHEA		POLYP
18500	DIED ON 11/26/80 WITH	1 TUMOR	
	TRACHEA		POLYP
18501	DIED ON 02/16/81 WITH	3 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LIVER		HEMANGIOSARCOMA
	LIVER		HEMANGIOSARCOMA
18502	DIED ON 04/09/81 WITH	NO TUMORS	
18503	DIED ON 01/26/82 WITH	NO TUMORS	
18504	DIED ON 11/08/81 WITH	1 TUMOR	
	LUNG & BRONCHI-AZYGOUS		CARCINOMA, ADENOSQUAMOUS
18505	DIED ON 11/23/81 WITH	6 TUMORS	
	LARYNX		POLYP
	LUNG & BRONCHI-LEFT		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-APICAL		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC		CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-CARDIAC		CARCINOMA, ADENOSQUAMOUS
18506	DIED ON 10/31/81 WITH	2 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOMA
18507	DIED ON 06/24/81 WITH	2 TUMORS	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-LEFT		SARCOMA
18508	DIED ON 10/19/81 WITH	1 TUMOR	
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
18509	DIED ON 07/11/80 WITH	NO TUMORS	
18510	DIED ON 05/16/80 WITH	NO TUMORS	
18511	DIED ON 11/22/80 WITH	3 TUMORS	
	TRACHEA		POLYP
	LUNG & BRONCHI-LEFT		ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC		ADENOCARCINOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 26

18512	DIED ON 08/23/81 WITH 9 TUMORS	
	STOMACH	ADENOCARCINOMA, INVASIVE
	DUODENUM	ADENOCARCINOMA, INVASIVE
	MESENTERIC LYMPH NODE	ADENOCARCINOMA, METASTATIC
	LUNG & BRONCHI-LEFT	ADENOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA, METASTATIC
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA, METASTATIC
	SPLEEN	ADENOCARCINOMA, INVASIVE
	PANCREAS	ADENOCARCINOMA, INVASIVE
	KIDNEYS	ADENOCARCINOMA, INVASIVE
18513	DIED ON 01/26/82 WITH 4 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18514	DIED ON 10/08/81 WITH 2 TUMORS	
	TRACHEA	ADENOCARCINOMA
	LUNG & BRONCHI-APICAL	CARCINOMA, SQUAMOUS CELL
18515	DIED ON 08/14/81 WITH 4 TUMORS	
	ADRENALS	PHEOCHROMOCYTOMA
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-AZYGOUS	ADENOCARCINOMA
18516	DIED ON 09/30/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, SQUAMOUS CELL
18517	DIED ON 03/12/81 WITH 3 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18518	DIED ON 01/19/82 WITH 5 TUMORS	
	ADRENALS	ADENOMA, CORTICAL CELL
	STOMACH	PAPILLOMA
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
18519	DIED ON 11/09/81 WITH 2 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
18520	DIED ON 11/27/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 26

18521	DIED ON 05/22/81 WITH NO TUMORS	
18522	DIED ON 08/03/81 WITH 2 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
18523	DIED ON 09/16/81 WITH 2 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
18524	DIED ON 09/23/80 WITH NO TUMORS	
18525	DIED ON 11/09/81 WITH 3 TUMORS	
	ADRENALS	ADENOMA, CORTICAL CELL
	LARYNX	POLYP
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18526	DIED ON 06/28/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
18527	DIED ON 02/27/81 WITH 3 TUMORS	
	LUNG & BRONCHI-LEFT	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	HEART	CARCINOMA, METASTATIC
18528	DIED ON 11/13/81 WITH 5 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, ADENOSQUAMOUS
	LUNG & BRONCHI-DIAPHRAGMATIC	CARCINOMA, ADENOSQUAMOUS
	STERNUM & RIB JUNCTION	ADENOCARCINOMA, METASTATIC
18529	DIED ON 06/05/80 WITH NO TUMORS	
18530	DIED ON 10/17/81 WITH NO TUMORS	
18531	DIED ON 09/15/81 WITH 7 TUMORS	
	CECUM	SARCOMA
	ILEUM	SARCOMA
	MESENTERIC LYMPH NODE	SARCOMA
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA
	LIVER	SARCOMA
	SPLEEN	SARCOMA
	PANCREAS	SARCOMA, HISTIOCYTIC, INVASIVE
18532	DIED ON 01/05/82 WITH 2 TUMORS	
	STOMACH	PAPILLOMA
	LUNG & BRONCHI-APICAL	ADENOMA
18533	DIED ON 11/15/81 WITH 1 TUMOR	
	LUNG & BRONCHI-AZYGOUS	ADENOMA
18534	DIED ON 10/13/81 WITH 6 TUMORS	
	MESENTERIC LYMPH NODE	SARCOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
	LIVER	SARCOMA
	PANCREAS	SARCOMA, HISTIOCYTIC, INVASIVE
	HEART	SARCOMA, HISTIOCYTIC, INVASIVE
	BRONCHIAL LYMPH NODE	SARCOMA
18535	DIED ON 04/28/81 WITH 1 TUMOR	
	LUNG & BRONCHI-LEFT	ADENOCARCINOMA

TUMOR INVENTORY
CO-CARCINOGENICITY OF FOUNDRY PARTICULATES:
SILICA AND SILICA SAND SUBSTITUTES
GROUP: 26

18536	DIED ON 06/04/80 WITH NO TUMORS	
18537	DIED ON 11/11/80 WITH 2 TUMORS	
	TRACHEA	POLYP
	LUNG & BRONCHI-LEFT	NEOPLASM
18538	DIED ON 09/02/81 WITH 3 TUMORS	
	LARYNX	POLYP
	LUNG & BRONCHI-LEFT	ADENOMA
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18539	DIED ON 05/27/81 WITH 4 TUMORS	
	ADRENALS	CARCINOMA, CORTICAL CELL
	LARYNX	POLYP
	LUNG & BRONCHI-AZYGOUS	CARCINOMA, SQUAMOUS CELL
	LUNG & BRONCHI-DIAPHRAGMATIC	ADENOCARCINOMA
18540	DIED ON 01/26/82 WITH NO TUMORS	
18541	DIED ON 05/17/81 WITH 1 TUMOR	
	STOMACH	CARCINOMA, SQUAMOUS CELL

APPENDIX 5

GROUP SUMMARY OF HISTOPATHOLOGICAL FINDINGS

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
SKIN/SUBCUTIS							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	40	38	42	42	43	42	45
INSUFFICIENT TISSUE PRESENT IN SECTION.	1	0	0	0	0	0	0
PUSTULE.	1	0	0	0	0	0	0
HYPERKERATOSIS.	6 1+ - 2+	1 2+	1 2+	2 2+	0	3 2+	0
EDEMA, SUBCUTANEOUS.	0	7 1+ - 4+	5 2+ - 3+	4 2+ - 3+	4 1+ - 4+	2 2+	5 2+ - 3+
ACARIASIS.	0	1	0	0	1	1	0
INFLAMMATION, CHRONIC.	0	1 2+	0	0	1 1+	0	0
MISSING.	0	0	1	0	0	0	0
PERITONITIS, ACUTE.	0	0	1 2+	0	0	0	0
PERITONITIS, PYOGRANULOMATOUS.	0	0	0	1 3+	0	0	0
INFLAMMATION, ACUTE.	0	0	0	0	2 2+ - 3+	1 1+	0
MELANOSIS.	0	0	0	0	0	1 2+	0
INFLAMMATION, PYOGRANULOMATOUS.	0	0	0	0	0	1 3+	0
ACANTHOSIS.	0	0	0	0	0	1 2+	0
MAMMARY GLAND							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	2	0	0	0	1	2	1
NOT PRESENT IN SECTION.	46	47	50	48	48	49	49
MISSING.	0	0	0	0	1	0	0
THIGH MUSCLE							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	48	47	49	47	46	49	48
INFLAMMATION, ACUTE.	0	0	1 2+	0	0	0	0
DEGENERATION.	0	0	0	1 1+	3 1+	1 2+	1 1+
MISSING.	0	0	0	0	1	0	1
SALIVARY GLAND							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	47	46	50	46	50	50	48
DILATATION, DUCTULAR.	1 2+	0	0	0	0	0	0
MISSING.	0	1	0	0	0	0	1
AUTOLYZED.	0	0	0	1	0	0	0
LYMPHOMA, MALIGNANT.	0	0	0	1	0	0	0
ATROPHY, ACINAR.	0	0	0	0	0	0	1 1+
MANDIBULAR LYMPH NODE							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	43	42	41	41	44	43	38
MISSING.	4	3	6	5	5	4	8
ERYTHROCYTOSIS, SINUSOIDAL.	1 2+	0	0	0	0	0	0
ECTASIA, SINUSOIDAL.	0	1 2+	0	0	0	0	3 2+ - 3+
DILATATION, SINUSOIDAL.	0	1 3+	1 2+	0	0	0	0
ERYTHROCYTOSIS.	0	1 2+	0	0	0	0	1 2+
AUTOLYZED.	0	0	1	1	0	0	1
ATROPHY.	0	0	1 3+	0	0	0	0
SIDEROSIS.	0	0	1 3+	0	0	0	0
LYMPHOMA, MALIGNANT.	0	0	0	1	0	0	0
INFLAMMATION, GRANULOMATOUS.	0	0	0	0	1 3+	1 1+	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
MANDIBULAR LYMPH NODE (continued)							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
CRYSTALLINE DEPOSITS.	0	0	0	0	1 2+	0	0
INFLAMMATION, PYOGRANULOMATOUS.	0	0	0	0	0	1 4+	0
ADENOCARCINOMA, METASTATIC.	0	0	0	0	0	1	0
SCIATIC NERVE							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	48	44	48	45	48	48	47
MISSING.	0	2	0	2	2	2	3
INSUFFICIENT TISSUE PRESENT IN SECTION.	0	1	2	1	0	0	0
BRAIN							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	48	44	50	44	49	48	48
INFLAMMATION, ACUTE.	0	1 1+	0	0	0	0	0
MALACIA.	0	1 3+	0	0	0	0	0
NECROSIS.	0	1 3+	0	0	0	0	0
HEMORRHAGE.	0	1 2+	0	1 2+	0	0	0
AUTOLYZED.	0	0	0	1	0	0	0
VACUOLATION.	0	0	0	1 2+	0	0	0
NECROSIS, CORTICAL CELL.	0	0	0	1 2+	1 2+	0	0
NECROSIS, CEREBELLAR.	0	0	0	0	0	1 2+	0
VACUOLATION OF NEURONS.	0	0	0	0	0	1 1+	0
MISSING.	0	0	0	0	0	0	1
MONONUCLEAR CELL CUFFING, PERIVASCULAR.	0	0	0	0	0	0	1
PITUITARY							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	39	40	40	38	36	43	42
MISSING.	8	5	6	6	11	7	7
HYPERTROPHY, BASOPHILIC.	1 2+	0	0	0	0	0	0
VACUOLATION.	0	2 2+	0	2 1+ - 2+	1 2+	0	0
AUTOLYZED.	0	0	1	1	1	0	0
INSUFFICIENT TISSUE PRESENT IN SECTION.	0	0	1	1	1	0	1
CYST(S).	0	0	1 4+	0	0	0	0
HYPERPLASIA, BASOPHILIC.	0	0	1 2+	0	0	0	0
ADRENALS							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	24	27	18	28	14	27	13
HYPERPLASIA, CORTICAL CELL.	9 1+ - 3+	3 2+	7 2+ - 3+	4 2+	1 2+	1 2+	5 2+ - 3+
AUTOLYZED.	1	1	3	1	1	1	0
ADENOMA, CORTICAL CELL.	3	1	0	1	0	1	2
CARCINOMA, C-CELL.	1	0	0	0	0	0	0
AMYLOIDOSIS.	9 2+ - 4+	12 2+ - 4+	21 1+ - 4+	11 1+ - 3+	35 1+ - 4+	19 2+ - 4+	29 1+ - 4+
CARCINOMA, CORTICAL CELL.	1	2	1	0	0	0	0
ADENOCARCINOMA, NOS.	1	0	0	1	0	0	0
MISSING.	0	1	0	1	0	1	2

**CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES**

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
ADRENALS (continued)							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
ADENOCARCINOMA, CORTICAL CELL.	0	1	0	0	0	0	0
ATROPHY.	0	0	1 4+	0	0	1 4+	0
ECTASIA, SINUSOIDAL.	0	0	1 2+	0	0	0	0
INSUFFICIENT TISSUE PRESENT IN SECTION.	0	0	0	1	0	0	0
ANGIECTASIS.	0	0	0	1 2+	0	0	0
LYMPHOMA, MALIGNANT.	0	0	0	1	0	0	0
HYPEREMIA.	0	0	0	1 3+	0	0	0
INFLAMMATION, PERIADENAL, ACUTE AND CHRONIC.	0	0	0	1 1+	0	0	0
PHEOCHROMOCYTOMA.	0	0	0	1	0	1	0
(RIGHT ADRENAL), CARCINOMA, CORTICAL CELL.	0	0	0	0	1	0	0
HEMORRHAGE.	0	0	0	0	0	0	1 4+
HISTIOCYTOSIS, PIGMENTATION.	0	0	0	0	0	0	1 2+
THYMUS							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	22	18	22	19	21	17	22
NOT PRESENT IN SECTION.	1	0	0	0	0	0	0
MISSING.	20	24	24	26	23	28	28
ATROPHY.	5 3+	2 4+	2 3+	2 2+ - 4+	2 3+	4 2+ - 3+	0
INSUFFICIENT TISSUE PRESENT IN SECTION.	0	1	1	0	1	0	0
CARCINOMA, ADENOSQUAMOUS, METASTATIC.	0	1	0	0	0	0	0
LYMPHOMA, MALIGNANT, HISTIOCYTIC, (MEDIASTINAL LYMPH NODE), GRANULAR DEPOSITS.	0	1	0	0	0	0	0
AUTOLYZED.	0	0	1 3+	0	0	0	0
LYMPHOMA, MALIGNANT.	0	0	0	1	2	1	0
INFLAMMATION, GRANULOMATOUS.	0	0	0	1	0	0	0
CRYSTALLINE DEPOSITS.	0	0	0	0	1 3+	0	0
CARCINOMA, SQUAMOUS CELL, INVASIVE.	0	0	0	0	1 2+	0	0
STOMACH							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	34	29	1	29	36	30	34
HYPERPLASIA.	3 2+	3 1+ - 2+	1 2+	3 2+ - 3+	2 2+	5 2+ - 3+	0
AUTOLYZED.	1	4	6	9	4	4	2
INSUFFICIENT TISSUE PRESENT IN SECTION.	4	9	3	3	1	0	4
AMYLIDOSIS.	1 2+	0	0	0	1 2+	0 2+	0
INFLAMMATION, ACUTE AND CHRONIC.	1 2+	0	0	0	0	0	1 1+
ABSCESS(ES), INTRAEPITHELIAL.	1 1+	0	0	0	0	0	0
MINERALIZATION.	1 2+	0	0	0	0	1 1+	0
EDEMA.	1 2+	0	0	0	1 3+	2 2+	0 2+
INFLAMMATION, ACUTE.	0	1 2+	2 2+	0	1 1+	2 1+ - 2+	0
PAPILLOMA.	0	1	0	4	1	1	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
STOMACH (continued)							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[49]	[50]	[50]	[50]
PIGMENTATION, POSTMORTEM.	0	2	0	2	2	0	1
ULCER(S).	0	1 2+	0	0	4 2+ - 3+	2 2+	3 2+ - 3+
POLYP(S), EPITHELIAL.	0	0	1	0	0	0	0
PROLIFERATION, SUBMUCOSAL.	0	0	2 2+	0	0	0	0
NECROSIS.	0	0	0	0	0	1 2+	1 2+
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.	0	0	0	0	0	1 1+	0
NECROSIS, MUCOSAL.	0	0	0	0	0	1 2+	0
MISSING.	0	0	0	0	0	0	2
DUODENUM							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	37	30	36	31	30	36	41
AUTOLYZED.	11	13	13	18	19	12	6
MISSING.	0	1	0	0	0	0	0
INFLAMMATION, CHRONIC.	0	1 2+	0	0	0	0	1 3+
SEROSITIS, ACUTE.	0	0	1 3+	0	0	0	0
SEROSITIS, CHRONIC.	0	0	0	1 2+	0	0	0
DILATATION.	0	0	0	0	1 3+	0	0
NOT PRESENT IN SECTION.	0	0	0	0	0	1	1
HEMORRHAGE.	0	0	0	0	0	1 2+	0
EDEMA.	0	0	0	0	0	0	1 3+
JEJUNUM							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	37	33	36	27	27	36	40
MISSING.	1	0	0	2	1	2	2
AUTOLYZED.	10	13	14	18	22	10	6
INFLAMMATION, CHRONIC.	0	1 2+	0	0	0	0	1 3+
HEMATODIASIS.	0	0	0	1	0	0	0
HEMORRHAGE.	0	0	0	0	0	1 2+	0
INFLAMMATION, PLASMACYTIC.	0	0	0	0	0	1 3+	0
INFLAMMATION, ACUTE AND CHRONIC.	0	0	0	0	0	0	1 2+
CECUM							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	29	20	28	21	21	24	27
AUTOLYZED.	13	19	16	20	21	16	7
INFLAMMATION, ACUTE.	1 3+	0	1 4+	1 3+	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	2 2+	4 1+ - 3+	1 4+	2 2+	1 2+	2 1+ - 2+	1 2+
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.	4 1+ - 2+	1 2+	1 2+	1 3+	3 2+ - 3+	2 1+ - 3+	10 1+ - 2+
INFLAMMATION, CHRONIC.	0	2 2+	2 2+	0	5 1+ - 2+	3 1+ - 2+	6 1+ - 2+
EDEMA, SUBMUCOSAL.	0	1 3+	0	0	0	0	0
(MASS), ABSCESS(ES).	0	1	0	0	0	0	0
HEMATODIASIS.	0	0	1	1	0	0	0
(LARGE INTESTINE), ADENOCARCINOMA.	0	0	1	0	0	0	0
HEMORRHAGE.	0	0	1 2+	1 2+	0	1	1 2+
HYPERPLASIA.	0	0	0	1 3+	0	0	0
SARCOMA, HISTIOCYTIC.	0	0	0	1	0	0	0
CELL INFILTRATION, OXYPHIL.	0	0	0	0	0	1 4+	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
CECUM (continued)							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
EDEMA.	0	0	0	0	0	2 2+ - 3+	0
ULCER(S).	0	0	0	0	0	1 3+	0
MISSING.	0	0	0	0	0	0	2
ILEUM							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	31	26	33	23	25	28	39
MISSING.	4	3	1	2	5	3	1
AUTOLYZED.	13	16	15	18	18	16	8
INFLAMMATION, ACUTE AND CHRONIC.	0	1 3+	0	0	0	0	1 2+
INFLAMMATION, CHRONIC.	0	1 2+	1 2+	0	0	0	1 3+
INSUFFICIENT TISSUE	0	0	0	1	0	0	0
PRESENT IN SECTION.	0	0	0	2 2+ - 3+	0	2 2+ - 3+	0
HEMORRHAGE.	0	0	0	1	0	0	0
HEMATODIASIS.	0	0	0	1	0	0	0
SARCOMA, HISTIOCYTIC.	0	0	0	1	0	0	0
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.	0	0	0	0	2 1+ - 2+	0	0
INFLAMMATION, PLASMACYTIC.	0	0	0	0	0	1 3+	0
COLON/RECTUM							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	40	31	34	32	32	40	39
MISSING.	1	0	0	0	0	0	0
AUTOLYZED.	8	10	13	10	17	6	8
ADENOCARCINOMA.	0	1	0	1	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	2 1+ - 3+	2 2+	1 2+	0	1	3 1+ - 3+
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.	0	2 1+	3 1+ - 2+	1 2+	1+	3+	0
HEMATODIASIS.	0	1	2	2	0	3 3+	0
INFLAMMATION, CHRONIC.	0	2 2+	0	0	0	0	3 2+ - 3+
FIBROSARCOMA.	0	0	1	0	0	0	0
LYMPHOMA, MALIGNANT.	0	0	0	1	0	0	0
SARCOMA, HISTIOCYTIC.	0	0	0	1	0	0	0
HEMORRHAGE.	0	0	0	0	0	1	0
HYPEREMIA.	0	0	0	0	0	0	1 2+
HYPERPLASIA.	0	0	0	0	0	0	1 2+
MESENTERIC LYMPH NODE							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	37	26	35	28	36	39	33
MISSING.	1	4	2	4	1	4	9
HYPERPLASIA.	4 2+	4 2+	2 2+	5 1+ - 2+	3 2+	2 2+	7 1+ - 2+
AUTOLYZED.	4	2	3	6	3	0	1
EDEMA.	1 3+	0	0	0	0	0	0
LYMPHADENOMA.	1	0	0	0	0	0	0
INSUFFICIENT TISSUE	0	3	3	2	2	0	0
PRESENT IN SECTION.	0	1 1+	0	0	0	0	0
INFLAMMATION, ACUTE.	0	1 2+	1	0	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	1 4+	0 2+	0	0	0	0
INFLAMMATION, PYOGRANULOMATOUS.	0	1	0	0	0	0	0

CD-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
MESENTERIC LYMPH NODE (continued)							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
INFLAMMATION, CHRONIC	0	1 1+	3 1+ - 2+	0	0	1 1+	0
DEGENERATION, MYXOMATOUS	0	1 4+	0	0	0	0	0
LYMPHOMA, MALIGNANT, HISTIOCYTIC	0	1	0	0	0	0	0
ABSCESS(ES)	0	2 4+	0	0	0	0	0
ERYTHROCYTOSIS, SINUSOIDAL	0	0	1 2+	0	0	0	0
LYMPHOMA, MALIGNANT	0	0	0	1	0	0	0
INFLAMMATION, PERIADENAL, CHRONIC	0	0	0	1 3+	0	0	0
SARCOMA, HISTIOCYTIC	0	0	0	2	0	0	0
INFLAMMATION, GRANULOMATOUS	0	0	0	0	1 1+	3 1+ - 2+	0
ADENOCARCINOMA, METASTATIC	0	0	0	0	1	0	0
CRYSTALLINE DEPOSITS	0	0	0	0	1 1+	2 1+	0
FIBROSIS, FOLLICULAR	0	0	0	0	1 2+	0	0
INFLAMMATION, NOS	0	0	0	0	0	1 3+	0
ECTASIA, SINUSOIDAL	0	0	0	0	0	0	2 2+ - 3+
HYPEREMIA	0	0	0	0	0	0	1 2+
CARCINOMA, METASTATIC, (ENTERIC)	0	0	0	0	0	0	1
LARYNX							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED	47	39	45	26	45	25	44
INFLAMMATION, CHRONIC	1 1+	0	0	0	0	0	0
HYPERPLASIA	0	2 2+	0	7 1+ - 3+	0	5 2+	2 1+ - 2+
INFLAMMATION, ACUTE	0	1 2+	1 2+	5 2+	2 2+	4 1+ - 3+	1 2+
POLYP(S), EPITHELIAL	0	5	0	0	0	0	0
EDEMA	0	1 2+	0	0	0	0	0
MISSING	0	0	2	1	2	1	1
NECROSIS	0	0	1 1+	0	0	0	0
NEOPLASM(S), NOS	0	0	1	0	0	0	0
AUTOLYZED	0	0	0	3	0	0	0
EXUDATE, PURULENT	0	0	0	1 4+	0	0	0
DYSPLASIA	0	0	0	1 2+	0	0	0
CARCINOMA, SQUAMOUS CELL	0	0	0	2	0	2	0
INFLAMMATION, GRANULOMATOUS	0	0	0	0	1 2+	0	0
CRYSTALLINE DEPOSITS	0	0	0	0	1 1+	0	0
ADENOCARCINOMA	0	0	0	0	0	3	0
METAPLASIA, SQUAMOUS	0	0	0	0	0	1 2+	0
CARCINOMA, IN SITU	0	0	0	0	0	1	0
DYSPLASIA, MUCOSAL	0	0	0	0	0	1 1+	0
INFLAMMATION, ACUTE AND CHRONIC	0	0	0	0	0	0	2 1+ - 2+
TRACHEA							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED	46	41	48	34	50	35	49
MISSING	1	1	0	0	0	0	0
AUTOLYZED	1	1	1	3	0	1	1
POLYP(S), EPITHELIAL	0	3	0	4	0	10	0
INFLAMMATION, ACUTE AND CHRONIC	0	1 2+	0	0	0	0	0
DYSPLASIA, MUCOSAL	0	0	1 2+	0	0	1 2+	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
TRACHEA (continued)							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
HYPERPLASIA,	0	0	0	3 1+ - 2+	0	0	0
CARCINOMA, ADENOSQUAMOUS,	0	0	0	1	0	0	0
EXUDATE, PURULENT,	0	0	0	1 4+	0	0	0
ADENOCARCINOMA,	0	0	0	1	0	1	0
ARTIFACT(S),	0	0	0	1	0	0	0
CARCINOMA, SQUAMOUS CELL,	0	0	0	0	0	2	0
THYROID							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED,	40	39	36	37	29	46	37
MISSING,	3	1	7	6	5	1	6
CARCINOMA, C-CELL,	1	0	0	0	0	1	0
AMYLOIDOSIS,	3 1+ - 3+	2	3	1	10 1+ - 3+	1	2
CARCINOMA, CORTICAL CELL,	1	0	0	0	0	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION,	0	3	2	1	5	1	2
AUTOLYZED,	0	1	1	2	1	0	0
CYST(S), FOLLICULAR,	0	1	1	1	0	0	2
HYPERPLASIA, C-CELL,	0	0	0	0	0	0	1 1+
PARATHYROID							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED,	22	20	27	26	24	31	30
MISSING,	26	23	23	21	26	19	20
INSUFFICIENT TISSUE							
PRESENT IN SECTION,	0	1	0	0	0	0	0
HYPERPLASIA,	0	2	0	0	0	0	0
PROLIFERATION, CELLULAR, NOS,	0	1	0	0	0	0	0
AUTOLYZED,	0	0	0	1	0	0	0
ESOPHAGUS							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED,	48	45	47	44	49	48	48
INSUFFICIENT TISSUE							
PRESENT IN SECTION,	0	2	3	0	1	1	0
AUTOLYZED,	0	0	0	2	0	0	0
ADENOCARCINOMA,	0	0	0	1	0	0	0
CARCINOMA, ADENOSQUAMOUS, INVASIVE,	0	0	0	1	0	0	0
NOT PRESENT IN SECTION,	0	0	0	0	0	1	0
INFLAMMATION, ACUTE AND CHRONIC,	0	0	0	0	0	0	1 2+
INFLAMMATION, ACUTE,	0	0	0	0	0	0	1 2+
LUNG & BRONCHI-LEFT							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED,	38	21	0	0	0	1	2
PNEUMONIA, ASPIRATION, ACUTE,	1 2+	0	0	0	0	0	0
FETALIZATION OF ALVEOLAR LINING CELLS,	2 1+	0	0	0	0	0	0
INFLAMMATION, BRANULOMATOUS,	2 1+ - 2+	3 2+ - 4+	1 2+	5 1+ - 4+	44 1+ - 4+	36 1+ - 4+	42 1+ - 4+
CRYSTALLINE DEPOSITS							
IN DISTAL AIRWAYS,	2 1+ - 3+	2 1+ - 3+	48 1+ - 4+	47 1+ - 3+	32 1+ - 3+	35 1+ - 3+	14 1+ - 3+

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
LUNG & BRONCHI-LEFT (continued)							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	1 1+	6 1+ - 3+	0	4 1+ - 2+	0	5 1+ - 2+	0
VASCULITIS, ACUTE AND CHRONIC.	1 3+	0	0	0	0	0	0
EDEMA, ALVEOLAR.	1 2+	1 3+	0	0	0	0	0
CAPILLARY THROMBOSIS.	1 3+	0	0	0	0	0	0
HYPERCELLULARITY, ALVEOLAR SEPTUMS.	1 2+	0	0	0	0	0	0
ARTERITIS, CHRONIC.	1 2+	0	0	0	0	1 3+	0
LEUKEMOID REACTION.	0	1 3+	0	0	0	0	0
POLYP(S), BRONCHIOLAR, EPITHELIAL.	0	2	0	0	0	0	0
ADENOCARCINOMA.	0	3	0	6	0	11	0
INFLAMMATION, ACUTE AND CHRONIC.	0	2 2+ - 3+	0	0	0	2 3+	24
ARTIFACT(S).	0	1	0	0	0	0	0
ADENOMA.	0	1	0	3	0	6	0
CARCINOMA, SQUAMOUS CELL.	0	1	0	0	0	2	0
INFLAMMATION, HISTIOCYTIC.	0	1 3+	1 2+	0	0	0	0
CARCINOMA, ADENOSQUAMOUS.	0	2	0	7	0	4	1
INFLAMMATION, INTERSTITIAL.	0	1 2+	0	0	0	0	0
NEOPLASIA(S), NOS.	0	1	0	0	0	0	0
VASCULITIS, CHRONIC.	0	1 3+	0	0	0	0	0
MELANOMA, METASTATIC.	0	1	0	0	0	0	0
COAGULATION, INTRAVASCULAR.	0	1 2+	1 2+	0	0	0	0
PNEUMONIA, ASPIRATION.	0	1 2+	0	3 2+ - 4+	0	0	0
THROMBOSIS, ARTERIAL.	0	0	1 2+	0	0	0	0
INFLAMMATION, PROLIFERATIVE.	0	0	1 3+	0	0	2 3+ - 4+	0
HEMORRHAGE.	0	0	1 3+	2 3+	0	1 2+	0
MINERALIZATION.	0	0	1 2+	0	0	0	0
POLYP(S), EPITHELIAL.	0	0	0	1	0	0	0
INFLAMMATION, ACUTE.	0	0	0	4 2+ - 4+	0	0	0
NECROSIS.	0	0	0	1 2+	0	0	0
LYMPHOMA, MALIGNANT.	0	0	0	1	0	0	0
ABSCESS(ES).	0	0	0	1	0	0	0
(MAINSTEM BRONCHUS).							
CARCINOMA, ADENOSQUAMOUS.	0	0	0	3	0	1	0
(MAINSTEM BRONCHUS).							
CARCINOMA, SQUAMOUS CELL.	0	0	0	1	0	0	0
(MAINSTEM BRONCHUS), ADENOCARCINOMA.	0	0	0	1	0	1	0
SARCOMA, HISTIOCYTIC.	0	0	0	1	0	0	0
FIBROSARCOMA.	0	0	0	1	0	0	0
(MAINSTEM BRONCHUS).							
POLYP(S), EPITHELIAL.	0	0	0	1	0	0	0
AUTOLIZED.	0	0	0	0	1	0	0
MACROPHAGES, PIGMENTED.	0	0	0	0	1 2+	1 2+	0
MISSING.	0	0	0	0	0	1	1
(MASS), CARCINOMA, ADENOSQUAMOUS.	0	0	0	0	0	1	0
CARCINOMA, SQUAMOUS CELL.	0	0	0	0	0	1	0
(BRONCHIOLAR ORIGIN).	0	0	0	0	0	1	0
METAPLASIA, SQUAMOUS, BRONCHIOLAR.	0	0	0	0	0	1 1+	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
LUNG & BRONCHI-APICAL							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	40	28	0	0	0	2	2
PNEUMONIA, ASPIRATION, ACUTE.	1	0	0	0	0	0	0
INFLAMMATION, GRANULOMATOUS.	1	2+	3	4	4	35	42
CRYSTALLINE DEPOSITS							
IN DISTAL AIRWAYS.	2	1+	3+	48	1+	3+	14
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	1	1+	2	1+	0	3	0
VASCULITIS, ACUTE AND CHRONIC.	1	3+	0	0	0	0	0
EDEMA, ALVEOLAR.	1	2+	1	3+	0	0	0
CAPILLARY THROMBOSIS.	1	3+	0	0	0	0	0
HYPERCELLULARITY, ALVEOLAR SEPTUMS.	1	2+	0	0	0	0	0
ARTERITIS, CHRONIC.	1	2+	0	0	0	1	0
LEUKEMOID REACTION.	0	1	3+	0	0	0	0
POLYP(S), BRONCHIDLAR, EPITHELIAL.	0	1	0	0	0	0	0
ADENOCARCINOMA.	0	1	0	2	0	1	0
INFLAMMATION, ACUTE AND CHRONIC.	0	2	2+	3+	0	3+	2+
CARCINOMA, SQUAMOUS CELL.	0	2	0	1	0	2	0
INFLAMMATION, HISTIOCYTIC.	0	1	3+	1	2+	0	0
CARCINOMA, ADENOSQUAMOUS.	0	1	0	0	0	1	0
INFLAMMATION, INTERSTITIAL.	0	1	2+	0	0	0	0
VASCULITIS, CHRONIC.	0	1	3+	0	0	0	0
MELANOMA, METASTATIC.	0	1	0	0	0	0	0
COAGULATION, INTRAVASCULAR.	0	1	2+	1	2+	0	0
PNEUMONIA, ASPIRATION.	0	2	2+	4+	0	0	0
THROMBOSIS, ARTERIAL.	0	0	1	2+	0	0	0
INFLAMMATION, PROLIFERATIVE.	0	0	1	3+	0	2	3+
HEMORRHAGE.	0	0	1	3+	0	0	0
MINERALIZATION.	0	0	1	2+	0	0	0
MISSING.	0	0	0	1	0	1	1
INFLAMMATION, ACUTE.	0	0	0	3	2+	3+	0
LYMPHOMA, MALIGNANT.	0	0	0	1	0	0	0
AUTOLYZED.	0	0	0	0	1	0	0
MACROPHAGES, PIGMENTED.	0	0	0	0	1	2+	0
ADENOMA.	0	0	0	0	0	4	0
LUNG & BRONCHI-AZYGOUS							
NUMBER OF ANIMALS EXAMINED	[41]	[31]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	41	31	0	0	0	0	1
PNEUMONIA, ASPIRATION, ACUTE.	1	2+	0	0	0	0	0
INFLAMMATION, GRANULOMATOUS.	1	2+	3	2+	4	4	36
CRYSTALLINE DEPOSITS							
IN DISTAL AIRWAYS.	2	1+	3+	48	1+	3+	15
VASCULITIS, ACUTE AND CHRONIC.	1	3+	0	0	0	0	0
EDEMA, ALVEOLAR.	1	2+	1	3+	0	0	0
CAPILLARY THROMBOSIS.	1	3+	0	0	0	0	0
HYPERCELLULARITY, ALVEOLAR SEPTUMS.	1	2+	0	0	0	0	0
ARTERITIS, CHRONIC.	1	2+	0	0	0	1	0
LEUKEMOID REACTION.	0	1	3+	0	0	0	0
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	0	2	1+	3+	0	3	1+

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
LUNG & BRONCHI-AZYGOUS (continued)							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
ADENOCARCINOMA.	0	1	0	9	0	3	0
INFLAMMATION, ACUTE AND CHRONIC.	0	2 2+ - 3+	0	0	0	2 3+	2 2+
INFLAMMATION, HISTIOCYTIC.	0	1 3+	1 2+	0	0	0	0
CARCINOMA, ADENOSQUAMOUS.	0	1	0	3	0	3	0
INFLAMMATION, INTERSTITIAL.	0	1 2+	0	0	0	0	0
VASCULITIS, CHRONIC.	0	1 3+	0	0	0	0	0
MELANOMA, METASTATIC.	0	1	0	0	0	0	0
COAGULATION, INTRAVASCULAR.	0	1 2+	1 2+	0	0	0	0
PNEUMONIA, ASPIRATION.	0	2 2+ - 4+	0	3 2+ - 4+	0	0	0
THROMBOSIS, ARTERIAL.	0	0	1 2+	0	0	0	0
INFLAMMATION, PROLIFERATIVE.	0	0	1 3+	0	0	0	0
HEMORRHAGE.	0	0	1 3+	1 3+	0	2 3+ - 4+	0
MINERALIZATION.	0	0	1 2+	0	0	0	0
INFLAMMATION, ACUTE.	0	0	0	3 2+ - 3+	0	0	0
LYMPHOMA, MALIGNANT.	0	0	0	1	0	0	0
AUTOLYZED.	0	0	0	0	1	0	0
MACROPHAGES, PIGMENTED.	0	0	0	0	2+	1 2+	0
MISSING.	0	0	0	0	0	1	1
CARCINOMA, SQUAMOUS CELL.	0	0	0	0	0	2	0
ADENOMA.	0	0	0	0	0	6	0
(NASS), ADENOCARCINOMA.	0	0	0	0	0	1	0
PIGMENTATION, SUBPLEURAL.	0	0	0	0	0	0	1 1+
LUNG & BRONCHI-DIAPHRAGMATIC							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	40	26	0	0	0	1	2
GRANULOMA, PIGMENTED.	1 1+	0	0	0	0	0	0
PNEUMONIA, ASPIRATION, ACUTE.	1 2+	0	0	0	0	0	0
INFLAMMATION, GRANULOMATOUS.	1 2+	3 2+ - 4+	1 2+	5 1+ - 4+	44 1+ - 4+	38 1+ - 4+	42 1+ - 4+
CRYSTALLINE DEPOSITS							
IN DISTAL AIRWAYS.	2 1+ - 3+	3 1+ - 3+	49 1+ - 4+	48 1+ - 3+	32 1+ - 3+	35 1+ - 3+	14 1+ - 3+
VASCULITIS, ACUTE AND CHRONIC.	1 3+	0	0	0	0	0	0
EDEMA, ALVEOLAR.	1 2+	1 3+	0	0	0	0	0
CAPILLARY THROMBOSIS.	1 3+	0	0	0	0	0	0
HYPERCELLULARITY, ALVEOLAR SEPTUMS.	1 2+	0	0	0	0	0	0
ARTERITIS, CHRONIC.	1 2+	0	0	0	0	1 3+	0
LEUKENOID REACTION.	0	1 3+	0	0	0	0	0
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	0	2 2+ - 3+	0	6 1+ - 2+	0	6 1+ - 2+	0
ADENOCARCINOMA.	0	3	0	8	0	4	0
INFLAMMATION, ACUTE AND CHRONIC.	0	2 2+ - 3+	0	0	0	2 3+	2 2+
INFLAMMATION, HISTIOCYTIC.	0	1 3+	1 2+	0	0	0	0
CARCINOMA, ADENOSQUAMOUS.	0	3	0	7	0	5	0
INFLAMMATION, INTERSTITIAL.	0	1 2+	0	0	0	0	0
CARCINOMA, ADENOSQUAMOUS, METASTATIC.	0	1	0	0	0	0	0
METAPLASIA, SQUAMOUS.	0	1 2+	0	0	0	1 2+	0
NEOPLASM(S), NOS.	0	1	0	0	0	0	0
VASCULITIS, CHRONIC.	0	1 3+	0	0	0	0	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
LUNG & BRONCHI-DIAPHRAGMATIC (continued)							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
MELANOMA, METASTATIC.	0	1	0	0	0	0	0
COAGULATION, INTRAVASCULAR.	0	1 2+	1 2+	0	0	0	0
PNEUMONIA, ASPIRATION.	0	2 2+ - 4+	0	3 2+ - 4+	0	0	0
THROMBOSIS, ARTERIAL.	0	0	1 2+	0	0	0	0
INFLAMMATION, PROLIFERATIVE.	0	0	1 3+	0	0	0	0
HEMORRHAGE.	0	0	1 3+	2 3+	0	2 3+ - 4+	0
MINERALIZATION.	0	0	1 2+	0	0	0	0
HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.	0	0	0	1	0	0	0
POLYP(S), BRONCHIOLAR, EPITHELIAL.	0	0	0	1	0	0	0
ADENOMA.	0	0	0	2	0	6	0
INFLAMMATION, ACUTE.	0	0	0	4 2+ - 3+	0	0	0
NECROSIS.	0	0	0	1 2+	0	0	0
CARCINOMA, SQUAMOUS CELL.	0	0	0	2	0	3	0
LYMPHOMA, MALIGNANT.	0	0	0	1	0	0	0
ADENOCARCINOMA, BRONCHIOLAR.	0	0	0	1	0	0	0
(MAINSTEM BRONCHUS).	0	0	0	0	0	0	0
CARCINOMA, ADENOSQUAMOUS.	0	0	0	1	0	1	0
(MAINSTEM BRONCHUS), ADENOCARCINOMA.	0	0	0	1	0	0	0
AUTOLYZED.	0	0	0	0	1	0	0
MACROPHAGES, PIGMENTED.	0	0	0	0	1 2+	1 2+	0
MISSING.	0	0	0	0	0	1	1
LUNG & BRONCHI-CARDIAC							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	41	31	1	0	0	2	2
PNEUMONIA, ASPIRATION, ACUTE.	1 2+	0	0	0	0	0	0
INFLAMMATION, GRANULOMATOUS.	1 2+	3 2+ - 4+	1 2+	5 1+ - 4+	44 1+ - 4+	36 1+ - 4+	42 1+ - 4+
CRYSTALLINE DEPOSITS	2 1+ - 3+	3 1+ - 3+	47 1+ - 4+	48 1+ - 3+	32 1+ - 3+	35 1+ - 3+	14 1+ - 3+
IN DISTAL AIRWAYS.	1 3+	0	0	0	0	0	0
VASCULITIS, ACUTE AND CHRONIC.	1 2+	1 3+	0	0	0	0	0
EDEMA, ALVEOLAR.	1 2+	0	0	0	0	0	0
CAPILLARY THROMBOSIS.	1 2+	0	0	0	0	0	0
HYPERCELLULARITY, ALVEOLAR SEPTUMS.	1 2+	0	0	0	0	0	0
ARTERITIS, CHRONIC.	1 2+	0	0	0	0	1 3+	0
LEUKENOID REACTION.	0	1 3+	0	0	0	0	0
ADENOCARCINOMA.	0	1	0	1	0	1	0
INFLAMMATION, ACUTE AND CHRONIC.	0	2 2+ - 3+	0	0	0	2 3+	2 2+
CARCINOMA, SQUAMOUS CELL.	0	1	0	1	0	0	0
INFLAMMATION, HISTIOCYTIC.	0	1 3+	1 2+	0	0	0	0
INFLAMMATION, INTERSTITIAL.	0	1 2+	0	0	0	0	0
VASCULITIS, CHRONIC.	0	1 3+	0	0	0	0	0
MELANOMA, METASTATIC.	0	1	0	3	0	0	0
COAGULATION, INTRAVASCULAR.	0	1 2+	1 2+	0	0	0	0
PNEUMONIA, ASPIRATION.	0	2 2+ - 4+	0	3 2+ - 4+	0	0	0
THROMBOSIS, ARTERIAL.	0	0	1 2+	0	0	0	0
INFLAMMATION, PROLIFERATIVE.	0	0	1 3+	0	0	0	0
HEMORRHAGE.	0	0	1 3+	1 3+	0	2 3+ - 4+	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
LUNG & BRONCHI-CARDIAC (continued)							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
MINERALIZATION.	0	0	1 2+	0	0	0	0
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	0	0	0	1 1+	0	4 2+	0
CARCINOMA, ADENOSQUAMOUS.	0	0	0	2	0	1	0
INFLAMMATION, ACUTE.	0	0	0	2 2+ - 3+	0	1 1+	0
LYMPHOMA, MALIGNANT.	0	0	0	1	0	0	0
AUTOLYZED.	0	0	0	0	1	0	0
MACROPHAGES, PIGMENTED.	0	0	0	0	1 2+	1 2+	0
MISSING.	0	0	0	0	0	1	1
ADENOMA.	0	0	0	0	0	2	0
METAPLASIA, SQUAMOUS, BRONCHIOLAR.	0	0	0	0	0	1 2+	0
LIVER							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	32	26	26	26	19	28	15
AUTOLYZED.	1	1	2	4	2	1	2
INFLAMMATION, ACUTE.	2 1+ - 2+	0	1 2+	0	0	0	0
CYST(S), BILIARY.	6 1+ - 3+	2 2+	3 2+	2 1+ - 2+	3 1+ - 2+	2 1+ - 2+	9 1+ - 3+
AMYLOIDOSIS.	5 1+ - 3+	10 1+ - 3+	18 1+ - 2+	6 1+ - 2+	23 1+ - 2+	11 1+ - 2+	26 1+ - 3+
(LATERAL), CYST(S), BILIARY.	1 2+	0	0	0	0	0	0
HEMANGIOSARCOMA.	1	1	0	0	0	0	0
THROMBUS.	1 1+	0	0	0	0	0	0
AMYLOIDOSIS, PERIVASCULAR.	1 2+	0	0	0	0	0	0
NECROSIS.	2 1+ - 2+	3 1+ - 2+	4 1+ - 2+	4 1+ - 3+	1 3+	4 1+ - 3+	1 1+
INFLAMMATION, GRANULOMATOUS.	0	1 2+	0	0	0	0	0
HYPERPLASIA, HEPATOCELLULAR.	0	1 2+	0	0	0	0	0
MACROPHAGES, CENTRILOBULAR.	0	1 2+	0	0	0	0	0
LEUKEMIA, GRANULOCYTIC.	0	1	0	0	0	0	0
LYMPHOMA, MALIGNANT, HISTIOCYTIC.	0	1	0	0	0	0	0
HYPEREMIA.	0	1 2+	0 3+	2 2+ - 4+	1 3+	0	0
ANGIECTASIS.	0	1 1+	0	0	0	0	0
(MEDIAN LOBE), CYST(S), BILIARY.	0	0	1 2+	1 3+	0	0	0
ADHESIONS BETWEEN LATERAL AND MEDIAN LOBES.	0	0	1 2+	0	0	0	0
MACROPHAGES, CENTRILOBULAR, PIGMENTED.	0	0	1 2+	0	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	0	0	1 2+	0	0	0
LYMPHOMA, MALIGNANT.	0	0	0	1	0	0	0
(CAUDATE LOBE), ADENOCARCINOMA, NOS.	0	0	0	1	0	0	0
SARCOMA, HISTIOCYTIC.	0	0	0	2	0	0	0
(MEDIAN LOBE), ADENOMA.	0	0	0	0	0	0	0
HEPATOCELLULAR.	0	0	0	1	0	0	0
INFLAMMATION, CHRONIC.	0	0	0	0	1 2+	1 2+	0
FOCI, CLEAR CELL.	0	0	0	0	1 1+	0	0
(LATERAL), HEMATOMA.	0	0	0	0	1 4+	0	0
(LATERAL), ECTASIA, SINUSOIDAL.	0	0	0	0	1 3+	0	0
HYPERPLASIA, BILE DUCT.	0	0	0	0	1 2+	0	0
FIBROSIS.	0	0	0	0	1 3+	0	0
THROMBOSIS.	0	0	0	0	0	1 2+	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
LIVER (continued)							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
VACUOLATION.	0	0	0	0	0	1 2+	0
HYPERPLASIA, KUPFFER CELL.	0	0	0	0	0	1 2+	0
PIGMENTATION, CYTOPLASMIC.	0	0	0	0	0	1 1+	0
HEMANGIOMA.	0	0	0	0	0	1	0
VACUOLATION, CYTOPLASMIC.	0	0	0	0	0	1 3+	0
DEGENERATION, HEPATOCELLULAR.	0	0	0	0	0	1 3+	0
BASOPHILIA.	0	0	0	0	0	0	1 2+
FOCUS, BASOPHILIC.	0	0	0	0	0	0	1
GALLBLADDER							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	29	19	30	20	27	26	39
AUTOLYZED.	18	26	18	25	22	21	8
CHOLELITH(S).	1	0	1	0	0	0	1
MISSING.	0	2	1	1	1	1	2
HYPERPLASIA, FOLLICULAR.	0	0	0	1 2+	0	0	0
INFLAMMATION, ACUTE.	0	0	0	1 1+	0	0	0
ADENOCARCINOMA.	0	0	0	0	0	1	0
HYPERPLASIA.	0	0	0	0	0	1 3+	0
SPLEEN							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	37	31	35	32	25	35	38
MISSING.	3	3	4	2	3	1	3
AUTOLYZED.	1	1	3	4	3	1	2
AMYLOIDOSIS.	5 1+ - 3+	7 1+ - 3+	5 2+ - 3+	1 2+	17 1+ - 3+	5 2+ - 3+	5 2+ - 3+
HEMANGIOSARCOMA.	1	1	0	0	0	3	0
(MASS), HEMANGIOSARCOMA.	1	0	0	0	0	0	0
INFLAMMATION, GRANULOMATOUS.	0	1 3+	0	0	0	0	0
SARCOMA, NOS.	0	1	0	0	0	0	0
LEUKEMIA, GRANULOCYTIC.	0	1	0	0	0	0	0
HEMATOPOIESIS, EXTRAMEDULLARY.	0	1 3+	2 2+	5 2+ - 3+	2 2+	2 3+	2 2+ - 3+
HEMATOPOIESIS.	0	0	1 2+	1 3+	0	0	0
HYPERPLASIA, RETICULOENDOTHELIAL CELL.	0	0	0	1 2+	0	2 2+	0
LYMPHOMA, MALIGNANT.	0	0	0	1	0	0	0
INFLAMMATION, GRANULOMATOUS, CAPSULAR.	0	0	0	1 3+	0	0	0
SARCOMA, HISTIOCYTIC.	0	0	0	2	0	0	0
SARCOMA, RETICULUM CELL.	0	0	0	0	0	1	0
PANCREAS							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	41	41	40	39	39	42	44
AUTOLYZED.	1	1	5	5	4	2	2
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	1	0	0	0	0	0	0
CARCINOMA, ISLET CELL.	1	0	0	0	2	0	0
ATROPHY.	1	0	0	0	0	0	0
CYST(S), NOS.	1 2+	0	0	0	0	0	0
ADENOMA, ISLET CELL.	1	0	0	0	0	0	2

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
PANCREAS (continued)							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
METAPLASIA, EOSINOPHILIC.	1 1+	0	0	0	0	0	0
MISSING.	0	1	2	1	4	2	2
AMYLOIDOSIS.	0	1 3+	0	0	0	0	0
ATROPHY, ACINAR.	0	1 1+	0	0	0	0	0
LEUKEMIA, GRANULOCYTIC.	0	1	0	0	0	0	0
CYST(S), DUCTULAR.	0	1 1+	2 1+	0	0	0	0
VACUOLATION.	0	0	1 2+	0	0	0	0
LYMPHOMA, MALIGNANT.	0	0	0	1	0	0	0
INFLAMMATION, GRANULOMATOUS, CAPSULAR.	0	0	0	1 3+	0	0	0
HYPERPLASIA, ISLET CELL.	0	0	0	1 1+	0	0	0
INFLAMMATION, GRANULOMATOUS,							
PERIADENAL.	0	0	0	0	1 2+	1 2+	0
INFLAMMATION, ACUTE.	0	0	0	0	0	1 2+	0
LIPIDOSIS.	0	0	0	0	0	1 2+	0
DUCT(S), CYSTIC.	0	0	0	0	0	1 2+	0
HEART							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	42	41	47	43	37	39	47
THROMBOSIS.	4 3+	4 2+ - 3+	2 2+ - 4+	0	11 2+ - 3+	6 2+ - 3+	2 2+ - 3+
NECROSIS.	1 3+	0	0	0	0	2 1+	0
MINERALIZATION, VASCULAR.	1 3+	1 2+	0	0	0	0	0
CARCINOMA, SQUAMOUS CELL, METASTATIC.	0	1	0	0	0	0	0
VALVULITIS, CHRONIC.	0	0	1 2+	0	0	0	0
AUTOLYZED.	0	0	0	1	0	0	0
INFLAMMATION, ACUTE.	0	0	0	1 1+	0	1 1+	0
CARCINOMA, ADENOSQUAMOUS, INVASIVE.	0	0	0	1	0	0	0
SARCOMA, HISTIOCYTIC.	0	0	0	1	0	0	0
ARTERIOPATHY, DEGENERATIVE.	0	0	0	1 2+	0	0	0
INFLAMMATION, CHRONIC.	0	0	0	0	1 2+	0	0
HEMORRHAGE, PERIARTIC.	0	0	0	0	1 4+	0	0
PROLIFERATION, EPICARDIAL.	0	0	0	0	0	1 2+	0
PROLIFERATIVE MUSCLE CELL NUCLET.	0	0	0	0	0	1 2+	0
DEGENERATION.	0	0	0	0	0	0	1 1+
KIDNEYS							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	22	16	14	21	14	21	21
NEPHROPATHY, CHRONIC.	16 1+ - 3+	17 1+ - 3+	14 1+ - 3+	9 1+ - 3+	2 1+ - 4+	10 1+ - 2+	10 1+ - 3+
AMYLOIDOSIS.	10 2+ - 3+	12 2+ - 4+	14 1+ - 3+	10 1+ - 4+	33 1+ - 4+	15 1+ - 4+	19 1+ - 3+
AUTOLYZED.	0	1	4	4	1	1	0
PYELITIS, ACUTE.	0	1 2+	0	0	0	0	0
DILATATION, TUBULAR.	0	1 1+	1 3+	0	0	2 1+	0
MISSING.	0	0	2	0	0	0	0
INFLAMMATION, ACUTE.	0	0	1 1+	0	0	0	0
INFARCT(S).	0	0	1	0	0	0	0
MINERALIZATION, PELVIC, EPITHELIAL.	0	0	1 2+	0	0	0	0
ATROPHY.	0	0	0	1 2+	0	1 4+	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
KIDNEYS (continued)							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
LYMPHOMA, MALIGNANT,	0	0	0	1	0	0	0
ADENOCARCINOMA, TUBULAR,	0	0	0	1	0	0	0
INFLAMMATION, PERINEPHRIC,	0	0	0	1 2+	0	0	0
PYOGRAULOMATOUS,	0	0	0	1	0	0	0
CARCINOMA, ADENOSQUAMOUS, METASTATIC,	0	0	0	1	0	0	0
INFLAMMATION, GRANULOMATOUS,	0	0	0	0	0	1 3+	0
PERIPELVIC,	0	0	0	0	0	1 3+	0
NECROSIS, CORTICAL CELL,	0	0	0	0	0	0	0
URINARY BLADDER							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED,	39	34	37	36	35	43	43
MISSING,	2	1	4	1	2	1	0
AUTOLYZED,	1	9	6	9	9	4	1
INSUFFICIENT TISSUE							
PRESENT IN SECTION,	1	3	1	1	4	2	4
INFLAMMATION, ACUTE AND CHRONIC,	1 2+	0	0	0	0	0	0
HYPERPLASIA, TRANSITIONAL CELL,	2 2+	0	0	0	0	0	0
MINERALIZATION,	2 2+	0	0	0	0	0	0
MINERALIZATION, TRANSITIONAL							
EPITHELIUM,	1 2+	0	0	1 2+	0	0	1 2+
NEPHRODIASIS,	1	0	0	0	0	0	0
INFLAMMATION, CHRONIC,	0	0	1 1+	0	0	0	0
MINERALIZATION, EPITHELIAL,	0	0	1 1+	0	0	0	0
AMYLOIDOSIS,	0	0	0	0	0	0	1 2+
PROSTATE							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED,	44	41	44	39	46	46	47
MISSING,	2	3	3	4	1	2	2
INSUFFICIENT TISSUE							
PRESENT IN SECTION,	2	0	0	1	1	0	0
AUTOLYZED,	0	1	0	4	1	1	1
INFLAMMATION, ACUTE,	0	1 2+	3 2+ - 3+	0	0	0	0
INFLAMMATION, CHRONIC,	0	1 2+	0	0	0	1 1+	0
ATROPHY,	0	0	0	0	1 3+	0	0
THROMBOSIS, ARTERIAL,	0	0	0	0	1 2+	0	0
TESTES							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED,	25	26	27	27	19	15	20
ATROPHY,	22 1+ - 3+	20 1+ - 4+	19 1+ - 4+	15 1+ - 3+	26 1+ - 3+	30 1+ - 4+	19 1+ - 3+
(RIGHT), ATROPHY,	1 4+	0	0	0	0	0	0
(LEFT), ATROPHY,	1 3+	0	0	0	0	1 4+	0
SPERM GRANULOMA,	1 2+	0	0	0	0	0	0
DEGENERATION,	0	3 1+ - 3+	1 3+	3 1+ - 3+	3 1+ - 2+	4 2+ - 3+	0
MISSING,	0	0	2	0	0	0	0
(TESTES), ABSCESS(ES), EPIDIDYMAL,	0	0	1 4+	0	0	0	0
INFLAMMATION OF TUNIC, ACUTE,	0	0	1 2+	0	0	0	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
TESTES (continued)							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
AUTOLYZED.	0	0	0	3	1	0	0
ATROPHIC.	0	0	0	0	2 2+ - 3+	0	2 2+
THROMBOSIS, ARTERIAL.	0	0	0	0	1 2+	0	0
DEGENERATION, ACUTE.	0	0	0	0	0	1 2+	0
INFLAMMATION, ACUTE.	0	0	0	0	0	0	1 4+
SEMINAL VESICLES							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	46	42	47	40	48	47	48
AUTOLYZED.	1	3	1	8	1	1	1
INFLAMMATION, ACUTE.	1 4+	1 4+	0	0	0	1 2+	1 3+
INFLAMMATION, ACUTE, PERIADENAL.	0	1 2+	1 2+	0	0	0	0
ABSCESSES.	0	0	1 4+	0	0	0	0
MISSING.	0	0	0	2	1	0	0
INFLAMMATION, CHRONIC.	0	0	0	0	0	1 2+	0
STERNUM & RIB JUNCTION							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	48	46	50	46	48	45	48
INFLAMMATION, PERIOSTEAL.	0	1 2+	0	0	0	0	0
ACUTE AND CHRONIC.	0	0	0	0	0	0	0
AUTOLYZED.	0	0	0	1 2+	0	0	0
INFLAMMATION, INTERCOSTAL, ACUTE.	0	0	0	0	0	0	0
MISSING.	0	0	0	0	1	0	0
INSUFFICIENT TISSUE.	0	0	0	0	1	2	0
PRESENT IN SECTION.	0	0	0	0	0	1 3+	0
HYPERPLASIA, GRANULOCYTIC.	0	0	0	0	0	1	0
HEALING FRACTURE.	0	0	0	0	0	1	0
ARTIFACT(S).	0	0	0	0	0	1	0
MYOSITIS, ACUTE AND CHRONIC.	0	0	0	0	0	0	1 2+
MYODEGENERATION.	0	0	0	0	0	0	1 2+
FEMUR/BONE MARROW							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	45	43	44	41	45	45	50
MISSING.	1	3	1	2	3	2	0
INSUFFICIENT TISSUE.	1	1	5	3	2	1	0
PRESENT IN SECTION.	1 3+	0	0	0	0	0	0
DECREASED MARROW CELLULARITY.	0	0	0	1	0	0	0
AUTOLYZED.	0	0	0	1 3+	0	0	0
HYPERPLASIA, GRANULOCYTIC.	0	0	0	0	0	2 3+	0
NASAL CAVITY							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	45	44	46	37	44	45	47
AUTOLYZED.	1	1	1	3	0	0	0
INSUFFICIENT TISSUE.	3	0	1	0	1	0	1
PRESENT IN SECTION.	1	1	0	0	1	0	0
ARTIFACT(S).	0	1	0	1	1	1	0
INFLAMMATION, ACUTE.	0	1	1 1+	3 1+	1 1+	1 1+	2 1+

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
NASAL CAVITY (continued)							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
INFLAMMATION, ACUTE AND CHRONIC.	0	0	1 1+	1 1+	0	0	0
EXUDATE, PURULENT.	0	0	0	3 1+ - 2+	2 2+	3 1+ - 2+	0
(PARANASAL TISSUE), INFLAMMATION.	0	0	0	1	0	0	0
MISSING.	0	0	0	0	1	0	0
EPITAXIS.	0	0	0	0	0	1 2+	0
OTHER							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
NOT REQUIRED.	46	42	48	42	17	21	19
(MEDIASTINAL LYMPH NODE),							
INFLAMMATION, GRANULOMATOUS.	1 2+	1 3+	1 1+	1 3+	21 1+ - 3+	17 2+ - 3+	21 1+ - 3+
(MEDIASTINAL LYMPH NODE),							
CRYSTALLINE DEPOSITS.	1 3+	2 2+ - 3+	1 2+	3 2+	21 1+ - 3+	17 1+ - 3+	24 1+ - 3+
(STOMACH GLAND), NO SIGNIFICANT							
LESION RECOGNIZED.	1	0	0	0	0	0	0
(MEDIASTINAL LYMPH NODE), NECROSIS.	0	1 3+	0	0	0	0	0
(BRONCHIAL LYMPH NODE),							
INFLAMMATION, GRANULOMATOUS.	0	1 3+	0	0	9 2+ - 4+	8 2+ - 3+	7 1+ - 3+
(BRONCHIAL LYMPH NODE),							
CRYSTALLINE DEPOSITS.	0	1 3+	0	0	9 2+ - 3+	11 1+ - 3+	7 1+ - 3+
(MEDIASTINAL LYMPH NODE), INFLAMMATION,							
GRANULOMATOUS, ACUTE.	0	1 2+	0	0	1 3+	1 3+	2 2+ - 3+
(MEDIASTINAL LYMPH NODE), MELANOMA.	0	1	0	0	0	0	0
(BRONCHIAL LYMPH NODE),							
ADENOCARCINOMA, METASTATIC.	0	0	0	1	0	0	0
(BRONCHIAL LYMPH NODE),							
GRANULAR DEPOSITS.	0	0	0	1 1+	0	0	0
(MEDIASTINAL LYMPH NODE),							
ADENOCARCINOMA, METASTATIC.	0	0	0	1	0	1	0
(MID-CHEST), SARCOMA, HISTIOCYTIC.	0	0	0	1	0	0	0
(MESENTERY), ABSCESS(ES).	0	0	0	0	1	0	0
(RENAL LYMPH NODE), INFLAMMATION,							
GRANULOMATOUS.	0	0	0	0	1 3+	0	1 2+
(RENAL LYMPH NODE),							
CRYSTALLINE DEPOSITS.	0	0	0	0	1 3+	0	1 2+
(SMALL INTESTINE),							
TELESCOPING, POSTMORTEM.	0	0	0	0	1	0	0
(BRONCHIAL LYMPH NODE),							
THROMBOSIS, ARTERIAL.	0	0	0	0	1 2+	0	0
(BRONCHIAL LYMPH NODE), CARCINOMA,							
ADENOSQUAMOUS, METASTATIC.	0	0	0	0	0	1	0
(RIBCAGE), ADENOCARCINOMA,							
METASTATIC, (LUNG).	0	0	0	0	0	1	0
(MEDIASTINAL LYMPH NODE),							
INFLAMMATION, ACUTE.	0	0	0	0	0	2 1+	0
(STOMACH GLAND), HEMORRHAGE.	0	0	0	0	0	1 1+	0
(FORE LEB), INFLAMMATION,							
GRANULOMATOUS.	0	0	0	0	0	1 3+	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7
OTHER (continued)							
NUMBER OF ANIMALS EXAMINED	[48]	[47]	[50]	[48]	[50]	[50]	[50]
(AXILLARY LYMPH NODE), INFLAMMATION, GRANULOMATOUS.	0	0	0	0	0	1 2+	0
(PENIS), INFLAMMATION.	0	0	0	0	0	1 3+	0
(EPIDIDYMS), HEMORRHAGE.	0	0	0	0	0	1 3+	0
(BRONCHIAL LYMPH NODE), CARCINOMA, SQUAMOUS CELL, METASTATIC.	0	0	0	0	0	1	0
(BRONCHIAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS, ACUTE.	0	0	0	0	0	2 2+ - 3+	0
(MEDIASTINAL LYMPH NODE), HEMORRHAGE.	0	0	0	0	0	1 3+	0
(PANCREATIC LYMPH NODE), INFLAMMATION, GRANULOMATOUS.	0	0	0	0	0	1 1+	0
(PANCREATIC LYMPH NODE), CRYSTALLINE DEPOSITS.	0	0	0	0	0	1 1+	0
(MEDIASTINAL LYMPH NODE), AMYLOIDOSIS.	0	0	0	0	0	0	1 3+
(EPIDIDYMS), INFLAMMATION, ACUTE.	0	0	0	0	0	0	1 4+

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
SKIN/SUBCUTIS							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	47	48	44	41	42	48	46
MISSING.	1	0	1	1	1	0	0
EDEMA, SUBCUTANEOUS.	1	2+	0	2	2+ - 3+	0	1
HYPERKERATOSIS.	1	2+	0	0	0	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	1	1	0	2	2	1
CYST(S), EPIDERMOID.	0	1	0	0	0	0	0
INFLAMMATION, CHRONIC.	0	0	3+	1	2+	1+	0
(SKELETAL MUSCLE), DEGENERATION.	0	0	1	0	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	0	2+	1	2+	0	0
EDEMA, SUBMUCOSAL.	0	0	0	1	3+	0	0
SARCOMA, GRANULOCYTIC.	0	0	0	1	0	0	0
MELANOSIS.	0	0	0	1	3+	0	0
INFLAMMATION, ACUTE.	0	0	0	0	1	1+	0
MAMMARY GLAND							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	2	5	1	2	0	0	0
NOT PRESENT IN SECTION.	48	45	49	48	50	50	48
THIGH MUSCLE							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	48	49	46	50	49	49	47
MISSING.	1	0	0	0	0	0	0
DEGENERATION, VASCULAR, INTERNAL.	1	1+	0	0	0	0	0
DEGENERATION.	0	1	2+	3	1+	0	0
THROMBUS, ARTERIAL.	0	0	1	1+	0	0	0
DEGENERATION, BASOPHILIC.	0	0	1	2+	0	0	0
INFLAMMATION, CHRONIC, INTERSTITIAL.	0	0	0	0	1	1+	0
ARTERITIS, CHRONIC.	0	0	0	0	0	1	1+
DEGENERATION, GRANULAR.	0	0	0	0	0	0	1
SALIVARY GLAND							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	48	48	47	47	49	50	48
MISSING.	1	2	2	0	0	0	0
LYMPHOMA, MALIGNANT.	1	0	0	0	0	0	0
INFARCT(S).	0	0	1	0	0	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	0	0	1	0	0	0
INFLAMMATION, CHRONIC.	0	0	0	1	2+	0	0
INFLAMMATION, ACUTE							
AND CHRONIC, PERIADENAL.	0	0	0	1	2+	0	0
DEGENERATION, ACINAR.	0	0	0	0	1	2+	0
(SALIVARY GLAND); LYMPHOMA,							
MALIGNANT, HISTIOCYTIC.	0	0	0	0	0	1	0
MANDIBULAR LYMPH NODE							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	40	38	39	36	40	38	33
MISSING.	10	7	10	11	8	12	8

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
MANDIBULAR LYMPH NODE (continued)							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	2	0	0	0	0	0
ERYTHROCYTOSIS, SINUSOIDAL.	0	2 2+	0	0	0	0	0
LYMPHOMA, MALIGNANT.	0	1	1	0	0	0	0
AUTOLYZED.	0	0	0	1	0	0	0
NEOPLASM, HEMATOPOIETIC.	0	0	0	1	0	0	0
SARCOMA, GRANULOCYTIC.	0	0	0	1	0	0	0
HYPERPLASIA.	0	0	0	0	1 2+	0	0
DILATATION, SINUSOIDAL.	0	0	0	0	1 2+	0	0
SARCOMA, RETICULUM CELL.	0	0	0	0	0	0	1
LYMPHOMA, MALIGNANT, HISTIOCYTIC.	0	0	0	0	0	0	1
SCIATIC NERVE							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	47	48	46	46	49	49	45
MISSING.	3	3	4	3	0	0	1
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	1	0	0	1	1	2
INFLAMMATION, CHRONIC.	0	0	0	1 2+	0	0	0
BRAIN							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	49	50	50	48	50	50	47
LYMPHOMA, PERIVASCULAR.	1	0	0	0	0	0	0
HYPEREMIA.	0	0	0	1 3+	0	0	0
MENTINGEAL INFLAMMATION,							
ACUTE AND CHRONIC.	0	0	0	1 2+	0	0	0
NECROSIS.	0	0	0	0	0	0	1 2+
HEMORRHAGE.	0	0	0	0	0	0	1 2+
PITUITARY							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	39	39	39	40	43	36	34
MISSING.	10	7	9	9	3	9	6
VACUOLATION.	1 3+	0	1 2+	0	1 1+	2 2+ - 3+	3 1+ - 2+
CYST(S).	0	1 3+	0	0	0	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	3	1	0	3	3	3
AUTOLYZED.	0	0	0	1	0	0	1
ARTIFACT(S).	0	0	0	0	0	0	1
ADRENALS							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	19	33	33	25	37	24	31
AMYLOIDOSIS.	18 1+ - 4+	9 1+ - 4+	9 1+ - 3+	13 2+ - 4+	5 2+ - 4+	20 1+ - 4+	10 1+ - 4+
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	1	0	0	0	0	0	0
AUTOLYZED.	1	0	0	1	0	0	1
HYPERPLASIA, CORTICAL CELL.	7 1+ - 2+	4 1+ - 2+	5 2+	5 2+ - 3+	5 2+ - 3+	2 2+ - 3+	4 1+ - 3+
PIGMENTATION, CORTICAL CELL.	1 2+	0	0	0	0	0	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
ADRENALS (continued)							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
ADENOMA, CORTICAL CELL.	3	3	1	3	2	5	1
CARCINOMA, CORTICAL CELL.	1	0	0	1	0	0	0
HYPERPLASIA, MEDULLARY.	1	0	0	0	0	0	0
LYMPHOMA, MALIGNANT.	1	0	0	0	0	0	0
MISSING.	0	1	0	1	0	0	0
GRANULE(S), CYTOPLASMIC.	0	1	1+	0	0	0	0
PROLIFERATION, CORTICAL CELL.	0	1	2+	0	0	0	0
ECTASIA, SINUSOIDAL.	0	0	1	4+	1	2+	0
SARCOMA, NOS.	0	0	1	0	0	0	0
NEOPLASIA(S), NOS.	0	0	1	0	0	0	0
CARCINOMA, ANAPLASTIC, INVASIVE.	0	0	0	0	1	0	0
SARCOMA, RETICULUM CELL.	0	0	0	0	0	0	1
THYMUS							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	16	28	19	21	18	17	19
MISSING.	31	15	24	21	27	30	24
ATROPHY.	1	3+	5 3+ - 4+	6 3+ - 4+	3	3+	3 2+ - 3+
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	1	2	0	0	0	0	1
LYMPHOMA, MALIGNANT.	1	0	0	0	0	0	0
CYST(S).	0	1	2+	0	0	0	0
CARCINOMA, SQUAMOUS CELL, INVASIVE.	0	0	1	0	0	0	0
CARCINOMA, FOLLICULAR CELL.							
METASTATIC, (THYROID).	0	0	0	1	0	0	0
LEUKEMIA, MEGAKARYOCYTIC.	0	0	0	1	0	0	0
AUTOLYZED.	0	0	0	0	1	0	0
CARCINOMA, INVASIVE.	0	0	0	0	1	0	0
SARCOMA, RETICULUM CELL.	0	0	0	0	0	0	1
STOMACH							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	32	1	29	35	28	43	28
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	6	5	9	7	3	2	4
AUTOLYZED.	2	4	6	2	5	2	5
MINERALIZATION.	1	0	0	0	0	1	0
PAPILLOMA.	2	0	3	1	2	0	4
HYPERPLASIA.	5 2+ - 3+	3 2+ - 3+	1	2+	11 1+ - 3+	1	2+
PIGMENTATION, POSTMORTEM.	2	3	2	3	0	0	1
NECROSIS, MUCOSAL.	1	0	0	0	0	0	0
INFLAMMATION, CHRONIC.	0	1	1+	0	0	0	0
PIGMENTATION.	0	1	2+	0	0	0	0
MISSING.	0	0	1	0	1	0	1
MINERALIZATION, MUCOSAL.	0	0	0	1	0	0	0
NECROSIS.	0	0	0	1	2+	0	1
PAPILLOMA, SQUAMOUS.	0	0	0	0	1	0	0
ULCER(S).	0	0	0	0	1	4+	2 2+ - 3+

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
STOMACH (continued)							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
INFLAMMATION, ACUTE.	0	0	0	0	0	1 2+	0
HEMORRHAGE, MUCOSAL.	0	0	0	0	0	0	1 2+
EDEMA.	0	0	0	0	0	0	1 2+
DUODENUM							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	28	31	29	36	32	40	27
MISSING.	3	3	2	0	3	1	0
AUTOLYZED.	19	16	18	12	15	8	19
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.	0	0	1 1+	0	0	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	0	0	1	0	0	1
HYPEREMIA.	0	0	0	1 2+	0	0	0
HEMORRHAGE.	0	0	0	0	0	1 1+	0
SARCOMA, RETICULUM CELL.	0	0	0	0	0	0	1
JEJUNUM							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	30	32	27	36	31	38	26
MISSING.	2	1	4	1	2	0	0
AUTOLYZED.	17	17	18	11	15	12	22
HYPEREMIA.	1 3+	0	0	0	0	0	0
HEMORRHAGE.	1 3+	0	0	1 2+	0	0	0
INTRALUMINAL BLOOD.	0	0	1 3+	0	0	0	0
DILATATION OF LYMPHATICS.	0	0	0	1 1+	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	0	0	0	1 2+	0	0
INFLAMMATION, HEMORRHAGIC.	0	0	0	0	1 2+	0	0
CECUM							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	21	25	12	26	17	28	17
MISSING.	2	0	1	0	1	0	0
AUTOLYZED.	22	19	23	16	24	11	26
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.	3 1+ - 2+	2 2+	6 1+ - 3+	2 1+ - 3+	5 1+ - 3+	3 1+ - 3+	1 2+
INFLAMMATION, CHRONIC.	1 1+	3 2+ - 3+	3 1+ - 2+	2 2+	1 2+	4 2+	1 2+
HYPEREMIA.	1 3+	0	0	0	1 1+	0	0
SEROSITIS, ACUTE.	1 3+	0	0	0	0	0	0
HEMORRHAGE.	1 3+	2 2+ - 4+	0	2 2+	0	0	1 2+
INFLAMMATION, ACUTE AND CHRONIC.	0	1 2+	2 2+	4 1+ - 2+	0	3 1+ - 2+	1 2+
ULCER(S).	0	0	1 1+	0	0	0	0
EDEMA.	0	0	1 2+	0	0	0	1 3+
SARCOMA, NOS.	0	0	1	0	0	0	0
NEPHRODIASTIS.	0	0	1	0	0	2	1
INFLAMMATION, PYOGRANULOMATOUS.	0	0	0	1 4+	0	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	0	0	0	1	0	0
DILATATION, CRYPT.	0	0	0	0	1 2+	0	0
ILEUM							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
ILEUM (continued)							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	20	25	23	29	27	33	23
MISSING.	9	7	7	5	4	1	2
AUTOLYZED.	20	16	19	14	17	14	23
HYPEREMIA.	1	3+	0	1	2+	0	0
HEMORRHAGE.	1	3+	0	0	1	4+	0
EDEMA.	0	1	2+	0	0	1	3+
INFLAMMATION, CHRONIC.	0	1	2+	0	0	0	0
HEMORRHAGE, MUCOSAL.	0	1	2+	0	0	0	0
INTRALUMINAL BLOOD.	0	0	1	3+	0	0	0
DILATATION OF LYMPHATICS.	0	0	0	1	2+	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	0	0	0	1	2+	0
CARCINOMA.	0	0	0	0	0	1	0
COLON/RECTUM							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	34	35	28	38	38	32	33
AUTOLYZED.	10	11	14	7	11	8	12
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.	1	1+	3 1+ - 2+	4 1+ - 3+	1	1+	2 2+ - 4+
HEMATODIASIS.	3	3	2+	1	2	0	1
GRANULOMA, PARASITIC.	1	0	0	0	0	0	0
HYPEREMIA.	1	3+	0	0	0	0	0
HEMORRHAGE.	1	3+	0	1	4+	0	0
MISSING.	0	1	2	0	2	0	0
INFLAMMATION, CHRONIC.	0	2 1+ - 3+	2 2+ - 3+	1	2+	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	1	2+	1	2+	3+	0
ULCER(S).	0	0	1	2+	3 2+ - 3+	0	2 2+ - 3+
ABSCESSES.	0	0	1	1+	0	1	2+
ADENOCARCINOMA.	0	0	0	4+	0	0	0
DILATATION, CRYPT.	0	0	0	0	1	2+	0
MESENTERY, INFLAMMATION.	0	0	0	0	0	1	2+
ACUTE AND CHRONIC.	0	0	0	0	0	1	2+
INFLAMMATION, PYOGRANULOMATOUS.	0	0	0	0	0	1	4+
PARASITIC.	0	0	0	0	0	1	4+
MESENTERIC LYMPH NODE							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	36	36	30	37	33	33	30
MISSING.	6	5	7	6	6	5	9
INFLAMMATION, GRANULOMATOUS.	2 2+ - 4+	0	1	2+	1	3+	0
AUTOLYZED.	3	5	3	2	3	2	2
HYPERPLASIA.	2	2+	0	4 2+ - 3+	3 2+ - 3+	2	2+
ERYTHROCYTOSIS, SINUSOIDAL.	1	2+	0	0	1	2+	0
INSUFFICIENT TISSUE	0	1	1	0	3	1	1
PRESENT IN SECTION.	0	1	2+	0	0	0	0
ECTASIA, SINUSOIDAL.	0	1	1+	0	0	0	0
HEMORRHAGE.	0	1	2+	0	0	0	0
HISTIOCYTOSIS, SINUSOIDAL.	0	1	2+	0	0	0	0
TUMOR EMBOLUS.	0	0	1	0	0	0	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
MESENTERIC LYMPH NODE (continued)							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
PLASMOCYTOSIS.	0	0	1 2+	0	0	0	0
FIBROSIS.	0	0	1 3+	0	0	0	0
FIBROSARCOMA.	0	0	1	0	0	0	0
CRYSTALLINE DEPOSITS.	0	0	0	1 3+	0	0	0
LEUKEMIA, MEGAKARYOCYTIC.	0	0	0	1	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	0	0	0	1 3+	1 2+	0
SARCOMA, NOS.	0	0	0	0	1	1	0
LYMPHOMA, MALIGNANT, HISTIOCYTIC.	0	0	0	0	0	1	1
CARCINOMA, METASTATIC, (INTESTINAL).	0	0	0	0	0	1	0
CARCINOMA, METASTATIC, (ILEAL).	0	0	0	0	0	1	0
INFLAMMATION, ACUTE.	0	0	0	0	0	0	2 2+ - 4+
LARYNX							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	30	48	31	50	31	49	28
HYPERPLASIA, SUBMUCOSAL, GLANDULAR.	2 2+	0	0	0	1 2+	0	0
INFLAMMATION, ACUTE.	1 2+	0	1 2+	0	0	0	2 2+ - 3+
CARCINOMA, SQUAMOUS CELL.	2	0	1	0	1	0	5
HYPERPLASIA.	7 2+ - 3+	1 1+	1	0	5 1+ - 3+	0	5 1+ - 2+
POLYP(S), EPITHELIAL.	8	0	6	0	6	0	5
DEGENERATION, MUCOSAL.	0	1 1+	0	0	0	0	0
PERILARYNGEAL MUSCLE.	0	1	0	0	0	0	0
MISSING.	0	1	3	0	1	1	0
CRYSTALLINE DEPOSITS, SUBMUCOSAL.	0	1 1+	0	0	0	0	0
ASPIRATION, FOREIGN MATERIAL.	0	0	1	0	0	0	0
METAPLASIA, SQUAMOUS.	0	0	1	0	1 1+	0	0
ADENOCARCINOMA, INVASIVE.	0	0	1	0	0	0	0
ADENOCARCINOMA.	0	0	0	0	1	0	0
CARCINOMA, IN SITU.	0	0	0	0	1	0	0
ARTERITIS, CHRONIC.	0	0	0	0	1 2+	0	0
HYPERPLASIA, SQUAMOUS CELL.	0	0	0	0	1 3+	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	0	0	0	0	0	1 3+
DYSPLASIA, MUCOSAL.	0	0	0	0	0	0	1 1+
SARCOMA, RETICULUM CELL.	0	0	0	0	0	0	1
CARCINOMA, INTRALUMINAL.	0	0	0	0	0	0	1
TRACHEA							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	43	50	40	49	35	49	33
INSUFFICIENT TISSUE PRESENT IN SECTION.	1	0	0	0	0	0	0
ADENOCARCINOMA.	1	0	2	0	0	0	1
HYPERPLASIA.	3 1+ - 2+	0	0	0	1 2+	0	2 2+
POLYP(S), EPITHELIAL.	1	0	3	0	6	0	9
METAPLASIA, MUCOSAL.	1 1+	0	0	0	0	0	0
CARCINOMA, ADENOSQUAMOUS.	0	0	1	0	0	0	0
AUTOLYZED.	0	0	1	0	0	1	0
MISSING.	0	0	1	1	0	0	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
TRACHEA (continued)							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
CARCINOMA, SQUAMOUS CELL.	0	0	1	0	3	0	3
ASPIRATION, FOREIGN MATERIAL.	0	0	1	0	0	0	0
CARCINOSARCOMA.	0	0	1	0	0	0	0
DYSPLASIA.	0	0	0	0	1	2+	0
INFLAMMATION, ACUTE.	0	0	0	0	2 1+ - 2+	0	0
EXUDATE, PURULENT.	0	0	0	0	1	0	0
FOREIGN MATERIAL.	0	0	0	0	1	0	0
MINERALIZATION.	0	0	0	0	1 3+	0	0
THYROID							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	41	38	37	41	44	40	36
MISSING.	8	7	10	2	3	4	4
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	1	2	1	0	2	1	4
AMYLOIDOSIS.	0	1	1 2+	6 1+ - 2+	0	3 2+ - 3+	2 2+ - 3+
HYPERPLASIA, CORTICAL CELL.	0	1 1+	0	0	0	0	0
CYSTIC HYPERPLASIA.	0	1 2+	0	0	0	0	0
TUMOR EMBOLUS.	0	0	1	0	0	0	0
AUTOLYZED.	0	0	0	1	0	0	1
CARCINOMA, NOS.	0	0	0	0	1	0	0
CYST(S), FOLLICULAR.	0	0	0	0	0	1	1 2+
NEOPLASM(S), NOS.	0	0	0	0	0	1	0
PARATHYROID							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	25	23	27	33	31	27	24
MISSING.	24	27	23	16	18	21	22
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	1	0	0	0	1	1	1
NOT PRESENT IN SECTION.	0	0	0	1	0	1	0
AUTOLYZED.	0	0	0	0	0	0	1
ESOPHAGUS							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	47	50	47	49	48	47	45
MISSING.	1	0	1	0	1	2	1
CARCINOMA, SQUAMOUS CELL.	1	0	0	0	0	0	0
POLYP(S), EPITHELIAL.	1	0	0	0	0	0	0
LYMPHOMA, MALIGNANT.	1	0	0	0	0	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	0	2	1	1	1	1
INFLAMMATION, ACUTE, PERIESOPHAGEAL.	0	0	0	0	0	0	1 2+
LUNG & BRONCHI-LEFT							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	3	29	3	34	3	3	0
ADENOMA.	5	0	2	0	3	0	5
CARCINOMA, BRONCHIOAL.	1	0	0	0	0	0	0
INFLAMMATION, GRANULOMATOUS.	27 1+ - 4+	1 2+	7 2+ - 4+	2 3+ - 4+	1 4+	4 2+ - 4+	3 1+ - 3+

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
LUNG & BRONCHI-LEFT (continued)							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
INFLAMMATION, ACUTE.	3 2+ - 3+	1 3+	1 4+	0	1 4+	0	2 3+
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.	7 1+	19 1+	42 1+ - 3+	10 1+	38 1+ - 3+	45 1+ - 3+	45 1+ - 2+
ADENOCARCINOMA.	17	0	12	0	12	0	10
CARCINOMA, SQUAMOUS CELL.	5	0	5	0	6 2+	0	8
CARCINOMA, ADENOSQUAMOUS.	4	0	4	0	6	0	2
PNEUMONIA, ASPIRATION.	3 2+ - 3+	0	3 2+ - 3+	0	2 2+	0	4 3+ - 4+
HEMORRHAGE.	2 2+ - 4+	0	0	0	0	0	0
HYPERPLASIA, ALVEOLAR/BRONCHIOAL.	2 2+	0	1 2+	0	3 1+ - 2+	0	2 1+
INFLAMMATION, ACUTE AND CHRONIC.	1 1+	0	0	0	0	0	0
INFLAMMATION, LYMPHOGRANULOMATOUS.	1 2+	0	0	0	0	0	0
(MAINSTEM BRONCHUS).							
CARCINOMA, SQUAMOUS CELL.	1	0	1	0	0	0	0
EMPHYSEMA.	1 3+	0	0	0	0	0	0
LYMPHOMA, MALIGNANT.	1	0	0	0	0	0	0
(ALVEOLAR CAPILLARIES), HYALINIZATION.	0	1 2+	0	0	0	0	0
EXUDATE, PROTEIN RICH, ALVEOLAR.	0	1 2+	1	0	1	0	0
THROMBUS, FIBRIN, CAPILLARY.	0	0	1 2+	0	0	0	0
POLYP(S), BRONCHIOAL, EPITHELIAL.	0	0	2	0	0	0	0
CARCINOMA, SQUAMOUS CELL, METASTATIC.	0	0	1	0	0	0	0
SARCOMA, METASTATIC, NOS.	0	0	1	0	0	0	0
ADENOCARCINOMA, METASTATIC.	0	0	1	0	0	0	0
CARCINOMA, ANAPLASTIC.	0	0	1	0	0	0	0
HYPERPLASIA, BRONCHIOAL.	0	0	1 2+	0	0	0	0
METAPLASIA, SQUAMOUS.	0	0	1	0	0	0	1 1+
HYPERPLASIA, BRONCHIOAL, EPITHELIAL.	0	0	1 2+	0	1 2+	0	0
ADENOCARCINOMA, INVASIVE.	0	0	1	0	0	0	0
MISSING.	0	0	0	1	0	0	0
OSTEOSARCOMA, METASTATIC.	0	0	0	1	0	0	0
HYPEREMIA.	0	0	0	1 3+	0	0	0
LEUKEMIA, MEGAKARYOCYTIC.	0	0	0	1	0	0	0
SARCOMA, UNDIFFERENTIATED.	0	0	0	1	0	0	0
HYPERCELLULARITY, ALVEOLAR SEPTUMS.	0	0	0	1 3+	0	0	0
ABSCESSES.	0	0	0	0	1	0	0
CARCINOMA, ANAPLASTIC, METASTATIC.	0	0	0	0	1	0	0
NEOPLASM(S), NOS.	0	0	0	0	1	0	0
(MAINSTEM BRONCHUS), ADENOCARCINOMA.	0	0	0	0	0	0	1
(MASS); CARCINOMA, SQUAMOUS CELL.	0	0	0	0	0	0	1
ADENOCARCINOMA, BRONCHIOAL.	0	0	0	0	0	0	1
SARCOMA, RETICULUM CELL.	0	0	0	0	0	0	1
LUNG & BRONCHI-APICAL							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	4	36	4	36	10	5	3
ADENOMA.	4	0	0	0	0	0	0
INFLAMMATION, GRANULOMATOUS.	28 1+ - 4+	1 2+	5 2+ - 3+	2 3+ - 4+	1 4+	4 2+ - 4+	3 1+ - 3+
INFLAMMATION, ACUTE.	3 2+ - 3+	1 3+	2 4+	0	3 4+	0	1 3+

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
LUNG & BRONCHI-APICAL (continued)							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.	7 1+	12 1+	40 1+ - 3+	9 1+	33 1+ - 3+	43 1+ - 3+	44 1+ - 2+
ADENOCARCINOMA.	6 0	0	3 0	0	3 0	0	1 0
CARCINOMA, ADENOSQUAMOUS.	1 0	0	3 0	0	5 0	0	0 0
ADENOMA, BRONCHIOLAR.	1 0	0	0 0	0	0 0	0	0 0
PNEUMONIA, ASPIRATION.	3 2+ - 3+	0	3 2+ - 3+	0	2 2+	0	4 3+ - 4+
HEMORRHAGE.	1 2+	0	0 0	0	0 0	0	0 0
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	2 1+	0	0 0	0	0 0	0	0 0
INFLAMMATION, ACUTE AND CHRONIC.	1 1+	0	0 0	0	0 0	0	0 0
INFLAMMATION, LYMPHOGRANULOMATOUS.	1 2+	0	0 0	0	0 0	0	0 0
LYMPHOMA, MALIGNANT.	1 0	0	0 0	0	0 0	0	0 0
MISSING.	0 1	0	2 1	1	1 0	0	0 0
(ALVEOLAR CAPILLARIES), HYALINIZATION.	0 1	2+	0 0	0	0 0	0	0 0
METAPLASIA, SQUAMOUS.	0 1	1+	0 0	0	1 3+	0	0 0
CARCINOMA, SQUAMOUS CELL.	0 0	0	5 0	0	0 0	0	0 0
THROMBUS, FIBRIN, CAPILLARY.	0 0	0	1 2+	0	0 0	0	0 0
CARCINOMA, SQUAMOUS CELL, METASTATIC.	0 0	0	1 0	0	0 0	0	0 0
ADENOCARCINOMA, METASTATIC.	0 0	0	1 0	0	0 0	0	0 0
OSTEOSARCOMA, METASTATIC.	0 0	0	0 1	0	0 0	0	0 0
HYPEREMIA.	0 0	0	0 1	3+	0 0	0	0 0
LEUKEMIA, MEGAKARYOCYTIC.	0 0	0	0 1	3+	0 0	0	0 0
HYPERCELLULARITY, ALVEOLAR SEPTUMS.	0 0	0	0 1	3+	0 0	0	0 0
HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.	0 0	0	0 0	0	1 2+	0	0 0
TUMOR EMBOLUS.	0 0	0	0 0	0	0 0	0	1 0
SARCOMA, RETICULUM CELL.	0 0	0	0 0	0	0 0	0	1 0
LUNG & BRONCHI-AZYGOUS							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	3 32	0	4 34	9	2	0	0
ADENOMA.	4 0	0	2 0	0	0	0	0
INFLAMMATION, GRANULOMATOUS.	29 1+ - 4+	1 2+	6 2+ - 4+	2 3+ - 4+	1 4+	4 2+ - 4+	3 1+ - 3+
INFLAMMATION, ACUTE.	3 2+ - 3+	1 3+	1 4+	0	2 4+	0	1 3+
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.	7 1+	14 1+	40 1+ - 3+	12 1+ - 2+	35 1+ - 3+	47 1+ - 3+	46 1+ - 2+
ADENOCARCINOMA.	12 0	0	5 0	0	5 0	0	2 0
CARCINOMA, SQUAMOUS CELL.	1 0	0	6 0	0	1 0	0	4 0
CARCINOMA, ADENOSQUAMOUS.	4 0	0	4 0	0	2 0	0	3 0
PNEUMONIA, ASPIRATION.	3 2+ - 3+	0	3 2+ - 3+	0	2 2+	0	4 3+ - 4+
HEMORRHAGE.	1 2+	0	0 0	0	0 0	0	0 0
INFLAMMATION, ACUTE AND CHRONIC.	1 1+	0	0 0	0	0 0	0	0 0
INFLAMMATION, LYMPHOGRANULOMATOUS.	1 2+	0	0 0	0	0 0	0	0 0
LYMPHOMA, MALIGNANT.	1 0	0	0 0	0	0 0	0	0 0
MISSING.	0 2	0	1 1	2	2 0	0	0 0
(ALVEOLAR CAPILLARIES), HYALINIZATION.	0 1	2+	0 0	0	0 0	0	0 0
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	0 1	1+	0 0	0	0 0	0	0 0
THROMBUS, FIBRIN, CAPILLARY.	0 0	0	1 2+	0	0 0	0	0 0
CARCINOMA, SQUAMOUS CELL, METASTATIC.	0 0	0	1 0	0	0 0	0	0 0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
LUNG & BRONCHI-AZYGOUS (continued)							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
ADENOCARCINOMA, METASTATIC.	0	0	1	0	0	0	0
NEOPLASM(S), NOS.	0	0	0	1	0	0	0
HYPEREMIA.	0	0	0	1 3+	0	0	0
LEUKEMIA, MEGAKARYOCYTIC.	0	0	0	1	0	0	0
HYPERCELLULARITY, ALVEOLAR SEPTUMS.	0	0	0	1 3+	0	0	0
ABSCESS(ES).	0	0	0	0	1	0	0
ADENOCARCINOMA, BRONCHIOLAR.	0	0	0	0	1	0	0
EXUDATE, PROTEIN RICH, ALVEOLAR.	0	0	0	0	1 2+	0	1 2+
(MASS); CARCINOMA, ADENOSQUAMOUS.	0	0	0	0	0	0	1
SARCOMA, RETICULUM CELL.	0	0	0	0	0	0	1
LUNG & BRONCHI-DIAPHRAGMATIC							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	3	34	2	33	3	4	2
ADENOMA.	7	0	1	0	0	0	2
INFLAMMATION, GRANULOMATOUS.	27 1+ - 4+	1 2+	6 2+ - 3+	2 3+ - 4+	1 4+	4 2+ - 4+	3 1+ - 3+
INFLAMMATION, ACUTE.	3 2+ - 3+	1 3+	3 4+	0	3 4+	0	1 3+
CRYSTALLINE DEPOSITS							
IN DISTAL AIRWAYS.	7 1+	15 1+	42 1+ - 3+	11 1+ - 2+	37 1+ - 3+	44 1+ - 3+	44 1+ - 2+
ADENOCARCINOMA.	17	0	8	1	13	0	3
CARCINOMA, SQUAMOUS CELL.	1 3+	0	11	0	4	0	4
CARCINOMA, ADENOSQUAMOUS.	5	0	3	0	7	0	2
PNEUMONIA, ASPIRATION.	3 2+ - 3+	0	3 2+ - 3+	0	2 2+	0	4 3+ - 4+
HEMORRHAGE.	1 2+	0	0	0	0	0	1 2+
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	1 2+	0	1 2+	0	2 1+ - 2+	0	1 1+
INFLAMMATION, ACUTE AND CHRONIC.	1 1+	0	0	0	0	0	0
INFLAMMATION, LYMPHOGRAULOMATOUS.	1 2+	0	0	0	0	0	0
(BRONCHIAL LYMPH NODE), HYPERPLASIA.	1 2+	0	0	0	0	0	0
LYMPHOMA, MALIGNANT.	1	0	0	0	0	0	0
(ALVEOLAR CAPILLARIES), HYALINIZATION.	0	1 2+	0	0	0	0	0
POLYP(S), BRONCHIOLAR.	0	0	1	0	0	0	0
THROMBUS, FIBRIN, CAPILLARY.	0	0	1 2+	0	0	0	0
CARCINOMA, BRONCOGENIC.	0	0	1	0	0	0	0
CARCINOMA, SQUAMOUS CELL, METASTATIC.	0	0	1	0	0	0	0
SARCOMA, NOS.	0	0	1	0	0	0	0
ADENOCARCINOMA, METASTATIC.	0	0	1	0	0	0	0
HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.	0	0	1 2+	0	2 1+ - 2+	0	0
MISSING.	0	0	0	1	1	0	0
OSTEOSARCOMA, METASTATIC.	0	0	0	1	0	0	0
HYPEREMIA.	0	0	0	1 3+	0	0	0
LEUKEMIA, MEGAKARYOCYTIC.	0	0	0	1	0	0	0
HYPERCELLULARITY, ALVEOLAR SEPTUMS.	0	0	0	1 3+	0	0	0
PROTEIN RICH EXUDATE, ALVEOLAR.	0	0	0	1 1+	0	0	0
(MAINSTEM BRONCHUS).							
CARCINOMA, SQUAMOUS CELL.	0	0	0	0	1	0	0
CARCINOMA, SQUAMOUS CELL,							
(BRONCHIOLAR ORIGIN).	0	0	0	0	1	0	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
LUNG & BRONCHI-DIAPHRAGMATIC (continued)							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
MINERALIZATION.	0	0	0	0	1 2+	0	0
NECROSIS.	0	0	0	0	0	0	1 3+
POLYP(S), BRONCHIOLAR, EPITHELIAL.	0	0	0	0	0	0	1
ADENOCARCINOMA, BRONCHIOLAR.	0	0	0	0	0	0	1
EXUDATE, PROTEIN RICH, ALVEOLAR.	0	0	0	0	0	0	1 2+
SARCOMA, RETICULUM CELL.	0	0	0	0	0	0	1
BACTERIAL COLONIES.	0	0	0	0	0	0	1 1+
LUNG & BRONCHI-CARDIAC							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	4	38	4	36	11	5	4
ADENOMA.	2	0	0	0	0	0	0
INFLAMMATION, GRANULOMATOUS.	27 1+ - 4+	1 2+	6 2+ - 3+	2 3+ - 4+	2 2+ - 4+	4 2+ - 4+	3 1+ - 3+
INFLAMMATION, ACUTE.	4 1+ - 3+	1 3+	2 4+	0	4 1+ - 4+	0	0
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.	7 1+	11 1+	41 1+ - 3+	9 1+	34 1+ - 3+	43 1+ - 3+	42 1+ - 2+
ADENOCARCINOMA.	9	0	5	0	3	0	0
CARCINOMA, ADENOSQUAMOUS.	4	0	3	0	2	0	1
PNEUMONIA, ASPIRATION.	3 2+ - 3+	0	3 2+ - 3+	0	2 2+	0	4 3+ - 4+
HEMORRHAGE.	1 2+	0	0	0	0	0	1 3+
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	1 2+	0	1 2+	0	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	1 1+	0	0	0	0	0	0
INFLAMMATION, LYMPHOGAMULOMATOUS.	1 2+	0	0	0	0	0	0
LYMPHOMA, MALIGNANT.	1	0	0	0	0	0	0
(ALVEOLAR CAPILLARIES), HYALINIZATION.	0	1 2+	0	0	0	0	0
CARCINOMA, SQUAMOUS CELL.	0	0	7	0	0	0	0
THROMBUS, FIBRIN, CAPILLARY.	0	0	1 2+	0	0	0	0
POLYP(S), BRONCHIOLAR, EPITHELIAL.	0	0	1	0	0	0	1
CARCINOMA, SQUAMOUS CELL, METASTATIC.	0	0	2	0	0	0	0
ADENOCARCINOMA, METASTATIC.	0	0	1	0	0	0	0
HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.	0	0	1 2+	0	1 2+	0	0
MISSING.	0	0	0	1	0	0	0
NEOPLASM(S), NOS.	0	0	0	1	0	0	0
OSTEOSARCOMA, METASTATIC.	0	0	0	1	0	0	0
HYPEREMIA.	0	0	0	1 3+	0	0	0
LEUKEMIA, MEGAKARYOCYTIC.	0	0	0	1	0	0	0
HYPERCELLULARITY, ALVEOLAR SEPTUMS.	0	0	0	1 3+	0	0	0
PIGMENTATION, HEPATOCYTIC.	0	0	0	0	0	0	1 2+
TUMOR EMBOLUS.	0	0	0	0	0	0	1
SARCOMA, RETICULUM CELL.	0	0	0	0	0	0	1
LIVER							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	30	36	31	31	31	28	27
AMYLOIDOSIS.	13 1+ - 3+	6 1+ - 3+	5 1+ - 2+	9 1+ - 3+	5 1+ - 2+	13 1+ - 3+	5 1+ - 2+
AUTOLYZED.	1	1	3	3	0	1	3
CYST(S), BILIARY.	6 1+ - 2+	5 1+ - 3+	2 1+ - 2+	3 1+ - 3+	1 2+	8 1+ - 3+	1 2+
NECROSIS.	2 2+ - 3+	0	2 1+ - 3+	2 1+	4 2+ - 3+	1 1+	3 1+ - 2+

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
LIVER (continued)							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
HYPEREMIA,	2 2+	0	1 2+	0	5 2+ - 4+	1 2+	2 2+ - 3+
VACUOLATION, CYTOPLASMIC,	1 2+	0	0	1 2+	1 1+	0	0
HYPERPLASIA, BILE DUCT,	1 2+	0	3 2+ - 3+	0	1 2+	0	0
CYSTADENOMA, BILIARY, PAPILLARY,	0	1	0	0	0	0	0
INFLAMMATION, ACUTE AND CHRONIC,	0	1 1+	0	0	0	0	0
PIGMENTATION, POSTMORTEM,	0	1 2+	0	0	0	0	0
INFLAMMATION, ACUTE,	0	1 2+	1 2+	0	0	0	0
PSEUDOLOBULE,	0	0	1 2+	0	0	0	0
VACUOLATION,	0	0	1 2+	0	0	0	0
(LATERAL), SARCOMA, RETICULUM CELL,	0	0	1	0	0	0	0
ECTASIA, SINUSOIDAL,	0	0	1 2+	0	1 4+	0	0
FIBROSIS, PORTAL,	0	0	1 2+	0	0	0	0
(LEFT), AUTOLYSIS,	0	0	0	1	0	0	0
LEUKEMIA, NEGAKARYOCYTIC,	0	0	0	1	0	0	0
SARCOMA, GRANULOCYTIC,	0	0	0	1	0	0	0
DEGENERATION,	0	0	0	0	1 3+	0	1 3+
INFLAMMATION, NOS,	0	0	0	0	1 2+	0	0
PIGMENTATION, CYTOPLASMIC,	0	0	0	0	1 2+	0	0
(CAUDATE LOBE), VACUOLATION,	0	0	0	0	1 2+	0	0
CYTOPLASMIC,	0	0	0	0	1 2+	0	0
FOCUS, BASOPHILIC,	0	0	0	0	1	0	0
HYPERPLASIA, HEPATOCELLULAR,	0	0	0	0	1 2+	0	1 2+
(LATERAL), CYST(S), BILIARY,	0	0	0	0	0	1 3+	0
LYMPHOMA, MALIGNANT, HISTIOCYTIC,	0	0	0	0	0	1	1
INFLAMMATION, CHRONIC,	0	0	0	0	0	1 2+	3 1+ - 2+
(LATERAL), HYPEREMIA,	0	0	0	0	0	0	1 3+
SARCOMA, RETICULUM CELL,	0	0	0	0	0	0	1
(MEDIAN LOBE), LYMPHOMA,	0	0	0	0	0	0	1
MALIGNANT, HISTIOCYTIC,	0	0	0	0	0	0	1
(LATERAL), LYMPHOMA,	0	0	0	0	0	0	1
MALIGNANT, HISTIOCYTIC,	0	0	0	0	0	0	1 2+
VACUOLATION, SINGLE CELL,	0	0	0	0	0	0	1 2+
GALLBLADDER							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED,	17	27	19	32	20	27	13
MISSING,	6	4	2	0	2	4	1
AUTOLYZED,	27	19	27	17	28	17	34
AMYLOIDOSIS,	0	0	1 3+	0	0	1 2+	0
CHOLELITH(S),	0	0	1	1 2+	0	0	0
EDEMA,	0	0	0	0	0	1 2+	0
SPLEEN							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED,	39	39	28	40	32	38	26
MISSING,	1	1	3	1	1	2	5
AMYLOIDOSIS,	3 3+	5 2+ - 3+	5 2+ - 3+	4 2+ - 3+	1 2+	6 2+ - 3+	5 1+ - 3+
AUTOLYZED,	1	1	3	2	4	1	3

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
SPLEEN (continued)							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
HEMATOPOIESIS, EXTRAMEDULLARY.	3 2+	3 2+ - 4+	5 2+ - 3+	1 2+	2 2+ - 3+	2 2+	5 2+ - 3+
HEMANGIOSARCOMA.	1	0	0	0	1	1	0
HYPERPLASIA, RETICULOENDOTHELIAL CELL.	1 2+	0	8 2+ - 3+	0	7 2+ - 4+	0	2 2+
LYMPHOMA, MALIGNANT.	1	0	0	0	0	0	0
HEMATOPOIESIS.	0	1 2+	0	0	1 2+	0	1 3+
HYPERCELLULARITY OF RED PULP.	0	0	1 2+	2 3+	0	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	0	0	0	1	0	0
NECROSIS.	0	0	0	0	0	1 4+	0
THROMBOSIS.	0	0	0	0	0	1 2+	0
DEPLETION OF LYMPHOCYTES.	0	0	0	0	0	0	1 3+
INFARCT(S).	0	0	0	0	0	0	1 3+
PANCREAS							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	44	47	41	44	41	45	41
MISSING.	2	0	4	3	3	0	1
AUTOLYZED.	1	2	3	2	1	4	5
ECTASIA, DUCTAL.	2 1+	0	0	0	0	0	0
LYMPHOMA, MALIGNANT.	1	0	0	0	0	0	0
ATROPHY, ACINAR.	0	1 2+	0	0	1 4+	0	0
ATROPHY.	0	0	1 4+	0	0	0	0
ARTERITIS, CHRONIC.	0	0	1 1+	0	0	0	0
NOT PRESENT IN SECTION.	0	0	0	1	0	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	0	0	0	1	0	0
INFLAMMATION, CHRONIC, PROLIFERATIVE.	0	0	0	0	1 2+	0	0
ECTASIA, INSULAR SINUS.	0	0	0	0	1 1+	0	0
INFLAMMATION, GRANULOMATOUS.							
PERIADENAL.	0	0	0	0	1 3+	0	0
HYPERPLASIA, ISLET CELL.	0	0	0	0	0	1 1+	0
AMYLOIDOSIS.	0	0	0	0	0	0	1 2+
HEART							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	36	48	45	45	44	44	42
AMYLOIDOSIS.	1 1+	0	0	0	0	1 4+	0
ARTERITIS, ACUTE AND CHRONIC.	1 2+	0	0	0	0	0	0
INFLAMMATION, ACUTE.	1 2+	0	0	0	1 3+	0	0
INFLAMMATION, CHRONIC.	1 2+	0	1 4+	0	0	0	1 1+
CARCINOMA, ADENOSQUAMOUS, METASTATIC.	2	0	0	0	0	0	0
DEGENERATION.	1 1+	0	1 2+	0	0	1 1+	0
THROMBOSIS.	4 2+ - 3+	2 2+ - 3+	3 2+ - 3+	2 3+	4 1+ - 3+	3 2+ - 4+	1 2+
INFLAMMATION, EPICARDIAL, ACUTE.	1 1+	0	0	0	0	0	0
CARCINOMA, SQUAMOUS CELL, METASTATIC.	1	0	0	0	0	0	1
LYMPHOMA, MALIGNANT.	1	0	0	0	0	0	0
SARCOMA, RETICULUM CELL.	0	0	1	0	0	0	0
SARCOMA, METASTATIC, NOS.	0	0	1	0	0	0	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
HEART (continued)							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
ARTERITIS, CHRONIC.	0	0	1 2+	0	0	0	0
VALVULITIS, CHRONIC.	0	0	0	1 2+	0	0	0
VALVULITIS.	0	0	0	1 2+	0	0	0
FIBROSIS, EPICARDIAL.	0	0	0	1 2+	0	0	0
ARTERITIS.	0	0	0	0	1 1+	0	0
CARCINOMA, SQUAMOUS CELL, INVASIVE.	0	0	0	0	1	0	0
AUTOLYZED.	0	0	0	0	0	1	1
LYMPHOMA, MALIGNANT, HISTIOCYTIC.	0	0	0	0	0	1	0
DEGENERATION, GRANULAR.	0	0	0	0	0	0	1 1+
(INTRAMYOCARDIAL ARTERY).	0	0	0	0	0	0	1 2+
INTIMAL HYPERPLASIA.	0	0	0	0	0	0	1
SARCOMA, RETICULUM CELL, MEDIASTINAL.	0	0	0	0	0	0	1
KIDNEYS							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	27	29	23	22	27	19	22
AMYLOIDOSIS.	15 2+ - 4+	11 1+ - 3+	10 1+ - 4+	13 1+ - 4+	8 1+ - 3+	16 1+ - 4+	11 1+ - 3+
AUTOLYZED.	1	0	0	2	3	2	0
NEPHROPATHY, CHRONIC.	8 1+ - 2+	10 1+ - 2+	15 1+ - 2+	13 1+ - 2+	9 1+ - 3+	10 1+ - 3+	8 1+ - 3+
LYMPHOMA, MALIGNANT.	1	0	0	0	0	0	0
MINERALIZATION.	0	1 2+	1 1+	0	0	0	1 1+
SARCOMA, RETICULUM CELL.	0	0	1	0	0	0	1
SARCOMA, METASTATIC, NOS.	0	0	1	0	0	0	0
ARTERITIS, CHRONIC.	0	0	1 2+	0	0	0	0
DILATATION, TUBULAR.	0	0	0	0	2 1+ - 3+	2 2+	1 2+
MICROABSCESSES, PAPILLARY.	0	0	0	0	1 2+	0	0
CARCINOMA, ANAPLASTIC.	0	0	0	0	1	0	0
INSUFFICIENT TISSUE	0	0	0	0	0	1	0
PRESENT IN SECTION.	0	0	0	0	0	0	0
CAST(S).	0	0	0	0	0	0	1 2+
ATROPHY, TUBULAR.	0	0	0	0	0	0	1 1+
NEPHRITIS, SEPTIC, EXFOLIC.	0	0	0	0	0	0	1 1+
HYPERCELLULARITY, GLOMERULAR.	0	0	0	0	0	0	1 2+
URINARY BLADDER							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	39	41	39	43	40	39	35
INFLAMMATION, ACUTE.	1 1+	0	0	0	0	0	0
INSUFFICIENT TISSUE	0	0	0	0	0	0	0
PRESENT IN SECTION.	2	2	0	2	2	1	2
AUTOLYZED.	6	5	10	3	7	6	8
MINERALIZATION.	1 2+	0	0	1 2+	0	0	0
INFLAMMATION, PERICYSTIC, ACUTE.	1 2+	0	0	0	0	0	0
MISSING.	0	2	0	0	1	2	2
DIVERTICULUM, CYSTIC.	0	0	1	0	0	0	0
INFLAMMATION, CHRONIC.	0	0	0	1 2+	0	0	0
FIBROPLASIA.	0	0	0	1 2+	0	0	0
INFLAMMATION, ACUTE	0	0	0	0	0	1 2+	0
AND CHRONIC, PARASITIC.	0	0	0	0	0	0	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
URINARY BLADDER (continued)							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
HENORRHAEGE,	0	0	0	0	0	1 3+	0
FIBROSIS, SUBMUCOSAL,	0	0	0	0	0	0	1 3+
PROSTATE							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	41	41	39	43	34	45	32
MISSING,	5	5	9	4	11	1	14
INFLAMMATION, ACUTE,	1 3+	0	0	1 4+	0	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION,	1	4	1	1	2	1	0
AUTOLYZED,	2	0	1	1	3	2	1
ATROPHY,	0	0	0	0	0	1 2+	0
MINERALIZATION,	0	0	0	0	0	0	1 2+
TESTES							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	22	33	25	25	29	29	24
MISSING,	2	0	1	0	2	2	2
ATROPHY,	19 1+ - 3+	15 2+ - 3+	19 1+ - 3+	21 1+ - 3+	15 1+ - 3+	18 1+ - 3+	20 1+ - 4+
DEGENERATION,	7 1+ - 3+	4 2+	2 2+ - 3+	2 1+ - 2+	3 2+ - 3+	0	2 2+ - 3+
SPERMATOCYST(S),	1	0	0	0	0	0	0
AUTOLYZED,	0	0	3	2	1	1	1
INFLAMMATION, GRANULOMATOUS,	0	0	1 2+	0	0	0	0
ARTERITIS, CHRONIC,	0	0	1 2+	0	0	0	0
AMYLOIDOSIS,	0	0	0	0	1 2+	0	0
SPERMATOGENIC ARREST,	0	0	0	0	1 2+	0	0
GRANULOMA, SPERMATOGENIC,	0	0	0	0	0	1	1 2+
(EPIDIDYMIS), NO SIGNIFICANT							
LESION RECOGNIZED,	0	0	0	0	0	1	0
HENORRHAEGE, INTRATUBULAR,	0	0	0	0	0	0	1 2+
SEMINAL VESICLES							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	45	49	48	49	46	46	41
INFLAMMATION, ACUTE,	2 2+ - 3+	0	0	0	1 3+	0	0
AUTOLYZED,	1	0	2	1	2	1	3
INFLAMMATION, PERIGLANDULAR, ACUTE,	1 2+	0	0	0	0	0	0
LYMPHOMA, MALIGNANT,	1	0	0	0	0	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION,	0	1	0	0	0	0	0
MISSING,	0	0	0	0	1	2	2
INFLAMMATION, ACUTE AND CHRONIC,	0	0	0	0	0	1 3+	0
INFLAMMATION, ACUTE, PERIADENAL,	0	0	0	0	0	0	1 2+
STERNUM & RIB JUNCTION							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	48	48	41	47	47	50	46
INSUFFICIENT TISSUE							
PRESENT IN SECTION,	1	0	0	0	0	0	0
HYPERPLASIA, CHONDROID,	1 2+	0	0	0	0	0	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
STERNUM & RIB JUNCTION (continued)							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
MISSING.	0	1	1	0	0	0	0
(RIB MARROW), FIBROSIS.	0	1+	0	0	0	0	0
HYPERPLASIA, MYELOID.	0	0	2	2+ - 4+	0	0	0
HYPERPLASIA, GRANULOCYTIC.	0	0	3	3+ - 4+	2	1	0
(BONE MARROW), HYPERPLASIA.	0	0	1	3+	0	0	0
(MARROW), EXTRUSION.	0	0	2	0	0	0	0
LEUKEMIA, MEGAKARYOCYTIC.	0	0	0	1	0	0	0
ENDOSTOSIS.	0	0	0	0	1	3+	0
ARTIFACT(S).	0	0	0	0	1	0	0
SARCOMA, RETICULUM CELL.	0	0	0	0	0	0	1
FEMUR/BONE MARROW							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	47	46	42	47	46	47	44
MISSING.	2	4	2	0	1	2	1
LYMPHOMA, MALIGNANT.	1	0	0	0	0	0	0
INSUFFICIENT TISSUE.	0	0	1	0	2	1	0
PRESENT IN SECTION.	0	0	1	0	0	0	0
HYPERPLASIA, MYELOID.	0	0	1	4+	0	0	0
HYPERPLASIA, GRANULOCYTIC.	0	0	3	3+ - 4+	0	0	0
(BONE MARROW), HYPERPLASIA.	0	0	1	3+	0	0	0
LEUKEMIA, MEGAKARYOCYTIC.	0	0	0	1	0	0	0
ENDOSTOSIS.	0	0	0	0	1	3+	0
MYELOFIBROSIS.	0	0	0	0	0	0	1
HYPERCELLULARITY.	0	0	0	0	0	0	1
SARCOMA, RETICULUM CELL.	0	0	0	0	0	0	1
NASAL CAVITY							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
NO SIGNIFICANT LESION RECOGNIZED.	41	46	45	46	46	44	44
INFLAMMATION, ACUTE.	1	1+	1	2+	1	3+	1
INSUFFICIENT TISSUE.	2	2	1	2	0	1	1
PRESENT IN SECTION.	4	1+	1	1+	2	2+	2
EXUDATE, PURULENT.	2	0	1	0	0	0	0
ARTIFACT(S).	0	1	0	0	2	0	0
AUTOLYZED.	0	0	0	0	0	1	0
MISSING.	0	0	1	3+	0	0	0
EPITAXIS.	0	0	0	1	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	0	0	2+	0	0	0
FOREIGN MATERIAL.	0	0	0	0	1	3+	0
OTHER							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
(MEDIASTINAL LYMPH NODE),	16	1+ - 3+	0	0	0	0	0
INFLAMMATION, GRANULOMATOUS.	20	1+ - 3+	0	3	1+ - 2+	1	2+
(MEDIASTINAL LYMPH NODE),	1	4+	0	0	0	0	0
CRYSTALLINE DEPOSITS.	18	50	42	46	42	46	42
(EPIDIDYMNIS), INFLAMMATION, ACUTE.							
NOT REQUIRED.							

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 8	GROUP 9	GROUP 10	GROUP 11	GROUP 12	GROUP 13	GROUP 14
OTHER (continued)							
NUMBER OF ANIMALS EXAMINED	[50]	[50]	[50]	[50]	[50]	[50]	[48]
(MEDIASTINAL LYMPH NODE), INFLAMMATION, ACUTE.	1 3+	0	0	0	0	0	0
(MEDIASTINAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS, ACUTE.	4 2+ - 3+	0	0	1 3+	0	0	0
(BRONCHIAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.	8 1+ - 3+	0	0	0	0	0	0
(BRONCHIAL LYMPH NODE), CRYSTALLINE DEPOSITS.	9 2+ - 3+	0	2 1+ - 2+	0	0	0	0
(BRONCHIAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS, ACUTE.	3 3+	0	0	0	0	0	0
(BRONCHIAL LYMPH NODE), ADENOCARCINOMA, METASTATIC.	1	0	0	0	0	0	0
(MASS-ORIGIN UNCERTAIN), ABSCESS(ES).	0	0	1	0	0	0	0
(MEDIASTINAL LYMPH NODE), CARCINOMA, SQUAMOUS CELL.	0	0	1	0	0	0	0
(MEDIASTINAL LYMPH NODE), CARCINOMA, SQUAMOUS CELL, METASTATIC.	0	0	1	0	2	0	0
(CECAL NODULE), SARCOMA, NOS.	0	0	1	0	0	0	0
(AXILLARY MASS), NEOPLASM(S), NOS.	0	0	0	1	0	0	0
(MASS-CHEST), OSTEOSARCOMA.	0	0	0	1	0	0	0
(MEDIASTINAL LYMPH NODE), OSTEOSARCOMA, METASTATIC.	0	0	0	1	0	0	0
(RIB), CARCINOMA, SQUAMOUS CELL.	0	0	0	0	1	0	0
(MEDIASTINAL LYMPH NODE), LYMPHOMA, MALIGNANT, HISTIOCYTIC.	0	0	0	0	0	1	0
(BRONCHIAL LYMPH NODE), HYPERPLASIA, (MEDIASTINAL LYMPH NODE).	0	0	0	0	0	1 2+	0
(CARCINOMA, METASTATIC, (ILEAL), (MEDULLARY LYMPH NODE).	0	0	0	0	0	1	0
(CRYSTALLINE DEPOSITS, (BRONCHIAL LYMPH NODE), NO	0	0	0	0	0	0	1 1+
SIGNIFICANT LESION RECOGNIZED.	0	0	0	0	0	0	1

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 15	GROUP 16	GROUP 17	GROUP 18	GROUP 19	GROUP 20	GROUP 21
SKIN/SUBCUTIS							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
HYPERKERATOSIS.	2 1+ - 2+	2 2+ - 3+	0	1 3+	0	0	0
NO SIGNIFICANT LESION RECOGNIZED.	37	42	47	42	46	46	45
INSUFFICIENT TISSUE PRESENT IN SECTION.	2	0	0	0	1	2	0
MISSING.	1	0	0	1	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	1 1+	0	0	0	1 2+	0	0
INFLAMMATION, SUBCUTANEOUS, CHRONIC.	1 2+	0	0	0	0	0	0
EDEMA, SUBCUTANEOUS.	6 1+ - 4+	6 1+ - 4+	2 2+ - 3+	4 2+ - 3+	2 1+ - 2+	0	1 3+
ACANTHOSIS.	1 2+	0	0	0	0	0	0
INFLAMMATION, CHRONIC.	0	0	1 2+	2 1+ - 2+	0	0	0
AUTOLYZED.	0	0	0	1	0	0	1
DERMATITIS, ULCERATIVE, NECROTIC.	0	0	0	1 3+	0	0	0
PARAKERATOSIS.	0	0	0	0	1 2+	0	0
INFLAMMATION, ACUTE.	0	0	0	0	0	1 1+	0
ACARIASIS.	0	0	0	0	0	1	1 2+
EDEMA.	0	0	0	0	0	0	1 2+
(SUBCUTANEOUS LYMPH NODE), HYPERPLASIA.	0	0	0	0	0	0	1 3+
MAMMARY GLAND							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NOT PRESENT IN SECTION.	49	49	49	49	47	48	50
NO SIGNIFICANT LESION RECOGNIZED.	0	1	1	1	3	2	0
THIGH MUSCLE							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	47	48	48	48	47	50	48
DEGENERATION.	2 1+	1 1+	2 1+ - 2+	1 2+	3 1+	0	1 1+
INFLAMMATION, CHRONIC.	0	1 2+	0	0	0	0	0
MISSING.	0	0	0	1	0	0	0
AUTOLYZED.	0	0	0	0	0	0	1
SALIVARY GLAND							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	45	43	48	48	48	49	49
MISSING.	2	5	2	1	2	0	0
EDEMA, INTERSTITIAL.	1 2+	0	0	0	0	0	0
DEGENERATION.	1 1+	0	0	0	0	0	0
INFLAMMATION, ACUTE.	0	1 3+	0	0	0	0	0
ATROPHY, ACINAR.	0	1 1+	0	0	0	0	0
CELLULAR INFILTRATION, NOS.	0	1 3+	0	0	0	0	0
HEMORRHAGE.	0	1 2+	0	0	0	0	0
AUTOLYZED.	0	0	0	1	0	1	1
MANDIBULAR LYMPH NODE							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	32	37	34	39	43	45	46
MISSING.	15	7	12	9	6	1	2
AUTOLYZED.	1	0	0	1	0	1	1
ECTASIA, SINUSOIDAL.	1 3+	2 2+	1 2+	0	0	0	0
INSUFFICIENT TISSUE PRESENT IN SECTION.	0	2	0	0	0	0	1

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 15	GROUP 16	GROUP 17	GROUP 18	GROUP 19	GROUP 20	GROUP 21
HANDIBULAR LYMPH NODE (continued)							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
HYPERPLASIA, RETICULOENDOTHELIAL CELL.	0	1	0	0	0	0	0
CRYSTALLINE DEPOSITS.	0	2+	0	0	0	0	0
ERYTHROCYTOSIS, SINUSOIDAL.	0	0	2 2+ - 3+	0	1 2+	0	0
HYPERPLASIA.	0	0	1 2+	1 2+	0	0	0
HYPEREMIA.	0	0	0	0	0	1 2+	0
EDEMA, PERIADENAL.	0	0	0	0	0	1 2+	0
SCIATIC NERVE							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	46	46	45	46	49	43	49
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	2	1	4	1	0	2	0
MISSING.	1	2	1	3	1	5	1
THROMBOSIS, MENINGEAL.	0	1 1+	0	0	0	0	0
BRAIN							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	48	48	48	50	50	49	48
AUTOLYZED.	1	0	0	0	0	0	1
MISSING.	0	1	1	0	0	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	1	0	0	0	0	0
THROMBOSIS, MENINGEAL.	0	1 1+	0	0	0	0	0
NECROSIS.	0	0	1 2+	0	0	0	0
GLIOSIS.	0	0	1 2+	0	0	0	1 1+
HALACIA.	0	0	1 2+	0	0	1 1+	0
PIGMENTATION.	0	0	1 2+	0	0	0	0
INFLAMMATION, ACUTE.	0	0	0	0	1 1+	0	0
MENINGITIS, ACUTE.	0	0	0	0	0	1 3+	0
MONONUCLEAR CELL							
CUFFING, PERIVASCULAR.	0	0	0	0	0	0	1 1+
PITUITARY							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	34	37	41	42	42	37	48
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	2	4	2	3	2	4	1
MISSING.	10	7	5	4	4	7	1
AUTOLYZED.	2	0	0	0	0	2	0
CYST(S).	1 3+	0	1 3+	0	0	0	0
AMYLOIDOSIS.	0	1 2+	0	0	0	0	0
CARCINOMA, SQUAMOUS CELL, METASTATIC.	0	1	0	0	0	0	0
VACUOLATION.	0	0	1 1+	0	1 2+	0	0
ARTIFACT(S).	0	0	0	1	0	0	0
ADRENALS							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	14	18	27	30	26	35	21
AMYLOIDOSIS.	27 1+ - 4+	29 1+ - 4+	12 1+ - 4+	10 1+ - 4+	15 2+ - 4+	9 1+ - 4+	23 1+ - 4+
AUTOLYZED.	4	0	2	1	1	1	2

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 15	GROUP 16	GROUP 17	GROUP 18	GROUP 19	GROUP 20	GROUP 21
ADRENALS (continued)							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
VASCULITIS, CORTICAL CELL.	1 3+	0	0	0	0	0	0
HYPEREMIA, CORTICAL.	1 3+	0	0	0	0	0	0
HEMORRHAGE, CORTICAL.	1 3+	0	0	0	0	0	0
ANGIECTASIS.	1 3+	0	0	0	0	0	0
HYPERPLASIA, CORTICAL CELL.	1 2+	1 2+	5 2+	4 2+	6 2+	1 2+	1 1+
INFARCT(S).	1 3+	0	0	0	0	0	0
ARTIFACT(S).	1	1	0	0	0	0	0
ADENOMA, CORTICAL CELL.	1	2	2	1	3	0	1
MISSING.	0	2	1	0	0	1	1
PIGMENTATION, GRANULAR.	0	0	1 1+	0	0	0	0
NECROSIS.	0	0	0	2 4+	0	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	0	0	1	0	1	0
PHEOCHROMOCYTOMA.	0	0	0	1	0	0	0
HYPEREMIA.	0	0	0	1 3+	0	0	0
DILATATION, SINUSOIDAL.	0	0	0	1 2+	0	0	0
CARCINOMA, CORTICAL CELL.	0	0	0	0	1	0	0
BASOPHILIA, CORTICAL CELL.	0	0	0	0	0	1 2+	0
(MASS-ADRENAL), CARCINOMA,							
CORTICAL CELL.	0	0	0	0	0	1	0
NEOPLASM(S), NOS.	0	0	0	0	0	1	0
NEOPLASM(S), CORTICAL CELL.	0	0	0	0	0	0	1
THYMUS							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	13	15	24	23	26	17	32
MISSING.	36	30	22	21	19	28	18
AUTOLYZED.	0	1	0	0	0	2	0
ATROPHY.	0	2 3+ - 4+	3 2+ - 3+	2 2+	3 2+ - 3+	2 4+	0
PAPILLOMA, SQUAMOUS CELL.	0	1	0	0	0	0	0
HYPERPLASIA.	0	1 2+	0	0	0	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	0	1	1	2	0	0
SARCOMA, NOS.	0	0	0	1	0	0	0
ADENOCARCINOMA, METASTATIC.	0	0	0	1	0	0	0
HYPERPLASIA, ADENOMATOUS.	0	0	0	1 2+	0	0	0
INFLAMMATION, ACUTE.	0	0	0	0	0	1 4+	0
STOMACH							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	25	28	32	33	31	33	32
AMYLOIDOSIS.	1 1+	1 1+	0	0	4 1+ - 2+	0	0
MISSING.	1	0	0	0	1	0	0
AUTOLYZED.	9	10	1	6	5	7	11
HYPERPLASIA.	3 2+	5 2+ - 3+	0	4 1+ - 2+	1 2+	6 1+ - 3+	0
HEMORRHAGE.	3 2+ - 3+	0	0	1 1+	0	0	0
HYPEREMIA.	1 3+	0	0	0	0	0	0
PIGMENTATION, POSTMORTEM.	6	0	3	2	3	0	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 15	GROUP 16	GROUP 17	GROUP 18	GROUP 19	GROUP 20	GROUP 21
STOMACH (continued)							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
INFLAMMATION, ACUTE.	1 1+	0	0	0	0	0	0
PIGMENTATION.	1	0	0	0	0	0	0
ULCER(S).	1 2+	0	1 3+	1 3+	0	0	1 2+
INSUFFICIENT TISSUE PRESENT IN SECTION.	0	2	3	1	4	2	0
CARCINOMA, SQUAMOUS CELL.	0	1	0	0	0	0	0
PAPILLOMA.	0	3	0	1	0	2	0
EDEMA, SUBMUCOSAL.	0	1 2+	1 3+	1 3+	0	0	0
MINERALIZATION, VASCULAR.	0	0	1 2+	0	0	0	0
HYDRODEGENERATION.	0	0	1 1+	0	0	0	0
HYPERPLASIA, SQUAMOUS.	0	0	0	1 2+	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	0	0	0	1 2+	0	0
DUODENUM							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	30	26	36	35	27	27	32
MISSING.	1	3	1	0	1	2	0
AUTOLYZED.	18	20	12	14	22	20	18
SEROSITIS, ACUTE.	0	1 2+	0	0	0	0	0
AMYLOIDOSIS.	0	0	1 2+	0	0	0	0
INFLAMMATION, CHRONIC.	0	0	0	1 2+	0	1 2+	0
JEJUNUM							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	25	28	35	29	27	26	30
MISSING.	2	0	2	1	0	2	0
AUTOLYZED.	22	21	12	19	23	20	19
HEMATODIASIS.	0	1	0	0	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	0	1 1+	0	0	0	1 2+
INFLAMMATION, CHRONIC.	0	0	0	1 2+	0	1 2+	0
HEMORRHAGE.	0	0	0	0	0	1 4+	0
CECUM							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	15	21	26	21	22	16	25
AUTOLYZED.	25	22	13	22	19	22	19
INFLAMMATION, ACUTE AND CHRONIC.	4 2+ - 3+	2 2+ - 4+	1 1+	1 4+	0	2 1+ - 2+	3 2+
HEMORRHAGE.	1 1+	1 3+	3 1+ - 3+	1 4+	2 1+	3 3+ - 4+	2 1+ - 2+
EDEMA.	1 4+	0	0	0	0	0	1 3+
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.	2 1+ - 2+	0	2 1+ - 2+	1 1+	3 1+ - 2+	4 1+ - 4+	1 1+
INFLAMMATION, CHRONIC.	1 2+	1 1+	3 2+	1 2+	6 1+ - 3+	1 2+	1 2+
EDEMA, SUBMUCOSAL.	1 3+	1 3+	1 1+	0	0	0	0
MISSING.	0	1	0	0	0	1	0
INFLAMMATION, ACUTE.	0	1 4+	0	1 4+	0	1 4+	0
HEMATODIASIS.	0	1	1	3	0	0	0
ADENOCARCINOMA.	0	0	1	0	0	0	0
EDEMA, MUCOSAL.	0	0	0	0	0	1 2+	0
ABSCCESS(ES), SUBSEROUSAL.	0	0	0	0	0	0	1 4+
HEMORRHAGE, ACUTE AND CHRONIC.	0	0	0	0	0	0	1 3+

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 15	GROUP 16	GROUP 17	GROUP 18	GROUP 19	GROUP 20	GROUP 21
CECUM (continued)							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
INFLAMMATION.	0	0	0	0	0	0	1 2+
ILEUM							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	24	29	32	23	20	20	27
MISSING.	2	2	3	7	3	6	2
AUTOLYZED.	23	18	13	18	26	22	20
ADENOCARCINOMA.	0	1	0	0	0	0	0
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.	0	0	1 2+	0	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	0	2 1+ - 2+	0	0	0	1 2+
INFLAMMATION, CHRONIC.	0	0	0	1 2+	0	1 2+	0
NEMATODIASIS.	0	0	0	1	0	0	0
HEMORRHAGE.	0	0	0	0	1 1+	1 4+	0
COLON/RECTUM							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	31	26	32	35	37	34	29
AUTOLYZED.	16	12	9	8	9	10	16
INFLAMMATION, ACUTE AND CHRONIC.	1 2+	0	0	0	1 4+	0	2 2+ - 4+
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.	2 1+ - 2+	0	6 1+	1 2+	1 4+	2 1+ - 4+	1 1+
EDEMA, SUBMUCOSAL.	1 2+	1 3+	0	0	0	0	0
INFLAMMATION, ACUTE.	0	1 2+	1 3+	0	0	1 4+	0
SEROSITIS, ACUTE.	0	1 2+	0	0	0	0	0
NEMATODIASIS.	0	8	1	5	1	3	1
ADENOCARCINOMA, METASTATIC.	0	1	0	0	0	0	0
EDEMA.	0	1 3+	0	0	0	0	0
MISSING.	0	0	1	0	0	0	1
FIBROSIS, LAMINA PROPRIA.	0	0	1 2+	0	0	0	0
NECROSIS, MUCOSAL.	0	0	0	1 2+	0	0	0
INFLAMMATION, CHRONIC.	0	0	0	1 3+	1 1+	1 2+	2 2+
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM, CHRONIC.	0	0	0	0	1 1+	0	0
HEMORRHAGE.	0	0	0	0	1 1+	0	0
INFLAMMATION, PYOGRANULOMATOUS.	0	0	0	0	1 4+	0	0
ULCER(S).	0	0	0	0	1 2+	0	1 2+
MESENTERIC LYMPH NODE							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	34	36	34	39	38	25	34
INSUFFICIENT TISSUE PRESENT IN SECTION.	1	0	0	0	2	1	0
MISSING.	5	9	6	9	3	13	9
AUTOLYZED.	4	1	1	0	2	4	5
HYPERPLASIA.	2 2+	2 2+	3 2+	2 2+	3 1+ - 2+	1 2+	2 2+
ECTASIA, SINUSOIDAL.	1 1+	0	2 2+ - 3+	0	1 2+	0	0
ERYTHROCYTOSIS, SINUSOIDAL.	2 2+ - 3+	0	0	0	0	3 2+	0
ADENOCARCINOMA, METASTATIC.	0	1	0	0	0	0	0
SARCOMA, NOS.	0	1	0	0	0	0	0
INFLAMMATION, GRANULOMATOUS.	0	0	1 2+	0	0	0	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 15	GROUP 16	GROUP 17	GROUP 18	GROUP 19	GROUP 20	GROUP 21
MESENTERIC LYMPH NODE (continued)							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	39	31	48	23	48	35	46
INSUFFICIENT TISSUE	2	1	0	0	0	0	0
PRESENT IN SECTION.	1	0	0	0	1	2	0
MISSING.	1	0	0	0	0	0	2
AUTOLYZED.	2	0	0	1	0	0	0
PIGMENTATION, GRANULAR.	1	0	0	0	0	0	0
CRYSTALLINE DEPOSITS.	2	1+	0	0	0	0	1+
INFLAMMATION, CHRONIC.	1	1+	2 1+ - 2+	2 1+ - 2+	0	0	0
INFLAMMATION, ACUTE.	1	3+	1 3+	2 2+	1 3+	1 3+	1 2+
PIGMENTATION, SUBMUCOSAL, GRANULAR.	1	2+	0	0	0	0	0
CARCINOMA, SQUAMOUS CELL.	0	5	0	2	0	2	0
POLYP(S), EPITHELIAL.	0	4	0	12	0	5	0
HYPERPLASIA.	0	4 1+ - 2+	1 2+	8 1+ - 2+	0	3 2+	0
INFLAMMATION, ACUTE AND CHRONIC.	0	1 2+	0	0	0	0	0
CARCINOMA, NOS.	0	1	0	0	0	0	0
HYPERPLASIA, GLANDULAR.	0	0	0	1 2+	0	0	0
PAPILLOMA, SQUAMOUS.	0	0	0	0	0	1	0
HYPERPLASIA, SUBMUCOSAL, GLANDULAR.	0	0	0	0	0	1 3+	0
INFLAMMATION, GRANULOMATOUS.	0	0	0	0	0	0	1 1+
TRACHEA							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	45	42	48	38	49	34	47
MISSING.	1	2	2	0	0	1	0
AUTOLYZED.	3	0	0	1	1	0	2
CARCINOMA, SQUAMOUS CELL.	0	1	0	1	0	0	0
POLYP(S), EPITHELIAL.	0	3	0	4	0	5	0
HYPERPLASIA.	0	1 2+	0	4 1+ - 2+	0	4 2+ - 3+	0
DYSPLASIA, MUCOSAL.	0	1 2+	0	0	0	1 1+	0
NEOPLASM(S), NOS.	0	0	0	1	0	0	0
CARCINOMA, ADENOSQUAMOUS.	0	0	0	1	0	1	0
ADENOCARCINOMA.	0	0	0	0	0	2	0
CARCINOMA, INTRALUMINAL.	0	0	0	0	0	1	0
CARCINOMA, IN SITU.	0	0	0	0	0	1	0
METAPLASIA.	0	0	0	0	0	1 1+	0
SARCOMA, UNDIFFERENTIATED.	0	0	0	0	0	1	0
INFLAMMATION, ACUTE.	0	0	0	0	0	0	1 2+
THYROID							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	29	40	41	42	35	35	39
INSUFFICIENT TISSUE	1	1	2	2	0	2	1
PRESENT IN SECTION.							

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 15	GROUP 16	GROUP 17	GROUP 18	GROUP 19	GROUP 20	GROUP 21
THYROID (continued)							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
AMYLOIDOSIS..	10 1+ - 3+	7 1+ - 3+	3 2+	1 2+	6 2+ - 3+	3 2+	2 2+
MISSING.	0	2	1	3	5	7	3
AUTOLYZED.	1	0	1	0	2	2	4
CYST(S); FOLLICULAR.	0	0	0	1 2+	1 3+	0	0
CARCINOMA; FOLLICULAR CELL.	0	0	0	1	0	0	0
CARCINOMA; C-CELL.	0	0	0	0	1	0	1
NEOPLASIA(S); NOS.	0	0	0	0	0	1	0
PARATHYROID							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	24	27	26	31	30	27	34
MISSING.	24	23	23	19	19	20	14
AUTOLYZED.	1	0	0	0	0	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	1	1	0	1	2	1
ADENOMA.	0	0	0	0	0	1	0
HYPERPLASIA.	0	0	0	0	0	0	1 2+
ESOPHAGUS							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	43	48	50	47	48	49	48
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	2	0	0	0	1	0	0
MISSING.	2	1	0	1	1	1	1
AUTOLYZED.	2	0	0	1	0	0	1
POLYP(S); EPITHELIAL.	0	1	0	0	0	0	0
CARCINOMA; SQUAMOUS CELL.	0	0	0	1	0	0	0
LUNG & BRONCHI-LEFT							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	1	0	2	3	10	5	1
CRYSTALLINE DEPOSITS							
IN DISTAL AIRWAYS.	48 2+ - 4+	48 2+ - 4+	45 1+	39 1+ - 2+	36 1+ - 2+	31 1+ - 3+	49 1+ - 2+
INFLAMMATION; GRANULOMATOUS.	32 2+ - 4+	26 1+ - 4+	2 2+ - 3+	3 1+ - 3+	7 1+ - 3+	5 1+ - 3+	39 1+ - 4+
HYPERPLASIA; ALVEOLAR/BRONCHIOLAR.	1 3+	5 1+ - 2+	0	0	1 1+	1 1+	1 1+
INFLAMMATION; INTERSTITIAL.	3 2+ - 3+	5 2+ - 3+	0	0	0	0	0
HYSTIOCYTOSIS.	1 2+	0	0	0	0	0	0
HYSTIOCYTOSIS; ALVEOLAR.	1 2+	0	0	0	0	0	0
INFLAMMATION; ACUTE.	0	1 4+	0	2 3+ - 4+	0	2 3+ - 4+	0
ABSCCESS(ES).	0	1	0	0	0	0	0
ADENOCARCINOMA.	0	13	0	7	0	7	0
CARCINOMA; SQUAMOUS CELL.	0	5	0	8	0	6	0
LYMPHOMA; MALIGNANT; HISTIOCYTIC.	0	1	0	0	0	0	0
CARCINOMA; ADENOSQUAMOUS.	0	6	0	11	0	5	0
ADENOMA.	0	4	0	0	0	0	0
(MAINSTEM BRONCHUS);							
POLYP(S); EPITHELIAL.	0	1	0	0	0	0	0
(MAINSTEM BRONCHUS);							
CARCINOMA; SQUAMOUS CELL.	0	1	0	0	0	0	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 15	GROUP 16	GROUP 17	GROUP 18	GROUP 19	GROUP 20	GROUP 21
LUNG & BRONCHI-LEFT (continued)							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
INFLAMMATION, PYOGRANULOMATOUS.	0	1 4+	0	1 3+	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	1 3+	1 2+	1 3+	1 3+	1 1+	0
SARCOMA, HISTIOCYTIC.	0	1	0	0	0	0	0
INFLAMMATION, ASPIRATION.	0	1	0	0	0	0	0
ARTERITIS, ACUTE AND CHRONIC.	0	0	1 2+	0	0	0	0
PNEUMONIA, ASPIRATION.	0	0	0	1 4+	0	5 2+ - 4+	0
(MAINSTEM BRONCHUS).							
CARCINOMA, ADENOSQUAMOUS.	0	0	0	2	0	0	0
SARCOMA, NOS.	0	0	0	1	0	0	0
ADENOCARCINOMA, METASTATIC.	0	0	0	1	0	0	0
FETALIZATION OF ALVEOLAR LINING CELLS.	0	0	0	1 1+	0	0	0
METAPLASIA, ALVEOLAR.	0	0	0	1 1+	0	0	0
AUTOLYZED.	0	0	0	0	1	0	0
HEMORRHAGE.	0	0	0	0	3+	0	0
OSTEOSARCOMA, METASTATIC.	0	0	0	0	1	0	0
PNEUMONIA, ASPIRATION, ACUTE.	0	0	0	0	0	1 3+	0
(MASS), CARCINOMA, SQUAMOUS							
CELL, (BRONCHIOLAR ORIGIN).	0	0	0	0	0	1	0
(MAINSTEM BRONCHUS), ADENOCARCINOMA.	0	0	0	0	0	2	0
HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.	0	0	0	0	0	2 1+ - 2+	0
HYPERPLASIA.	0	0	0	0	0	1 3+	0
ADENOCARCINOMA, (BRONCHIOLAR ORIGIN).	0	0	0	0	0	1	0
CARCINOMA, ADRENOCORTICAL, METASTATIC.	0	0	0	0	0	1	0
HYPERPLASIA, BRONCHIOLAR.	0	0	0	0	0	1 2+	0
(MASS), CARCINOMA, SQUAMOUS CELL.	0	0	0	0	0	1	0
LUNG & BRONCHI-APICAL							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	1	1	2	7	9	7	1
CRYSTALLINE DEPOSITS							
IN DISTAL AIRWAYS.	48 2+ - 4+	48 2+ - 4+	45 1+	40 1+ - 2+	38 1+ - 2+	31 1+ - 3+	49 1+ - 2+
INFLAMMATION, GRANULOMATOUS.	32 2+ - 4+	25 1+ - 4+	2 2+ - 3+	2 3+	5 1+ - 3+	7 1+ - 3+	40 1+ - 4+
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	1 3+	5 2+	0	1 2+	1 1+	1 1+	0
INFLAMMATION, INTERSTITIAL.	3 2+ - 3+	5 2+ - 3+	0	0	0	0	0
HYSTIOCYTOSIS.	1 2+	0	0	0	0	0	0
HYSTIOCYTOSIS, ALVEOLAR.	1 2+	0	0	0	0	0	0
INFLAMMATION, ACUTE.	0	1 4+	0	2 3+ - 4+	0	3 3+ - 4+	0
ADENOCARCINOMA.	0	4	0	0	0	0	0
CARCINOMA, SQUAMOUS CELL.	0	2	0	6	0	2	0
LYMPHOMA, MALIGNANT, HISTIOCYTIC.	0	1	0	0	0	0	0
CARCINOMA, ADENOSQUAMOUS.	0	1	0	1	0	2	0
ADENOMA.	0	2	0	1	0	0	0
INFLAMMATION, PYOGRANULOMATOUS.	0	1 4+	0	1 3+	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	1 3+	1 2+	1 3+	1 3+	0	0
SARCOMA, HISTIOCYTIC.	0	1	0	0	0	0	0
INFLAMMATION, ASPIRATION.	0	1	0	0	0	0	0
ARTERITIS, ACUTE AND CHRONIC.	0	0	1 2+	0	0	0	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 15	GROUP 16	GROUP 17	GROUP 18	GROUP 19	GROUP 20	GROUP 21
LUNG & BRONCHI-APICAL (continued)							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
MISSING.	0	0	0	1	1	0	0
PNEUMONIA, ASPIRATION.	0	0	0	1 4+	0	5 2+ - 4+	0
AUTOLYZED.	0	0	0	0	1	1	0
HEMORRHAGE.	0	0	0	0	1 3+	0	0
OSTEOSARCOMA, METASTATIC.	0	0	0	0	1	0	0
PNEUMONIA, ASPIRATION, ACUTE.	0	0	0	0	0	1 3+	0
HYPEREMIA.	0	0	0	0	0	1 3+	0
CARCINOMA, ADRENOCORTICAL, METASTATIC.	0	0	0	0	0	1	0
LUNG & BRONCHI-AZYGOUS							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	1	0	2	4	10	5	1
CRYSTALLINE DEPOSITS							
IN DISTAL AIRWAYS.	48 2+ - 4+	48 2+ - 4+	47 1+	38 1+ - 2+	36 1+ - 2+	31 1+ - 2+	49 1+ - 2+
INFLAMMATION, GRANULOMATOUS.	32 2+ - 4+	24 1+ - 4+	2 2+ - 3+	2 2+ - 3+	6 1+ - 3+	5 1+ - 3+	40 1+ - 4+
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	1 3+	4 2+	0	0	0	1 1+	1 1+
INFLAMMATION, INTERSTITIAL.	3 2+ - 3+	5 2+ - 3+	0	0	0	0	0
HYSTIOCYTOSIS.	1 2+	0	0	0	0	0	0
HYSTIOCYTOSIS, ALVEOLAR.	1 2+	0	0	0	0	0	0
INFLAMMATION, ACUTE.	0	1 4+	0	1 3+	0	3 2+ - 4+	0
ABSCESS(ES).	0	1	0	0	0	0	0
ADENOCARCINOMA.	0	5	0	5	0	5	0
CARCINOMA, SQUAMOUS CELL.	0	3	0	5	0	1	0
LYMPHOMA, MALIGNANT, HISTIOCYTIC.	0	1	0	0	0	0	0
ADENOMA.	0	3	0	1	0	0	0
INFLAMMATION, PYOGRAMULOMATOUS.	0	1 4+	0	1 3+	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	1 3+	1 2+	1 3+	1 3+	0	0
NEOPLASM(S), NOS.	0	1	0	0	0	0	0
SARCOMA, HISTIOCYTIC.	0	1	0	0	0	0	0
INFLAMMATION, ASPIRATION.	0	1	0	0	0	0	0
ARTERITIS, ACUTE AND CHRONIC.	0	0	1 2+	0	0	0	0
MISSING.	0	0	0	2	0	1	0
PNEUMONIA, ASPIRATION.	0	0	0	1 4+	0	2+ - 4+	0
CARCINOMA, ADENOSQUAMOUS.	0	0	0	6	0	0	0
ADENOCARCINOMA, METASTATIC.	0	0	0	2	0	0	0
FETALIZATION OF ALVEOLAR LINING CELLS.	0	0	0	1 1+	0	0	0
AUTOLYZED.	0	0	0	0	1	1	0
HEMORRHAGE.	0	0	0	0	1 3+	0	0
OSTEOSARCOMA, METASTATIC.	0	0	0	0	1	0	0
PNEUMONIA, ASPIRATION, ACUTE.	0	0	0	0	0	1 3+	0
POLYP(S), BRONCHIOLAR, EPITHELIAL.	0	0	0	0	0	1 1+	0
HYPEREMIA.	0	0	0	0	0	1 3+	0
CARCINOMA, ADRENOCORTICAL, METASTATIC.	0	0	0	0	0	1	0
LUNG & BRONCHI-DIAPHRAGMATIC							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	1	0	2	3	10	2	1
CRYSTALLINE DEPOSITS							
IN DISTAL AIRWAYS.	48 2+ - 4+	49 2+ - 4+	45 1+	41 1+ - 2+	36 1+ - 2+	31 1+ - 2+	49 1+ - 2+

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 15	GROUP 16	GROUP 17	GROUP 18	GROUP 19	GROUP 20	GROUP 21
LUNG & BRONCHI-DIAPHRAGMATIC (continued)							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
INFLAMMATION, GRANULOMATOUS.	32 2+ - 4+	24 1+ - 4+	2 2+ - 3+	2 3+	6 1+ - 3+	7 1+ - 3+	48 1+ - 4+
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	1 3+	5 2+	0	3 1+ - 2+	0	2 1+	0
INFLAMMATION, INTERSTITIAL.	3 2+ - 3+	5 2+ - 3+	0	0	0	0	0
HYSTIOCYTOSIS.	1 2+	0	0	0	0	0	0
HYSTIOCYTOSIS, ALVEOLAR.	1 2+	0	0	0	0	0	0
INFLAMMATION, ACUTE.	0	1 4+	0	2 3+ - 4+	0	3 3+ - 4+	0
ADENOCARCINOMA.	0	7	0	6	0	10	0
CARCINOMA, SQUAMOUS CELL.	0	3	0	8	0	2	0
LYMPHOMA, MALIGNANT, HISTIOCYTIC.	0	1	0	0	0	0	0
CARCINOMA, ADENOSQUAMOUS.	0	4	0	4	0	2	0
ADENOMA.	0	3	0	1	0	0	0
INFLAMMATION, PYOGRANULOMATOUS.	0	1 4+	0	1 3+	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	1 3+	2+	1 3+	1 3+	1 2+	0
SARCOMA, HISTIOCYTIC.	0	1	0	0	0	0	0
POLYP(S), BRONCHIOLAR.	0	1	0	0	0	0	0
INFLAMMATION, ASPIRATION.	0	1	0	0	0	0	0
ARTERITIS, ACUTE AND CHRONIC.	0	0	1 2+	0	0	0	0
HEMORRHAGE.	0	0	0	1 4+	1 3+	0	0
POLYP(S), EPITHELIAL.	0	0	0	1	0	0	0
PNEUMONIA, ASPIRATION.	0	0	0	1 4+	0	5 2+ - 4+	0
CARCINOID.	0	0	0	1	0	0	0
HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.	0	0	0	1 1+	0	0	0
AUTOLYZED.	0	0	0	0	1	1	0
OSTEOSARCOMA, METASTATIC.	0	0	0	0	1	0	0
HISTIOCYTOSIS.	0	0	0	0	1 1+	0	0
PNEUMONIA, ASPIRATION, ACUTE.	0	0	0	0	0	1 3+	0
POLYP(S), BRONCHIOLAR, EPITHELIAL.	0	0	0	0	0	1	0
ADENOCARCINOMA, METASTATIC.	0	0	0	0	0	1	0
HYPEREMIA.	0	0	0	0	0	1 3+	0
CARCINOMA, ADRENOCORTICAL, METASTATIC.	0	0	0	0	0	1	0
LUNG & BRONCHI-CARDIAC							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	1	1	3	4	9	6	1
CRYSTALLINE DEPOSITS							
IN DISTAL AIRWAYS.	48 2+ - 4+	47 2+ - 4+	43 1+	41 1+ - 2+	37 1+ - 2+	31 1+ - 2+	49 1+ - 2+
INFLAMMATION, GRANULOMATOUS.	32 2+ - 4+	23 1+ - 4+	2 2+ - 3+	2 3+	6 1+ - 3+	7 1+ - 3+	40 1+ - 4+
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	1 3+	4 2+	0	1 2+	0	2 1+	1 1+
INFLAMMATION, INTERSTITIAL.	3 2+ - 3+	5 2+ - 3+	0	0	0	0	0
HYSTIOCYTOSIS.	1 2+	0	0	0	0	0	0
HYSTIOCYTOSIS, ALVEOLAR.	1 2+	0	0	0	0	0	0
MISSING.	0	1	0	0	0	0	0
INFLAMMATION, ACUTE.	0	1 4+	0	1 3+	0	3 3+ - 4+	0
ADENOCARCINOMA.	0	4	0	4	0	2	0
CARCINOMA, SQUAMOUS CELL.	0	2	0	3	0	2	0
LYMPHOMA, MALIGNANT, HISTIOCYTIC.	0	1	0	0	0	0	0
CARCINOMA, ADENOSQUAMOUS.	0	1	0	1	0	1	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 15	GROUP 16	GROUP 17	GROUP 18	GROUP 19	GROUP 20	GROUP 21
LUNG & BRONCHI-CARDIAC (continued)							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
METAPLASIA, BRONCHIOCLAR, EPITHELIAL.	0	1 2+	0	0	0	0	0
FIBROSIS.	0	1 3+	0	0	0	0	0
INFLAMMATION, PYOGRAMULOMATOUS.	0	1 4+	0	1 3+	0	0	0
SARCOMA, HISTIOCYTIC.	0	1	0	0	0	0	0
INFLAMMATION, ASPIRATION.	0	1	0	0	0	0	0
AUTOLYZED.	0	0	1	0	1	1	0
INFLAMMATION, ACUTE AND CHRONIC.	0	0	1 2+	1 3+	1 3+	0	0
ARTERITIS, ACUTE AND CHRONIC.	0	0	1 2+	0	0	0	0
PNEUMONIA, ASPIRATION.	0	0	0	1 4+	0	4 3+ - 4+	0
HYPERPLASIA, BRONCHIOCLAR, EPITHELIAL.	0	0	0	1 1+	0	1 2+	0
HEMORRHAGE.	0	0	0	0	1 3+	0	0
OSTEOSARCOMA, METASTATIC.	0	0	0	0	1	0	0
MINERALIZATION.	0	0	0	0	0	1 2+	0
PNEUMONIA, ASPIRATION, ACUTE.	0	0	0	0	0	1 3+	0
HYPEREMIA.	0	0	0	0	0	1 3+	0
CARCINOMA, ADRENOCORTICAL, METASTATIC.	0	0	0	0	0	1	0
LIVER							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	18	17	26	28	32	31	24
AMYLOIDOSIS.	23 1+ - 2+	21 1+ - 3+	11 1+ - 2+	5 1+ - 3+	13 1+ - 3+	5 1+ - 3+	10 1+ - 2+
AUTOLYZED.	2	1	6	1	3	2	2
CYST(S), BILIARY.	4 2+ - 3+	7 2+ - 3+	5 1+ - 2+	5 2+	1 3+	3 2+	8 2+ - 3+
VACUOLATION, CYTOPLASMIC.	3 2+	1 1+	0	1 2+	0	4 2+	1 2+
INFLAMMATION, GRANULOCYTIC, PIGMENTED.	1 2+	0	0	0	0	0	0
NECROSIS.	1 1+	4 1+ - 4+	1 3+	4 1+ - 3+	0	4 1+ - 2+	4 1+ - 2+
HYPERPLASIA, BILE DUCT.	0	1 2+	0	0	1 1+	0	0
(LATERAL), HEMANGIOSARCOMA.	0	1	0	0	0	0	0
HEMATOPOIESIS, EXTRAMEDULLARY.	0	1 2+	0	0	0	0	0
LYMPHOMA, MALIGNANT, HISTIOCYTIC.	0	1	0	0	0	0	0
LEUKEMIA, NOS.	0	1	0	0	0	0	0
SARCOMA, HISTIOCYTIC.	0	1	0	1	0	0	0
HYPEREMIA.	0	1 3+	1 3+	1 1+	0	2 3+	1 2+
SARCOMA, RETICULUM CELL.	0	0	1	0	0	0	0
(LATERAL), SARCOMA, RETICULUM CELL.	0	0	1	0	0	0	0
(LATERAL LOBE), CYST(S), BILIARY.	0	0	1 2+	0	0	0	0
HISTIOCYTOSIS, SINUSOIDAL.	0	0	1 2+	0	0	0	0
THROMBOSIS.	0	0	0	1 1+	0	0	0
GRANULOPOLIESIS.	0	0	0	1 3+	0	0	0
CYTOPLASMIC RAREFACTION(S).	0	0	0	1 1+	0	0	0
PIGMENTATION, HEPATOCYTIC.	0	0	0	1 2+	0	0	0
CYTOPLASMIC.	0	0	0	1 2+	0	0	0
INFLAMMATION, GRANULOMATOUS.	0	0	0	0	1 3+	0	0
(LATERAL), NO SIGNIFICANT LESION RECOGNIZED.	0	0	0	0	1	0	0
MISSING.	0	0	0	0	0	0	1
(LATERAL), HYPERPLASIA, BILIARY.	0	0	0	0	0	0	1 2+

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 15	GROUP 14	GROUP 17	GROUP 18	GROUP 19	GROUP 20	GROUP 21
LIVER (continued)							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
ECTASIA, VENOUS.	0	0	0	0	0	0	1 3+
HYPERPLASIA, HEPATOCELLULAR.	0	0	0	0	0	0	1 2+
GALLBLADDER							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	19	18	31	19	21	20	29
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	1	0	0	0	0	0	0
MISSING.	1	1	3	1	2	2	2
AUTOLYZED.	25	31	14	29	26	28	18
CHOLELITH(S).	3 2+	0	0	0	1	0	0
AMYLOIDOSIS.	0	0	1 2+	0	0	0	0
PAPILLOMA.	0	0	1	0	0	0	0
HYPERPLASIA.	0	0	0	1 1+	0	0	0
HEMATOPOIESIS, EXTRAMEDULLARY.	0	0	0	0	0	0	1 2+
SPLEEN							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	29	22	41	33	32	35	33
AMYLOIDOSIS.	12 1+ - 3+	12 1+ - 3+	3 1+ - 3+	2 3+	9 1+ - 4+	4 1+ - 3+	4 1+ - 2+
MISSING.	2	2	3	3	2	3	3
AUTOLYZED.	5	2	2	1	6	3	6
HEMANGIOSARCOMA.	1	1	0	0	0	0	0
HEMATOPOIESIS, EXTRAMEDULLARY.	0	6 2+ - 3+	0	5 2+ - 4+	0	1 2+	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	1	0	0	0	1	1
HYPERPLASIA, RETICULOENDOTHELIAL CELL.	0	2 2+	0	7 2+ - 3+	0	2 2+	2 2+ - 3+
GRAMULOPOIESIS.	0	1 3+	0	0	0	0	0
DILATATION, SINUSOIDAL.	0	0	1 2+	0	0	0	0
NECROSIS.	0	0	0	0	1 2+	0	0
SARCOMA, RETICULUM CELL.	0	0	0	0	0	1	0
HISTIOCYTOSIS, RED PULP.	0	0	0	0	0	0	1 1+
PANCREAS							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	43	41	44	46	39	40	38
MISSING.	1	1	2	1	0	3	2
AUTOLYZED.	5	3	2	2	9	4	9
AMYLOIDOSIS.	0	1 2+	0	0	1 2+	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	1	0	0	0	0	0
HYPERPLASIA, ISLET CELL.	0	1 1+	0	1 2+	0	0	1 2+
DUCT(S), CYSTIC.	0	1 2+	0	0	0	0	0
METAPLASIA, EOSINOPHILIC.	0	1 2+	1 2+	0	1 2+	2 1+ - 2+	0
DEGENERATION, MYXOMATOUS.	0	0	1 2+	0	0	0	0
HYPERPLASIA, RETICULOENDOTHELIAL CELL.	0	0	0	0	0	1 2+	0
(MASS), ABSCESS(ES).	0	0	0	0	0	1 4+	0
HEART							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 15	GROUP 16	GROUP 17	GROUP 18	GROUP 19	GROUP 20	GROUP 21
HEART (continued)							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	40	41	40	40	42	48	45
AUTOLYZED.	1	0	0	1	1	0	0
INFLAMMATION, GRANULOMATOUS.	1	0	0	0	0	0	0
THROMBOSIS.	4 2+ - 4+	8 2+ - 4+	5 2+ - 4+	2 3+	4 3+ - 4+	0	4 2+ - 4+
DEGENERATION.	1 1+	1 1+	0	1 1+	1 1+	1 2+	2 2+
NEURILEMMOMA, MALIGNANT.	1	0	0	0	0	0	0
EPICARDITIS, ACUTE AND CHRONIC.	1 2+	0	0	0	0	0	0
LYMPHOMA, MALIGNANT, HISTIOCYTIC.	0	1	0	0	0	0	0
ENDOCARDITIS.	0	1 3+	0	0	0	0	0
ADENOCARCINOMA, METASTATIC.	0	1	0	1	0	0	0
INFLAMMATION, ACUTE.	0	0	1 1+	0	0	0	0
MINERALIZATION.	0	0	2 1+	0	1 1+	0	0
ARTERITIS, ACUTE.	0	0	1 3+	0	0	0	0
MINERALIZATION, ARTERIAL.	0	0	1 3+	1 2+	0	0	0
ADENOCARCINOMA, INVASIVE.	0	0	0	1	0	0	0
AMYLOIDOSIS.	0	0	0	1 2+	0	0	0
(AORTA), MINERALIZATION.	0	0	0	1 2+	0	0	0
CARCINOMA, SQUAMOUS CELL, METASTATIC.	0	0	0	1	0	0	0
INFLAMMATION, CHRONIC.	0	0	0	0	1 2+	0	0
FIBROPLASIA.	0	0	0	0	0	1 1+	0
INFLAMMATION, ACUTE AND CHRONIC.	0	0	0	0	0	0	1 2+
KIDNEYS							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	9	16	23	26	24	27	24
AMYLOIDOSIS.	27 1+ - 4+	28 1+ - 4+	15 1+ - 4+	8 1+ - 3+	14 1+ - 4+	9 2+ - 3+	19 1+ - 3+
AUTOLYZED.	4	1	2	2	5	2	2
NEPHROPATHY, CHRONIC.	8 1+ - 2+	3 1+ - 2+	8 1+ - 2+	9 1+ - 2+	7 1+ - 2+	8 1+ - 3+	4 1+ - 2+
DILATATION, TUBULAR.	2 1+ - 2+	1 1+	0	1 1+	0	1 1+	0
CAST(S).	1 2+	0	0	0	0	0	0
HYPERCELLULARITY, GLOMERULAR.	0	1 2+	0	0	0	0	0
MINERALIZATION.	0	0	1 1+	0	0	0	0
CAST(S), CELLULAR.	0	0	1 1+	0	0	0	0
NECROSIS, TUBULAR.	0	0	0	1 2+	0	0	0
ATROPHY.	0	0	0	1 3+	1 3+	0	1 2+
NECROSIS, CORTICAL CELL.	0	0	0	1 3+	0	0	0
PELVIC INFLAMMATION, ACUTE.	0	0	0	1 3+	0	0	0
INFARCT(S).	0	0	0	1 3+	0	1 2+	0
CYST(S), TUBULAR.	0	0	0	1 1+	0	0	0
CARCINOMA, SQUAMOUS CELL, METASTATIC.	0	0	0	1	0	0	0
(RENAL LYMPH NODE), HYPERPLASIA.	0	0	0	0	0	1 2+	0
PYELITIS, ACUTE.	0	0	0	0	0	2 2+	0
URINARY BLADDER							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	35	43	35	44	35	44	34
INSUFFICIENT TISSUE PRESENT IN SECTION.	5	4	5	1	3	2	1

**CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES**

(MALES)

	GROUP 15	GROUP 16	GROUP 17	GROUP 18	GROUP 19	GROUP 20	GROUP 21
URINARY BLADDER (continued)							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
MISSING.	2	0	1	0	1	1	1
AUTOLYZED.	6	2	8	5	10	3	13
CYSTITIS, HYPERPLASTIC, ACUTE AND CHRONIC.	1 3+	0	0	0	0	0	0
UROLITH(S).	1	0	0	0	0	0	0
INFLAMMATION, CHRONIC, PERICYSTIC.	0	1 2+	0	0	0	0	0
MINERALIZATION, EPITHELIAL.	0	0	1 3+	0	0	0	0
HEMORRHAGE.	0	0	0	0	1 1+	0	0
MINERALIZATION.	0	0	0	0	0	0	1 2+
PROSTATE							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	39	35	36	42	41	36	38
MISSING.	4	10	9	7	7	12	2
AUTOLYZED.	3	1	3	0	0	1	6
ATROPHY.	2 3+	1 2+	0	0	0	0	0
INFLAMMATION, ACUTE.	1 2+	0	1 2+	0	0	1 2+	4 2+ - 3+
NOT PRESENT IN SECTION.	0	1	0	0	0	0	0
DEGENERATION.	0	1 1+	0	0	0	0	0
INSUFFICIENT TISSUE PRESENT IN SECTION.	0	1	0	0	2	0	0
INFARCT(S), ACUTE.	0	0	1 2+	0	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	0	0	1 2+	0	0	0
TESTES							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	14	22	24	28	28	26	29
AMYLIDOSIS.	1 2+	0	0	0	0	0	1 2+
MISSING.	2	0	0	0	0	0	1
AUTOLYZED.	2	1	2	1	0	1	2
ATROPHY.	28 1+ - 3+	24 1+ - 4+	21 1+ - 3+	16 1+ - 4+	18 2+ - 3+	18 1+ - 3+	17 1+ - 3+
DEGENERATION.	1 1+	3 1+ - 3+	1 1+	6 1+ - 3+	2 1+ - 2+	5 1+ - 2+	0
INFARCT(S).	1	0	0	0	0	0	0
DEGENERATION, VASCULAR.	0	1 2+	0	0	0	0	0
NEPHROPATHY, CHRONIC.	0	0	1 3+	0	0	0	0
(ONE TESTES NOT PRESENT).	0	0	1	0	0	0	0
ARTERITIS, ACUTE.	0	0	1 3+	0	0	0	0
INFLAMMATION, ACUTE.	0	0	0	0	1 3+	0	0
(LEFT); HEMORRHAGE, INTERSTITIAL.	0	0	0	0	1 2+	0	0
SPERMATOGENIC ARREST.	0	0	0	0	1	0	0
SEMINAL VESICLES							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	44	48	44	46	45	48	44
MISSING.	2	0	1	1	0	0	0
AUTOLYZED.	3	1	4	2	4	2	5
INFLAMMATION, CHRONIC, PERIADENAL.	0	1 3+	0	0	0	0	0
INFARCT(S), ACUTE.	0	0	1 4+	0	0	0	0
INFLAMMATION, ACUTE.	0	0	0	1 3+	1 3+	0	1 2+

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 15	GROUP 16	GROUP 17	GROUP 18	GROUP 19	GROUP 20	GROUP 21
OTHER (continued)							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
(BRONCHIAL LYMPH NODE), CRYSTALLINE DEPOSITS.	7 2+ - 3+	8 2+ - 3+	0	0	0	0	10 1+ - 2+
(MEDIASTINAL LYMPH NODE), PIGMENTATION.	1 1+	1 2+	0	0	0	0	0
(EPITIDYMIS), ABSCESS(ES).	0	1	0	0	0	0	0
(BRONCHIAL LYMPH NODE), PIGMENTATION.	0	1 2+	0	0	0	0	0
(BRONCHIAL LYMPH NODE), CARCINOMA, SQUAMOUS CELL, INVASIVE.	0	1	0	0	0	0	0
(MEDIASTINAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.	0	4 2+ - 3+	0	0	1 2+	0	10 2+ - 3+
(MEDIASTINAL LYMPH NODE), NECROSIS.	0	1 1+	0	0	0	0	0
(BRONCHIAL LYMPH NODE), HEMORRHAGE.	0	1 1+	0	0	0	0	0
(BRONCHIAL LYMPH NODE), CELLULAR INFILTRATION, NOS.	0	1 3+	0	0	0	0	0
(MEDIASTINAL LYMPH NODE), CELLULAR INFILTRATION, NOS.	0	1 3+	0	0	0	0	0
(MEDIASTINAL LYMPH NODE), ADENOCARCINOMA, METASTATIC.	0	1	0	0	0	1	0
(BRONCHIAL LYMPH NODE), ADENOCARCINOMA, METASTATIC.	0	1	0	1	0	0	0
(RENAL LYMPH NODE), HYPERPLASIA.	0	0	1 2+	0	0	0	0
(AXILLARY LYMPH NODE), CRYSTALLINE DEPOSITS.	0	0	0	1 2+	0	0	0
(JAW), CARCINOMA, SQUAMOUS CELL.	0	0	0	1	0	0	0
(MASS-AXILLARY), LYMPHOMA, MALIGNANT.	0	0	0	0	0	1	0
(MASS-MEDIASTINAL), CARCINOMA, SQUAMOUS CELL, (BRONCHIOLAR ORIGIN).	0	0	0	0	0	1	0
(MASS), SARCOMA, UNDIFFERENTIATED.	0	0	0	0	0	1	0
(MEDIASTINAL LYMPH NODE), HEMORRHAGE.	0	0	0	0	0	1 3+	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 15	GROUP 16	GROUP 17	GROUP 18	GROUP 19	GROUP 20	GROUP 21
STERNUM & RIB JUNCTION							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	48	46	49	45	46	50	49
AUTOLYZED.	1	0	0	0	1	0	1
LYMPHOMA, MALIGNANT, HISTIOCYTIC.	0	1	0	0	0	0	0
(MARROW); THROMBOSIS.	0	1 2+	0	0	0	0	0
(COSTOCHONDRAL JUNCTION);							
OSTEOSARCOMA.	0	1	0	0	0	0	0
MYOSITIS, ACUTE AND CHRONIC.	0	1 3+	0	0	0	0	0
(BONE MARROW); HYPERPLASIA.	0	0	1 3+	0	0	0	0
MISSING.	0	0	0	1	0	0	0
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	0	0	0	1	2	0	0
HYPERPLASIA; GRANULOCYTIC.	0	0	0	1 3+	0	0	0
HYPERPLASIA; MYELOID.	0	0	0	1 3+	0	0	0
DECREASED MARROW CELLULARITY.	0	0	0	1 2+	0	0	0
(MSS); OSTEOSARCOMA.	0	0	0	0	1	0	0
FEMUR/BONE MARROW							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	44	46	43	44	45	50	45
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	3	0	3	0	4	0	2
AUTOLYZED.	2	0	0	0	1	0	1
MISSING.	0	1	3	3	0	0	2
HYPERPLASIA.	0	1 3+	0	0	0	0	0
(MARROW); THROMBOSIS.	0	1 2+	0	0	0	0	0
(COSTOCHONDRAL JUNCTION);							
OSTEOSARCOMA.	0	1	0	0	0	0	0
(BONE MARROW); HYPERPLASIA.	0	0	1 3+	0	0	0	0
HYPERPLASIA; GRANULOCYTIC.	0	0	0	1 3+	0	0	0
HYPERPLASIA; MYELOID.	0	0	0	1 3+	0	0	0
DECREASED MARROW CELLULARITY.	0	0	0	1 2+	0	0	0
NASAL CAVITY							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	43	47	45	43	42	45	48
INSUFFICIENT TISSUE							
PRESENT IN SECTION.	2	1	1	2	0	1	0
AUTOLYZED.	2	0	2	1	2	0	2
INFLAMMATION, ACUTE.	1 1+	0	2 2+	1 2+	2 1+	0	0
ARTIFACT(S).	1	0	0	0	0	0	0
EPITAXIS.	0	1	0	0	0	0	0
EXUDATE, PURULENT.	0	1 2+	0	3 2+	4 2+	6 1+ - 2+	0
OTHER							
NUMBER OF ANIMALS EXAMINED	[49]	[50]	[50]	[50]	[50]	[50]	[50]
NOT REQUIRED.	32	28	49	47	49	45	30
(MEDIASTINAL LYMPH NODE);							
CRYSTALLINE DEPOSITS.	8 2+ - 4+	12 2+ - 4+	0	0	1 2+	0	10 1+ - 3+
(MEDIASTINAL LYMPH NODE); HYPEREMIA.	1 4+	0	0	0	0	0	0
(BRONCHIAL LYMPH NODE);							
INFLAMMATION, GRANULOMATOUS.	6 1+ - 3+	7 1+ - 3+	0	0	0	0	10 1+ - 3+

**CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES**

(MALES)

	GROUP 22	GROUP 23	GROUP 24	GROUP 25	GROUP 26
SKIN/SUBCUTIS					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	46	42	41	45	47
INFLAMMATION, CHRONIC,	1 3+	1 1+	0	0	0
INSUFFICIENT TISSUE					
PRESENT IN SECTION.	1	1	1	0	1
EDEMA, SUBCUTANEOUS.	1 3+	2 2+	4 2+ - 3+	3 2+ - 4+	2 2+ - 3+
INFLAMMATION, ACUTE.	1 1+	0	1 1+	1 2+	0
MISSING.	0	2	1	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	1 2+	0	0	0
HYPERKERATOSIS.	0	0	3 2+	1 2+	0
INFLAMMATION, SUBCUTANEOUS,					
HISTIOCYTIC.	0	0	1 1+	0	0
HYPERPLASIA.	0	0	0	1 2+	0
MAMMARY GLAND					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NOT PRESENT IN SECTION.	49	48	50	49	50
MISSING.	1	0	0	1	0
NO SIGNIFICANT LESION RECOGNIZED.	0	1	0	1	0
THIGH MUSCLE					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	48	47	47	47	50
DEGENERATION.	1 1+	1 1+	1 1+	1 1+	0
SARCOMA, METASTATIC.	1	0	0	0	0
MISSING.	0	1	1	0	0
ARTERITIS, ACUTE AND CHRONIC.	0	0	1 1+	0	0
MYELOIDIOSIS, VASCULAR.	0	0	0	1 1+	0
INFLAMMATION, ACUTE.	0	0	0	1 2+	0
SALIVARY GLAND					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	48	46	49	49	50
MISSING.	1	3	1	0	0
ATROPHY, ACINAR.	1 2+	0	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	0	0	1 3+	0
MANDIBULAR LYMPH NODE					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	39	44	42	46	42
MISSING.	9	3	7	4	8
INFLAMMATION, ACUTE.	1 2+	0	0	0	0
HISTIOCYTOSIS, SINUSOIDAL.	1 3+	0	0	0	0
AUTOLYZED.	0	1	0	0	1
ECTASIA, SINUSOIDAL.	0	1 2+	0	0	0
HEMORRHAGE.	0	0	1 2+	0	0
HYPERPLASIA.	0	0	0	0	1 2+
ERYTHROCYTOSIS, SINUSOIDAL.	0	0	0	0	2 2+ - 3+
SCIATIC NERVE					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	45	47	49	49	47
MISSING.	4	0	1	0	1

**CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES**

(MALES)

	GROUP 22	GROUP 23	GROUP 24	GROUP 25	GROUP 26
SCIATIC NERVE (continued)					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
INSUFFICIENT TISSUE PRESENT IN SECTION.	1	2	0	1	2
BRAIN					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	48	48	47	48	50
NECROSIS.	1 2+	0	0	0	0
CEREBELLAR DEGENERATION.	1 1+	0	0	0	0
AUTOLYZED.	0	1	0	0	0
INFLAMMATION, MENINGIAL, CHRONIC.	0	0	1 1+	0	0
HEMORRHAGE.	0	0	1 1+	1 1+	0
CARCINOMA, ADENOSQUAMOUS, METASTATIC, (LUNG).	0	0	1	0	0
MISSING.	0	0	0	1	0
PITUITARY					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	38	44	45	45	36
MISSING.	7	5	4	3	9
INSUFFICIENT TISSUE PRESENT IN SECTION.	2	0	0	0	3
CYST(S).	2 1+	0	0	0	0
ARTIFACT(S).	1	0	1	0	1
AUTOLYZED.	0	0	0	1	0
VACUOLATION.	0	0	0	0	1 1+
ADRENALS					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	27	17	28	14	30
AMYLOIDOSIS.	14 1+ - 3+	21 1+ - 4+	12 1+ - 4+	27 1+ - 4+	10 1+ - 4+
AUTOLYZED.	1	1	1	2	3
ATROPHY.	1 4+	0	0	0	0
HYPERPLASIA, CORTICAL CELL.	4 2+ - 3+	2 2+	3 2+	4 2+	3 2+ - 3+
ADENOMA, CORTICAL CELL.	3	4	3	3	2
ECTASIA, SINUSOIDAL.	0	1 3+	0	0	0
THROMBOSIS.	0	1 2+	0	0	0
INSUFFICIENT TISSUE PRESENT IN SECTION.	0	1	0	0	0
PIGMENTATION, SINGLE CELL.	0	2 1+	0	0	0
ARTIFACT(S).	0	0	1	0	1
MISSING.	0	0	1	0	0
INFLAMMATION, GRANULOMATOUS.	0	0	1 2+	0	0
INFLAMMATION, ACUTE, PERIADENAL.	0	0	1 2+	0	0
CARCINOMA, CORTICAL CELL.	0	0	2	0	0
ECTASIA, VASCULAR.	0	0	0	1 2+	0
ANGIECTASIS.	0	0	0	1 3+	0
ADENOCARCINOMA, CORTICAL CELL.	0	0	0	1	0
PHEOCHROMOCYTOMA.	0	0	0	0	1
(LEFT); CARCINOMA, CORTICAL CELL.	0	0	0	0	1

**CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES**

(MALES)

	GROUP 22	GROUP 23	GROUP 24	GROUP 25	GROUP 26
THYMUS					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	13	20	19	30	24
ATROPHY.	2 3+	1 4+	1 4+	0	0
MISSING.	33	26	27	19	25
INFLAMMATION, ACUTE.	1 4+	1 4+	0	0	0
SARCOMA, METASTATIC.	1	0	0	0	0
AUTOLYZED.	0	1	1	0	0
CARCINOMA, PERIADENAL.	0	0	1	0	0
CARCINOMA, ADENOSQUAMOUS, METASTATIC.	0	0	1	0	0
AMYLOIDOSIS.	0	0	0	1 3+	0
HYPEREMIA.	0	0	0	0	1 3+
CRYSTALLINE DEPOSITS.	0	0	0	0	1 2+
STOMACH					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	1	31	33	37	29
MINERALIZATION.	1 2+	1 2+	0	0	1 1+
AUTOLYZED.	4	9	4	7	1
ADENOCARCINOMA.	1	0	0	0	0
HYPERPLASIA.	3 1+ - 2+	1 2+	6 2+ - 3+	0	7 1+ - 3+
INFLAMMATION, CHRONIC.	1 2+	0	0	0	0
INSUFFICIENT TISSUE					
PRESENT IN SECTION.	6	1	0	2	1
PAPILLOMA.	3	0	3	0	2
HYPERKERATOSIS.	1	0	0	0	0
PIGMENTATION, POSTMORTEM.	1	3	2	2	1
ULCER(S).	1 2+	0	1 2+	0	1 2+
NECROSIS, MUCOSAL.	1 4+	1 4+	0	0	0
MISSING.	0	1	0	1	0
INFLAMMATION, ACUTE AND CHRONIC.	0	1 2+	1 3+	0	0
AUTOLYSIS.	0	0	1	0	0
ABCESS(ES).	0	0	0	1 4+	0
CARCINOMA, SQUAMOUS CELL.	0	0	0	0	1
ADENOCARCINOMA, INVASIVE.	0	0	0	0	1
DUODENUM					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	33	30	40	25	25
AUTOLYZED.	15	17	9	22	22
MISSING.	1	1	1	3	0
(MESENTERY), INFLAMMATION,					
ACUTE AND CHRONIC.	1 2+	0	0	0	0
INFLAMMATION, ACUTE AND CHRONIC.	0	1 2+	0	0	0
INSUFFICIENT TISSUE					
PRESENT IN SECTION.	0	0	0	0	1
ADENOCARCINOMA, INVASIVE.	0	0	0	0	1
INFLAMMATION, CHRONIC.	0	0	0	0	1 2+
JEJUNUM					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	32	28	43	27	29

**CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES**

(MALES)

	GROUP 22	GROUP 23	GROUP 24	GROUP 25	GROUP 26
COLON/RECTUM (continued)					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM,	1 2+	1 3+	2 1+ - 2+	1 1+	1 3+
NEPHROBLASTOSIS,	4	0	4	1	2
(MESENTERY), INFLAMMATION,					
ACUTE AND CHRONIC,	1 2+	0	0	0	0
INFLAMMATION, PYOGRANULOMATOUS,	0	1 4+	0	1 3+	1 4+
INFLAMMATION, ACUTE,	0	0	1 4+	0	0
INFLAMMATION, NOS,	0	0	0	1 2+	0
MESENTERIC LYMPH NODE					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED,	30	34	30	39	32
AUTOLYZED,	2	3	2	1	5
HYPERPLASIA,	4 2+ - 3+	3 2+ - 3+	3 2+	0	1 2+
MISSING,	8	4	7	3	5
INFLAMMATION, GRANULOMATOUS,	1 1+	0	0	0	1 2+
INSUFFICIENT TISSUE					
PRESENT IN SECTION,	2	0	2	0	1
ADENOCARCINOMA, METASTATIC, (GASTRIC),	1	0	0	0	0
ERYTHROCYTOSIS, SINUSOIDAL,	1 2+	0	0	0	0
ABSCCESS(ES),	1	0	0	0	0
ECTASIA, SINUSOIDAL,	0	3 2+ - 3+	0	1 2+	0
NECROSIS,	0	1 2+	0	0	0
HYPERCELLULARITY,	0	1 3+	0	0	0
INFLAMMATION, ACUTE,	0	0	1 2+	2 1+ - 4+	0
THROMBOSIS,	0	0	1 2+	0	0
GRANULOMA, PARASITIC,	0	0	1 4+	0	0
HISTIOCYTOSIS,	0	0	1 3+	0	0
INFLAMMATION, PYOGRANULOMATOUS,	0	0	1 4+	1 3+	0
CARCINOMA, CORTICAL CELL, METASTATIC,	0	0	1	0	0
HISTIOCYTOSIS, SINUSOIDAL,	0	0	0	1 2+	0
ADENOCARCINOMA, METASTATIC,	0	0	0	1	1
INFLAMMATION, GRANULOMATOUS,					
PARASITIC,	0	0	0	1 4+	0
INFLAMMATION, ACUTE AND CHRONIC,	0	0	0	0	2 2+ - 3+
SARCOMA, HISTIOCYTIC,	0	0	0	0	2
LARYNX					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED,	30	47	32	48	35
POLYP(S), EPITHELIAL,	8	0	9	0	10
ADENOCARCINOMA,	1	0	0	0	0
CARCINOMA, SQUAMOUS CELL,	3	0	2	0	1
HYPERPLASIA,	5 1+ - 3+	0	3 1+ - 2+	0	2 1+ - 2+
MISSING,	1	1	0	1	1
HYPERPLASIA, SUBMUCOSAL, GLANDULAR,	1 2+	0	0	0	0
HYPERPLASIA, EPITHELIAL,	1 2+	0	0	0	0
ULCER(S),	1 3+	0	0	0	0
AUTOLYZED,	0	1	0	0	0

Preceding page blank

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 22	GROUP 23	GROUP 24	GROUP 25	GROUP 26
LARYNX (continued)					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
INSUFFICIENT TISSUE					
PRESENT IN SECTION.	0	0	1	0	0
INFLAMMATION, ACUTE.	0	0	1	0	1
POLYP(S); INFLAMMATORY.	0	0	1	0	0
POLYP(S).	0	0	1	0	0
CRYSTALLINE DEPOSITS, SUBMUCOSAL.	0	0	0	1	0
DYSPLASIA.	0	0	0	0	1
TRACHEA					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	31	45	37	48	38
AUTOLYZED.	1	1	0	2	1
POLYP(S); EPITHELIAL.	6	0	3	0	5
ADENOCARCINOMA.	2	0	2	0	1
CARCINOMA; SQUAMOUS CELL.	3	0	0	0	1
HYPERPLASIA.	2	2+	4	1+ - 2+	2
MISSING.	1	1	0	0	0
CARCINOMA; ADENOSQUAMOUS.	1	0	1	0	0
HYPERPLASIA; EPITHELIAL.	1	1+	0	0	0
METAPLASIA; MUCOSAL.	1	1+	0	0	0
DYSPLASIA; MUCOSAL.	1	2+	0	0	0
INFLAMMATION; GRANULOMATOUS.	0	1	4+	0	0
CRYSTALLINE DEPOSITS.	0	1	1+	0	0
EDEMA; SUBMUCOSAL.	0	1	1+	0	0
INSUFFICIENT TISSUE					
PRESENT IN SECTION.	0	0	1	0	0
CARCINOMA; SQUAMOUS CELL, INVASIVE.	0	0	1	0	0
CYST(S); FOLLICULAR.	0	0	1	0	0
INFLAMMATION, ACUTE.	0	0	0	0	1
CARCINOMA; POLYPOID.	0	0	0	0	1
THYROID					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	42	39	44	35	34
ATROPHIC.	2	1+	2	4	1
MISSING.	4	5	2	8	11
INSUFFICIENT TISSUE					
PRESENT IN SECTION.	2	1	2	2	3
AUTOLYZED.	0	1	1	1	1
NEOPLASM(S); NOS.	0	1	0	0	0
ARTIFACT(S).	0	0	1	0	0
PARATHYROID					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	25	23	28	22	27
MISSING.	25	25	21	28	22
INSUFFICIENT TISSUE					
PRESENT IN SECTION.	0	0	1	0	0
AUTOLYZED.	0	0	0	0	1

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 22	GROUP 23	GROUP 24	GROUP 25	GROUP 26
ESOPHAGUS					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	48	45	45	49	48
MISSING.	1	1	2	1	1
INSUFFICIENT TISSUE PRESENT IN SECTION.	1	2	1	0	0
AUTOLYZED.	0	1	0	0	0
INFLAMMATION, ACUTE, PERIESOPHAGEAL.	0	0	1	2+	0
ULCER(S).	0	0	1	2+	0
INFLAMMATION, ACUTE.	0	0	0	0	1 4+
LUNG & BRONCHI-LEFT					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	1	1	0	0	1
POLYP(S), BRONCHIOAL, EPITHELIAL.	1	0	1	0	0
ADENOMA.	3	0	3	0	4
ADENOCARCINOMA.	11	0	8	0	12
CARCINOMA, SQUAMOUS CELL.	5	0	1	0	3
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.	42 1+ - 3+	47 1+ - 3+	50 1+ - 3+	50 1+ - 3+	48 1+ - 3+
INFLAMMATION, GRANULOMATOUS.	31 2+ - 4+	6 1+ - 3+	6 1+ - 3+	3 2+ - 3+	1 3+
HYPERPLASIA, ALVEOLAR/BRONCHIOAL.	1 2+	0	7 1+ - 2+	3 1+ - 2+	7 1+ - 2+
CARCINOMA, ADENOSQUAMOUS.	10	0	9	1	5
HYPEREMIA.	1 4+	0	0	0	0
INFLAMMATION, ACUTE.	1 4+	1 4+	2 2+ - 3+	0	2 3+ - 4+
PNEUMONIA, ASPIRATION.	2 2+ - 3+	0	2 2+ - 3+	0	3 1+ - 3+
SARCOMA, METASTATIC.	1	0	0	0	0
(MAINSTEM BRONCHUS); CARCINOMA, ADENOSQUAMOUS.	1	0	0	0	0
(BRONCHIAL LYMPH NODE); ADENOCARCINOMA.	1	0	0	0	0
EDEMA.	1 3+	0	0	0	0
FETALIZATION OF ALVEOLAR LINING CELLS.	0	1 2+	0	0	0
HEMORRHAGE.	0	1 2+	0	0	1 1+
EPITHELIALIZATION, ALVEOLAR.	0	0	1 2+	0	0
ABSCESS(ES).	0	0	1 4+	0	0
(MAINSTEM BRONCHUS); ADENOCARCINOMA.	0	0	1	0	0
INFLAMMATION, HISTIOCYTIC.	0	0	1 3+	0	0
EXUDATE, PROTEIN RICH, ALVEOLAR.	0	0	1 2+	0	0
HYPERPLASIA, BRONCHIOAL, EPITHELIAL.	0	0	1 2+	1 2+	0
(MAINSTEM BRONCHUS); ADENOCARCINOMA.	0	0	0	0	1
SARCOMA.	0	0	0	0	1
ADENOCARCINOMA, BRONCHIOAL.	0	0	0	0	1 2+
ADENOCARCINOMA, METASTATIC.	0	0	0	0	1
EMPHYSEMA, BULLOUS.	0	0	0	0	1 3+
(MAINSTEM BRONCHUS); NEOPLASM(S), NOS.	0	0	0	0	1
ATELECTASIS.	0	0	0	0	1 2+
LUNG & BRONCHI-APICAL					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	1	1	0	0	1

**CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES**

(MALES)

	GROUP 22	GROUP 23	GROUP 24	GROUP 25	GROUP 26
LUNG & BRONCHI-APICAL (continued)					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
POLYP(S), BRONCHIOLAR, EPITHELIAL.	1	0	1	0	0
ADENOCARCINOMA.	5	0	2	0	1
MISSING.	1	1	1	0	1
CRYSTALLINE DEPOSITS					
IN DISTAL AIRWAYS.	43 1+ - 3+	47 1+ - 3+	49 1+ - 3+	51 1+ - 3+	48 1+ - 3+
INFLAMMATION, GRANULOMATOUS.	32 2+ - 4+	4 1+ - 3+	5 1+ - 3+	3 2+ - 3+	1 3+
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	1 2+	0	2 1+ - 2+	0	3 1+ - 2+
CARCINOMA, ADENOSQUAMOUS.	2	0	2	0	1
CARCINOMA, ANAPLASTIC.	1	0	0	0	0
INFLAMMATION, ACUTE.	1 2+	0	2 2+ - 3+	0	2 3+ - 4+
PNEUMONIA, ASPIRATION.	1 3+	0	3 2+ - 3+	0	3 1+ - 3+
SARCOMA, METASTATIC.	1	0	0	0	0
HYPERPLASIA, ADENOSQUAMOUS.	1	0	0	0	0
CARCINOMA, SQUAMOUS CELL.	0	0	1	0	1
INFLAMMATION, HISTIOCYTIC.	0	0	1 3+	0	0
CARCINOMA.	0	0	1	0	0
ADENOMA.	0	0	0	0	1
EXUDATE, PROTEIN RICH, ALVEOLAR.	0	0	0	0	1 1+
SCARRING.	0	0	0	0	1 4+
LUNG & BRONCHI-AZYGOUS					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
ADENOMA.	1	0	0	0	1
ADENOCARCINOMA.	6	0	0	0	2
CARCINOMA, SQUAMOUS CELL.	4	0	1	0	1 2+
CRYSTALLINE DEPOSITS					
IN DISTAL AIRWAYS.	44 1+ - 3+	47 1+ - 3+	51 1+ - 3+	50 1+ - 3+	47 1+ - 3+
INFLAMMATION, GRANULOMATOUS.	32 2+ - 4+	7 1+ - 3+	5 1+ - 3+	3 2+ - 3+	1 3+
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	1 2+	0	4 1+ - 2+	0	3 2+
CARCINOMA, ADENOSQUAMOUS.	3	0	1	1	4
HYPEREMIA.	1 4+	0	0	0	0
PNEUMONIA, ASPIRATION.	2 2+ - 3+	0	2 2+ - 3+	0	3 1+ - 3+
SARCOMA, METASTATIC.	1	0	0	0	0
EDEMA.	1 3+	0	0	0	0
NO SIGNIFICANT LESION RECOGNIZED.	0	1	0	0	1
INFLAMMATION, ACUTE.	0	0	2 2+ - 3+	0	2 3+ - 4+
INFLAMMATION, HISTIOCYTIC.	0	0	1 3+	0	0
HISTIOCYTOSIS.	0	0	1 3+	0	0
EXUDATE, PROTEIN RICH, ALVEOLAR.	0	0	1 2+	0	0
CARCINOMA, CORTICAL CELL, METASTATIC.	0	0	1	0	0
MISSING.	0	0	0	0	1
EMPHYSEMA.	0	0	0	0	1 3+
EMPHYSEMA, BULLOUS.	0	0	0	0	1 3+
LUNG & BRONCHI-DIAPHRAGMATIC					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
ADENOMA.	2	0	2	0	2
ADENOCARCINOMA.	11	0	4	0	7

**CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES**

(MALES)

	GROUP 22	GROUP 23	GROUP 24	GROUP 25	GROUP 26
LUNG & BRONCHI-DIAPHRAGMATIC (continued)					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
CARCINOMA, SQUAMOUS CELL.	1	0	3	0	1
CRYSTALLINE DEPOSITS					
IN DISTAL AIRWAYS.	42 1+ - 3+	47 1+ - 3+	50 1+ - 3+	50 1+ - 3+	48 1+ - 3+
INFLAMMATION, GRANULOMATOUS.	29 2+ - 4+	6 1+ - 3+	5 1+ - 3+	3 2+ - 3+	1 3+
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	1 2+	0	7 1+ - 2+	0	2 2+
CARCINOMA, ADENOSQUAMOUS.	6	0	5	0	2
CARCINOMA, ANAPLASTIC.	1	0	0	0	0
PNEUMONIA, ASPIRATION.	2 2+ - 3+	0	3 2+ - 3+	0	4 1+ - 3+
SARCOMA, METASTATIC.	1	0	0	0	0
NO SIGNIFICANT LESION RECOGNIZED.	0	1	0	0	1
FIBROSIS, PLEURAL.	0	1 1+	0	0	0
INFLAMMATION, ACUTE.	0	0	3 2+ - 3+	0	2 3+ - 4+
CARCINOMA, ADENOSQUAMOUS, METASTATIC.	0	0	1	0	0
INFLAMMATION, HISTIOCYTIC.	0	0	1 3+	0	0
HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.	0	0	0	0	1 2+
ADENOCARCINOMA, BRONCHIOLAR.	0	0	0	0	1 2+
ADENOCARCINOMA, METASTATIC.	0	0	0	0	1
EMPHYSEMA.	0	0	0	0	1 2+
METAPLASIA, SQUAMOUS.	0	0	0	0	1 2+
LUNG & BRONCHI-CARDIAC					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	2	2	1	1	2
ADENOCARCINOMA.	2	0	0	0	0
CRYSTALLINE DEPOSITS					
IN DISTAL AIRWAYS.	44 1+ - 3+	46 1+ - 3+	49 1+ - 3+	49 1+ - 3+	46 1+ - 3+
INFLAMMATION, GRANULOMATOUS.	29 2+ - 4+	6 1+ - 3+	6 1+ - 3+	3 2+ - 3+	1 3+
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	1 2+	0	3 1+ - 2+	0	4 1+ - 2+
CARCINOMA, ADENOSQUAMOUS.	1	0	1	1	1
INFLAMMATION, ACUTE.	1 2+	0	2 2+ - 3+	0	2 3+ - 4+
PNEUMONIA, ASPIRATION.	2 2+ - 3+	0	3 2+ - 3+	0	4 1+ - 3+
EXUDATE, PROTEIN RICH, ALVEOLAR.	1 3+	0	0	0	0
SARCOMA, METASTATIC.	1	0	0	0	0
CARCINOMA, SQUAMOUS CELL.	0	0	1	0	0
INFLAMMATION, HISTIOCYTIC.	0	0	1 3+	0	0
HISTIOCYTOSIS.	0	0	1 3+	0	0
CARCINOMA, CORTICAL CELL, METASTATIC.	0	0	1	0	0
ADENOMA.	0	0	0	0	1
METAPLASIA, SQUAMOUS.	0	0	0	0	1 2+
SCARRING.	0	0	0	0	1 3+
LIVER					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	31	19	33	23	32
AMYLOIDOSIS.	9 2+	16 1+ - 2+	6 1+ - 2+	22 1+ - 3+	4 1+ - 2+
AUTOLYZED.	2	2	2	5	5
CYST(S), BILIARY.	3 2+ - 3+	5 1+ - 3+	4 2+	6 1+ - 2+	2 2+ - 3+
VACUOLATION, CYTOPLASMIC.	1 1+	2 2+ - 3+	0	0	1 1+

**CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES**

(MALES)

	GROUP 22	GROUP 23	GROUP 24	GROUP 25	GROUP 26
LIVER (continued)					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NECROSIS,	2 1+ - 2+	2 1+ - 2+	3 1+ - 3+	1 2+	2 1+ - 2+
HYPEREMIA,	1 2+	1 2+	1 3+	1 3+	1 3+
(LOBE), CYST(S), BILIARY,	1	0	0	0	0
SARCOMA, METASTATIC,	1	0	0	0	0
DEGENERATION,	0	1 3+	0	0	0
INFLAMMATION, CHRONIC,	0	2 1+ - 2+	0	0	1 2+
THROMBUS,	0	1 2+	0	0	0
(LATERAL), AUTOLYSIS,	0	1	0	0	0
(LATERAL), ADENOMA, HEPATOCELLULAR,	0	1	0	0	0
LYMPHOMA, MALIGNANT,	0	1	0	0	0
(LATERAL), HEMATOMA,	0	1 4+	0	0	0
(MEDIAN LOBE), CYST(S), BILIARY,	0	0	1 3+	0	0
(LATERAL), CYST(S), BILIARY,	0	0	1 3+	2 3+	0
INFLAMMATION, ACUTE AND CHRONIC,	0	0	1 2+	0	0
INFLAMMATION, NOS,	0	0	1 2+	0	0
SINUS HYPERCELLULARITY,	0	0	1 2+	0	0
(MEDIAN LOBE), VACUOLATION,					
CYTOPLASMIC,	0	0	1 2+	0	0
SARCOMA, HISTIOCYTIC,	0	0	1	0	2
CARCINOMA, CORTICAL CELL, METASTATIC,	0	0	1	0	0
INFLAMMATION, ACUTE,	0	0	0	0	1 1+
HEMANGIOSARCOMA,	0	0	0	0	1
(MEDIAN LOBE), HEMANGIOSARCOMA,	0	0	0	0	1
GALLBLADDER					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED,	18	24	22	17	19
AUTOLYZED,	29	22	26	29	30
MISSING,	1	2	1	2	1
INFLAMMATION, CHRONIC,	1 1+	0	0	0	0
INSUFFICIENT TISSUE					
PRESENT IN SECTION,	1	0	0	0	0
EDEMA, SUBMUCOSAL,	0	1 2+	0	0	0
HYPERPLASIA, RETICULOENDOTHELIAL CELL,	0	0	1 2+	0	0
ADENOCARCINOMA, INVASIVE,	0	0	0	1	0
HYPERPLASIA,	0	0	0	1 2+	0
SPLEEN					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED,	33	34	33	35	33
AMYLOIDOSIS,	3 1+ - 3+	4 2+ - 3+	1 1+	10 1+ - 3+	2 2+
AUTOLYZED,	1	3	0	1	3
HISTIOCYTOSIS,	1 3+	0	0	0	0
MISSING,	3	3	7	2	1
HYPERPLASIA, RETICULOENDOTHELIAL CELL,	3 1+ - 3+	0	7 2+ - 3+	0	6 1+ - 3+
INSUFFICIENT TISSUE					
PRESENT IN SECTION,	1	0	0	0	1
HEMANGIOSARCOMA,	1	0	0	0	0

**CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES**

(MALES)

	GROUP 22	GROUP 23	GROUP 24	GROUP 25	GROUP 26
SPLEEN (continued)					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
HEMATOPOIESIS, EXTRAMEDULLARY.	3 2+ - 3+	4 2+ - 3+	0	1 3+	2 2+ - 3+
HEMANGIOMA.	1	0	0	0	0
LYMPHOMA, MALIGNANT.	0	1	0	0	0
HEMATOPOIESIS.	0	0	1 2+	0	0
SARCOMA, HISTIOCYTIC.	0	0	1	0	1
ADENOCARCINOMA, INVASIVE.	0	0	0	1	1
PANCREAS					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	47	41	45	44	42
AUTOLYZED.	3	4	0	1	3
(MODULE), INFLAMMATION,					
PYOGRANULOMATOUS.	1 4+	0	0	0	0
MISSING.	0	4	3	3	2
INFARCT(S).	0	0	1 1+	0	0
CARCINOMA, CORTICAL CELL, METASTATIC.	0	0	1	0	0
AMYLOIDOSIS.	0	0	0	1 2+	0
ADENOCARCINOMA, INVASIVE.	0	0	0	1	1
SARCOMA, HISTIOCYTIC, INVASIVE.	0	0	0	0	2
HEART					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	42	43	45	44	42
MINERALIZATION, VASCULAR.	1 2+	0	0	0	0
NECROSIS.	1 1+	0	0	0	0
THROMBOSIS.	4 2+ - 3+	4 3+ - 4+	4 2+ - 3+	3 3+	4 1+ - 3+
SARCOMA, NOS.	1	0	0	0	0
EPICARDITIS, CHRONIC.	1 2+	0	0	0	0
CARCINOMA, INVASIVE, NOS.	1	0	0	0	0
AUTOLYZED.	0	1	0	0	0
INFLAMMATION, CHRONIC, ATRIAL.	0	1 2+	0	0	0
DEGENERATION.	0	0	1 1+	2 1+	0
INFLAMMATION, ACUTE AND CHRONIC.	0	0	0	1 2+	0
(CORONARY ARTERIES).					
HYPERPLASIA, MEDIAL.	0	0	0	0	1 3+
INFLAMMATION, CHRONIC, PERIVASCULAR.	0	0	0	0	1 2+
CARCINOMA, METASTATIC.	0	0	0	0	1
MINERALIZATION.	0	0	0	0	1 2+
SARCOMA, HISTIOCYTIC, INVASIVE.	0	0	0	0	1
KIDNEYS					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	24	16	27	14	21
AMYLOIDOSIS.	12 1+ - 3+	22 1+ - 3+	10 1+ - 4+	26 1+ - 4+	10 2+ - 3+
AUTOLYZED.	2	4	1	1	4
ATROPHY.	1 3+	0	0	1 1+	0
NEPHROPATHY, CHRONIC.	10 1+ - 2+	7 1+ - 2+	10 1+ - 3+	7 1+ - 2+	10 1+ - 3+
INFARCT(S).	1 2+	0	0	0	0
NECROSIS, TUBULAR.	1 2+	0	0	0	1 2+

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 22	GROUP 23	GROUP 24	GROUP 25	GROUP 26
KIDNEYS (continued)					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
INFLAMMATION, CHRONIC.	0	0	1 2+	0	0
INFLAMMATION, NOS.	0	0	1 1+	0	0
CARCINOMA, CORTICAL CELL, METASTATIC.	0	0	1	0	0
CAST(S).	0	0	0	1 1+	0
MISSING.	0	0	0	0	1
CARCINOMA, TUBULAR CELL.	0	0	0	0	1
DILATATION, TUBULAR.	0	0	0	0	1 2+
INFLAMMATION, ACUTE, CAPSULAR.	0	0	0	0	1 1+
ADENOCARCINOMA, INVASIVE.	0	0	0	0	1
NECROSIS, CORTICAL CELL.	0	0	0	0	1 3+
URINARY BLADDER					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	38	41	43	41	38
AUTOLYZED.	6	4	4	5	9
MISSING.	1	2	1	0	1
INSUFFICIENT TISSUE					
PRESENT IN SECTION.	4	1	2	2	2
INFLAMMATION, ACUTE.	1 3+	0	0	0	0
MINERALIZATION.	0	0	0	1 2+	0
HYPERPLASIA, SEROSAL.	0	0	0	1 2+	0
PROSTATE					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	43	43	41	37	41
AUTOLYZED.	1	3	1	0	1
MISSING.	5	1	5	9	6
INSUFFICIENT TISSUE					
PRESENT IN SECTION.	1	2	1	2	0
INFLAMMATION, ACUTE.	0	0	2 1+ - 3+	1 3+	2 2+
DEGENERATION.	0	0	0	1 1+	0
TESTES					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	22	31	21	26	28
ATROPHY.	21 1+ - 3+	14 1+ - 4+	28 1+ - 3+	21 2+ - 4+	18 1+ - 3+
INFARCT(S).	1 3+	0	0	0	0
SPERM STASIS.	1 2+	0	0	0	0
DEGENERATION.	7 1+ - 3+	2 1+ - 2+	1 2+	1 2+	2 2+
AUTOLYZED.	0	2	0	1	1
AMYLIDOSIS.	0	0	0	1 2+	1 3+
SPERMATOCELE.	0	0	0	1	0
INFLAMMATION, ACUTE.	0	0	0	0	1 3+
SEMINAL VESICLES					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	47	46	48	45	44
AUTOLYZED.	2	3	1	1	4
MISSING.	1	0	0	1	1
CARCINOMA, CORTICAL CELL, METASTATIC.	0	0	1	0	0

**CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES**

(MALES)

	GROUP 22	GROUP 23	GROUP 24	GROUP 25	GROUP 26
SEMINAL VESICLES (continued)					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
INFLAMMATION, ACUTE.	0	0	0	1 2+	0
ADENOCARCINOMA, INVASIVE.	0	0	0	1	0
INSUFFICIENT TISSUE PRESENT IN SECTION.	0	0	0	0	1
STERNUM & RIB JUNCTION					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	47	47	48	50	46
MISSING.	2	1	1	0	1
SARCOMA, NOS.	1	0	0	0	0
AUTOLYZED.	0	1	0	0	0
HYPERPLASIA, GRANULOCYTIC.	0	0	1 3+	0	0
INSUFFICIENT TISSUE PRESENT IN SECTION.	0	0	0	0	1
INFLAMMATION, ACUTE, PERIOSTEOS.	0	0	0	0	1 1+
ADENOCARCINOMA, METASTATIC, (LUNG).	0	0	0	0	1
FEMUR/BONE MARROW					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	47	44	43	48	41
MISSING.	2	4	6	0	3
HYPEREMIA.	1 3+	0	0	0	0
AUTOLYZED.	0	1	0	1	0
HYPERPLASIA, GRANULOCYTIC.	0	0	1 3+	0	0
INSUFFICIENT TISSUE PRESENT IN SECTION.	0	0	0	1	6
NASAL CAVITY					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
NO SIGNIFICANT LESION RECOGNIZED.	43	43	45	46	44
MISSING.	1	0	0	0	0
EXUDATE, PURULENT.	2 2+	1 2+	2 2+	0	1 2+
INSUFFICIENT TISSUE PRESENT IN SECTION.	2	0	2	2	3
INFLAMMATION, ACUTE.	2 2+	4 1+ - 2+	0	1 1+	0
AUTOLYZED.	0	1	1	1	1
ARTIFACT(S).	0	0	0	0	1
OTHER					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
(MEDIASTINAL LYMPH NODE).					
INFLAMMATION, GRANULOMATOUS.	16 1+ - 3+	1 2+	0	1 2+	1 2+
(MEDIASTINAL LYMPH NODE).					
CRYSTALLINE DEPOSITS.	16 1+ - 2+	3 2+ - 3+	3 1+ - 3+	4 1+ - 2+	5 1+ - 3+
(BRONCHIAL LYMPH NODE).					
INFLAMMATION, GRANULOMATOUS.	7 1+ - 3+	0	0	0	0
(BRONCHIAL LYMPH NODE).					
CRYSTALLINE DEPOSITS.	8 1+ - 2+	0	0	0	0
NOT REQUIRED.	26	45	46	42	43
(EPIDIDYMS), INFLAMMATION,					
PYOGRANULOMATOUS.	1 3+	0	0	0	0

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

(MALES)

	GROUP 22	GROUP 23	GROUP 24	GROUP 25	GROUP 26
OTHER (continued)					
NUMBER OF ANIMALS EXAMINED	[50]	[49]	[50]	[50]	[50]
(MEDIASTINAL LYMPH NODE),					
INFLAMMATION, CHRONIC,	1 4+	0	0	0	0
(MASS-SUBCUTANEOUS); SARCOMA, NOS.	1	0	0	0	0
(SMALL INTESTINE); INTUSSUSCEPTION,					
POSTMORTEM,	1	0	0	0	0
(EYE); CATARACT(S),	1	0	0	0	0
(MEDIASTINAL LYMPH NODE),					
ADENOCARCINOMA, METASTATIC,	0	1	0	0	0
(BRONCHIAL LYMPH NODE); CARCINOMA,					
ADENOSQUAMOUS, METASTATIC,	0	0	1	0	0
(RENAL LYMPH NODE); NO SIGNIFICANT					
LESION RECOGNIZED,	0	0	0	1	0
(MASS-ABDOMEN); ADENOCARCINOMA, NOS.	0	0	0	1	0
(EYES); CATARACT(S),	0	0	0	1	0
(MASS); INFLAMMATION, ACUTE,	0	0	0	1 4+	0
(MEDIASTINAL LYMPH NODE); DILATATION,	0	0	0	1 2+	0
(MEDIASTINAL LYMPH NODE),					
ECTASIA, SINUSOIDAL,	0	0	0	0	1 2+
(BRONCHIAL LYMPH NODE);					
SARCOMA, HISTIOCYTIC,	0	0	0	0	1
(EPIDIDYMS); INFLAMMATION, ACUTE,	0	0	0	0	1 4+

APPENDIX 6
SUMMARY OF INDIVIDUAL HISTOPATHOLOGY



GROUP 1 MALES

1-5

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED!
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 1 MALES

[illegible]

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 1 MALES

6-3

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 1 MALES

6-4

(X) NO SIGNIFICANT LESION RECDONIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 1 MALES

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 1 HOLES

6-6

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 1 MALES

6-7

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 1 MALES

1
7
2
6 6 7 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8
8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7

LUNG & BRONCHI-APICAL (CONTINUED)

INFLAMMATION, GRANULOMATOUS.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
VASCULITIS, ACUTE AND CHRONIC.
EDEMA, ALVEOLAR.
CAPILLARY THROMBOSIS.
HYPERCELLULARITY, ALVEOLAR SEPTUMS.
ARTERITIS, CHRONIC.

= = = = = 1+ = = = = =
= 3+ = = = = =
= = = = = 2+ = = = = =
= = = = = 3+ = = = = =
= 4 = = = = = 2+ = = = = =
= = = = = 2+ = = = = =

LUNG & BRONCHI-ALVEOLAR
PNEUMONIA, ASPIRATION, ACUTE.
INFLAMMATION, GRANULOMATOUS.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
VASCULITIS, ACUTE AND CHRONIC.
EDEMA, ALVEOLAR.
CAPILLARY THROMBOSIS.
HYPERCELLULARITY, ALVEOLAR SEPTUMS.
ARTERITIS, CHRONIC.

X = X X X = = X X X X X X = X X X = X X X X
= = = = = 1+ = = = = =
= 3+ = = = = =
= = = = = 2+ = = = = =
= = = = = 3+ = = = = =
= = = = = 2+ = = = = =

LUNG & BRONCHI-DIAPHRAGMATIC
PNEUMONIA, ASPIRATION, ACUTE.
INFLAMMATION, GRANULOMATOUS.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
VASCULITIS, ACUTE AND CHRONIC.
EDEMA, ALVEOLAR.
CAPILLARY THROMBOSIS.
HYPERCELLULARITY, ALVEOLAR SEPTUMS.
ARTERITIS, CHRONIC.

X = X X X = = X X X X X X = X X X = X X X X
= = = = = 1+ = = = = =
= 3+ = = = = =
= = = = = 2+ = = = = =
= = = = = 3+ = = = = =
= = = = = 2+ = = = = =

LUNG & BRONCHI-CARDIAC
PNEUMONIA, ASPIRATION, ACUTE.
INFLAMMATION, GRANULOMATOUS.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
VASCULITIS, ACUTE AND CHRONIC.
EDEMA, ALVEOLAR.
CAPILLARY THROMBOSIS.
HYPERCELLULARITY, ALVEOLAR SEPTUMS.
ARTERITIS, CHRONIC.

X = X X X = = X X X X X X = X X X = X X X X
= = = = = 1+ = = = = =
= 3+ = = = = =
= = = = = 2+ = = = = =
= = = = = 3+ = = = = =
= = = = = 2+ = = = = =

LIVER

X = X = X X = X = X X = X X X X = X X X = X

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

[illegible]

GEORGE J. MALFORD

[illegible]

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 1 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3

6-10

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 2 MALES

11-5

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRING
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 2 - MALES

6-12

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

[illegible]

GROUP 2 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3
9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0
2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0

LARYNX (CONTINUED)

INFLAMMATION, ACUTE.
POLYP(S), EPITHELIAL.
EDEMA.

10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531
----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

TRACHEA

POLYP(S), EPITHELIAL.
INFLAMMATION, ACUTE AND CHRONIC.

THYROID

AMYLOIDOSIS.
CYST(S); FOLLICULAR.

FAKATHYEDIR

HYPERPLASIA,
PROLIFERATION, CELLULAR, NOS.

ESOPHAGUS

X X X Y Y Y Y Y Y Y I Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y

LUNG & BRONCHI-LEFT

LEUKOCYTE REACTION.
HYPERPLASIA; ALVEOLAR/BRONCHOLAR.
POLYPS (S); BRONCHOLAR, EPITHELIAL.
ADENOCARCINOMA.
INFLAMMATION; ACUTE AND CHRONIC.
ARTIFACT(S).
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION; GRANULOMATOUS.
ADENOMA.
CARCINOMA, SPUNOUS CELL.
EDEMA, ALVEOLAR.
INFLAMMATION, HISTIOCYTIC.
CARCINOMA, ADENOSQUAMOUS.
INFLAMMATION, INTERSTITIAL.
NEOPLASMS; NOS.
VASCULITIS, CHRONIC.
MELANOMA, METASTATIC.
COAGULATION; INTRAVASCULAR.
PNEUMONIA, ASPIRATION.

[illegible]

LUNG & BRONCHI-AEIOI

LEUKEMOID REACTION.

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 2 MALES

HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
POLYPLASIA, BRONCHIOLAR, EPITHELIAL.
ADENOCARCINOMA.
INFLAMMATION, ACUTE AND CHRONIC.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.
CARCINOMA, SQUAMOUS CELL.
EDEMA, ALVEOLAR.
INFLAMMATION, HISTIOCYTIC.
CARCINOMA, ADENOSQUAMOUS.
INFLAMMATION, INTERSTITIAL.
VASCULITIS, UREMIC.
MELANOMA, METASTATIC.
COAGULATION, INTRAVASCULAR.
PNEUMONIA, ASPIRATION.

LEUKOCIDAL REACTION.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
ADENOCARCINOMA.
INFLAMMATION, ACUTE AND CHRONIC.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.
EDEMA, ALVEOLAR.
INFLAMMATION, HISTIOCYTIC.
CARCINOMA, ADENOSQUAMOUS.
INFLAMMATION, INTERSTITIAL.
VASCULITIS, CHRONIC.
MELANOMA, METASTATIC.
COAGULATION, INTRAVASCULAR.
PNEUMONIA, ASPIRATION.

LEUKEMOID REACTION.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
ADENOCARCINOMA.
INFLAMMATION, ACUTE AND CHRONIC.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.
EDEMA, ALVEOLAR.
INFLAMMATION, HISTIOCYTIC.

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (14) MINIMAL (2F) SLIGHT
(31) MODERATE (41) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 2 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3
9	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	1	1	1	1
2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1

LUNG & BRONCHI-DIAPHRAGMATIC (CONTINUED)

CARCINOMA, ADENOSQUAMOUS,
INFLAMMATION, INTERSTITIAL,
CARCINOMA, ADENOSQUAMOUS, METASTATIC,
METAPLASIA, SQUAMOUS,
NEOPLASIA(S), NOS,
VASCULITIS, CHRONIC,
MELANOMA, METASTATIC,
COAGULATION, INTRAVASCULAR,
PNEUMONIA, ASPIRATION.

=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

LUNG & BRONCHI-CARDIAC
LEUKEMOID REACTION,
ADENOCARCINOMA,
INFLAMMATION, ACUTE AND CHRONIC,
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS,
INFLAMMATION, GRANULOMATOUS,
CARCINOMA, SQUAMOUS CELL,
EDEMA, ALVEOLAR,
INFLAMMATION, HISTIOCYTIC,
INFLAMMATION, INTERSTITIAL,
VASCULITIS, CHRONIC,
MELANOMA, METASTATIC,
COAGULATION, INTRAVASCULAR,
PNEUMONIA, ASPIRATION.

X	=	X	X	X	=	X	X	X	X	=	X	=	X	X	X	=	X	X	X
=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

LIVER
AMYLOIDOSIS,
INFLAMMATION, GRANULOMATOUS,
HEMANGIOSARCOMA,
CYST(S), BILIARY,
HYPERPLASIA, HEPATOCELLULAR,
NECROSIS,
MACROPHAGES, CENTRILOBULAR,
LEUKEMIA, GRANULOCYTIC,
LYMPHOMA, MALIGNANT, HISTIOCYTIC,
HYPEREMIA,
ANGIECTASIS.

X	=	X	X	X	X	X	X	X	=	X	X	X	X	=	X	=	X	=	X
=	1+	=	=	=	=	=	=	=	=	2+	=	=	=	=	3+	=	2+	=	1+
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

GALLBLADDER

A	X	A	X	A	A	A	X	X	X	X	A	X	A	A	A	A	X	A	X
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

SPLEEN

X	=	X	X	X	X	X	X	=	X	X	=	M	M	X	=	X	X	=	X
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP ? MALES

9-6

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 2 MALES

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 2 SALES

6-18

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 2 MALES

1
7
3
1 1 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 4 4
8 9 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

STOMACH (CONTINUED)

INFLAMMATION, ACUTE.
PAPILLOMA.
PIGMENTATION, POSTMORTEM.
ULCER(S).

= = = = = 2+ = = = = =
= = = = = P = = = = =
= = = = = 2+ = = = = =

DUODENUM

INFLAMMATION, CHRONIC.

X X X X X X X X A X A A X X A X M A A A A X
= = = = = = = = = = = = = = = = = = = =

JEJUNUM

INFLAMMATION, CHRONIC.

X X X X X X X X X A X X X A A X A A A A X
= = = = = = = = = = = = = = = = = = = =

CECUM

INFLAMMATION, ACUTE AND CHRONIC.
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.
INFLAMMATION, CHRONIC.
EDEMA, SUBMUCOSAL.
(MASS), ABSCESS(ES).

X A X X X = X A X X A = A X A = A A = A A X
= = = = = 2+ = = = = =
= = = = = = = = = = = = = = 2+ = = = =
= = = = = = = = = = = = = = 2+ = = = =
= = = = = = = = = = = = = = 3+ = = = =
= = = = = = = = = = = = = = P = = = =

ILEUM

INFLAMMATION, ACUTE AND CHRONIC.
INFLAMMATION, CHRONIC.

X X X X X X X X A = A X X X A M A A A A A X
= = = = = = = = = = 3+ = = = = =
= = = = = = = = = = = = = = = = = = =

COLON/RECTUM

ADENOCARCINOMA.
INFLAMMATION, ACUTE AND CHRONIC.
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.
NEMATODIASIS.
INFLAMMATION, CHRONIC.

X X X X X = X X X X X A X X = A A A A = A A X
= = = = = P = = = = =
= = = = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = 1+ = = = =
= = = = = 2+ = = = = = 2+ = = = =

MESENTERIC LYMPH NODE

HYPERPLASIA.
INFLAMMATION, ACUTE.
INFLAMMATION, ACUTE AND CHRONIC.
INFLAMMATION, PYOGRAMULONATOUS.
INFLAMMATION, CHRONIC.
DEGENERATION, MYXOMATOUS.
LYMPHOMA, MALIGNANT, HISTIOCYTIC.
ABSCESS(ES).

= I I M X = = X X X X X = X X = M A X X X X
2+ = = = = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = = =
= = = = = 4+ = = = = =
= = = = = P = = = = =
= = = = = 4+ = = = = =

LARYNX

HYPERPLASIA.

X X X X X X X X X = X X X X X X X X X X X
= = = = = = = = = = = = = = = = = = =

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 2 MALES

5-20

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(H) NOT PRESENT IN SECTION (-) NOT REEVALUATED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 2 MALES

[illegible]

HYPERPLASIA; ALVEOLAR/BRONCHIOLAR.
FOLYUS; BRONCHIOLAR, EPITHELIAL.
ADENOCARCINOMA.
INFLAMMATION, ACUTE AND CHRONIC.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.
CARCINOMA, SQUAMOUS CELL.
EDEMA, ALVEOLAR.
INFLAMMATION, HISTIOCYTIC.
CARCINOMA, ADENOSQUAMOUS.
INFLAMMATION, INTERSTITIAL.
VASCULITIS, GUMMOS.
MELANOMA, METASTATIC.
COAGULATION, INTRAVASCULAR.
PNEUMONIA, ASPIRATION.

[illegible]

LEUKEMOID REACTION.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
ADENOCARCINOMA.
INFLAMMATION, ACUTE AND CHRONIC.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.
EDEMA, ALVEOLAR.
INFLAMMATION, HISTIOCYTIC.
CARCINOMA, ADENOSQUAMOUS.
INFLAMMATION, INTERSTITIAL.
VASCULITIS, CHRONIC.
MELANOMA, METASTATIC.
COAGULATION, INTRAVASCULAR.
PNEUMONIA, ASPIRATION.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85															

LEUKEMOID REACTION.
HYPERPLASIA, ALVEOLAR/BRONCHIODLAR.
ADEMOCARCINOMA.
INFLAMMATION, ACUTE AND CHRONIC.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.
EDEMA, ALVEOLAR.
INFLAMMATION, HISTIOCYTIC.

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099																																																																																																																																																																																																																																						
1990	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 2 MALES

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
1 1 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 4
9 9 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

LUNG & BRONCHI-DIAPHRAGMATIC (CONTINUED)

CARCINOMA, ADENOSQUAMOUS.
INFLAMMATION, INTERSTITIAL.
CARCINOMA, ADENOSQUAMOUS, METASTATIC.
METAPLASIA, SQUAMOUS.
NEOPLASIA, NOS.
VASCULITIS, CHRONIC.
MELANOMA, METASTATIC.
COAGULATION, INTRAVASCULAR.
PNEUMONIA, ASPIRATION.

= P = P = = = = = P = = = = =
= 2+ = = = = = = = = = = = = =
= P = = = = = = = = = = = = =
= = = = 2+ = = = = = = = = = =
= = = = = = = = = P = = = = =
= = = = = = = = = 3+ = = = = =
= = = = = = = = = P = = = = =
= = = = = = = = = 2+ = = = = =
= = = = = = = = = 4+ = = = 2+

LUNG & BRONCHI-CARDIAC
LEUKEMOID REACTION.
ADENOCARCINOMA.
INFLAMMATION, ACUTE AND CHRONIC.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.
CARCINOMA, SQUAMOUS CELL.
EDEMA, ALVEOLAR.
INFLAMMATION, HISTIOCYTIC.
INFLAMMATION, INTERSTITIAL.
VASCULITIS, CHRONIC.
MELANOMA, METASTATIC.
COAGULATION, INTRAVASCULAR.
PNEUMONIA, ASPIRATION.

= = X X X X X X X X = X X X = X X X =
= = = = = = = = = = = = = = = = =
= 2+ = = = = = = = = = = = = =
= = = = = = = = = 2+ = = = = =
= = = = = = = = = = = = = = P =
= = = = = = = = = 3+ = = = = =
= = 2+ = = = = = = = = = = = =
= = = = = = = = = 3+ = = = = =
= = = = = = = = = P = = = = =
= = = = = = = = = 2+ = = = = =
= = = = = = = = = 4+ = = = 2+

LIVER
AMYLOIDOSIS.
INFLAMMATION, GRANULOMATOUS.
HEMANGIOSARCOMA.
CYST(S), BILIARY.
HYPERPLASIA, HEPATOCELLULAR.
NECROSIS.
MACROPHAGES, CENTRILOBULAR.
LEUKEMIA, GRANULOCYTIC.
LYMPHOMA, MALIGNANT, HISTIOCYTIC.
HYPEREMIA.
ANGIECTASIS.

X = X X = X = = X = = A = X = X X =
= = = = = = = 2+ 2+ = 3+ = 2+ = 2+
= = = = = = = P = = = = = = = =
= = = = = = = 2+ = = = = = = = =
= = = = 1+ = 1+ = = 2+ = = = =
= = = = = = = = = = = = = = = =
= P = = = P = = = = = = = = = =
= = = = = = = = = 2+ = = = = =
= = = = = = = = = 1+ = = = = =

GALLBLADDER

A A X X X X X A X A A A X A A A A X

SPLEEN

X = H X X X X = = X = = X X A X X X = X X X

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 2 MALES

6-23

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

© 2006 The Authors
Journal compilation © 2006 Blackwell Publishing Ltd

GROUP 2 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4
9	9	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8

NASAL CAVITY
INFLAMMATION, ACUTE.
ARTIFACT(S).

$\frac{X}{\pi} \frac{X}{\pi} \frac{X}{\pi} \frac{X}{\pi} \frac{X}{\pi} \frac{X}{\pi} \frac{X}{\pi} \frac{X}{\pi} \frac{X}{\pi} \frac{X}{\pi} A \frac{X}{\pi} \frac{X}{\pi} \frac{X}{\pi} \frac{X}{\pi} \frac{X}{\pi} \frac{X}{\pi} = \frac{X}{\pi} \frac{X}{\pi} \frac{X}{\pi} \frac{X}{\pi}$

OTHER

(MEDIASTINAL LYMPH NODE), NECROSIS.
 (MEDIASTINAL LYMPH NODE), CRYSTALLINE DEPOSITS.
 (MEDIASTINAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.
 (SCAPULAR LYMPH NODE), INFLAMMATION, GRANULOMATOUS.
 (BRONCHIAL LYMPH NODE), CRYSTALLINE DEPOSITS.
 (MEDIASTINAL LYMPH NODE), INFLAMMATION,
 GRANULOMATOUS, ACUTE.
 (MEDIASTINAL LYMPH NODE), MELANOMA.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	5
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 3 HALCS

6-25

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 3 MALES

GROUP 3 MALES

5-26

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 3 HALES

[illegible]

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 3 MALES

1
7
3
4 4 4 4 4 4 4 4 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6
2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6

KIDNEYS (CONTINUED)

MINERALIZATION, PELVIC, EPITHELIAL.

= = = = =

URINARY BLADDER

INFLAMMATION, CHRONIC.

MINERALIZATION, EPITHELIAL.

X X X A X X I X X X X X X = X A A X X A X X X
= = = = = 1+ = = = = =

PROSTATE

INFLAMMATION, ACUTE.

X = X X X X X X X X X X X X X X X X X X X
= 3+ = = = = =

TESTES

ATROPHY.

(TESTES), ABSCESS(ES), EPIDIDYMAL.

DEGENERATION.

INFLAMMATION OF TUNIC, ACUTE.

X = X = = = = M X X = = = = X = X X =
= 3+1+ = 1+1+1+2+4+3+ = 1+ = 2+3+3+2+ = 2+ = 3+
= 4+ = = = = =
= = = 3+ = = = = = 2+ = = = = =

SEMINAL VESICLES

ABSCESS(ES).

INFLAMMATION, ACUTE, PERIADENAL.

X = X X X X X X X X X X X X X X X X X X X
= 4+ = = = = = 2+ = = = = =

STERNUM & RIB JUNCTION

X X

FEMUR/BONE MARROW

X X X X X X X I M X X X X X X X X X X X X I X X I

NASAL CAVITY

INFLAMMATION, ACUTE.

INFLAMMATION, ACUTE AND CHRONIC.

X X X X X X X = X X X X X X X X X A X X X X X X
= = = = = 1+ = = = = =

OTHER

(MEDIASTINAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.

(MEDIASTINAL LYMPH NODE), CRYSTALLINE DEPOSITS.

= = = = = 1+ = = = = = 2+ = = = = =

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 3 MALES

6-30

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (11) MINIMAL (2F) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 3 MALES

1
7
3
6
7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

DUODENUM (CONTINUED)

SEROSITIS, ACUTE.

= = = = =

JEJUNUM

X A X X X X X A X X A X X X X X X X X X X X

CECUM

X A A X X X = X A X X = X X A A X X X X A X X X X

INFLAMMATION, CHRONIC.
INFLAMMATION, ACUTE.
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.
HEMATODIASIS.
INFLAMMATION, ACUTE AND CHRONIC.
(LARGE INTESTINE), ADENOCARCINOMA.
HEMORRHAGE.

= = = = = 4+ = = = = =
= = = = = 4+ = = = = =
= = = = = = = = = = =
= = = = = = = = = = =

ILEUM

X A X X X X X A X X A X X X X X X X X X X

INFLAMMATION, CHRONIC.

COLON/RECTUM

X X = X X X X = A X X A X X A X X X X X A X X X X

CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.
HEMATODIASIS.
INFLAMMATION, ACUTE AND CHRONIC.
FIBROSARCOMA.

= = = = = 2+ = = = = =
= = = = = 2+ = = = = =
= = = = = = = = = = =

MESENTERIC LYMPH NODE

X X I X X X X = X X I = X X X X X X X X = X - A X

INFLAMMATION, CHRONIC.
HYPERPLASIA.
INFLAMMATION, ACUTE AND CHRONIC.
ERYTHROCYTOSIS, SINUSOIDAL.

= = = = = 2+ = = = = =
= = = = = 2+ = = = = =
= = = = = 2+ = = = = =

LARYNX

X X

INFLAMMATION, ACUTE.
NECROSIS.
NEOPLASIA(S), NOS.

= =

TRACHEA

X X

DYSPLASIA, MUCOSAL.

= =

THYROID

X I X X X X X = X X X X X M = X M X X X M X X M X

AMYLOIDOSIS.
CYST(S), FOLLICULAR.

= = = = = 2+ = = = = =
= = = = = 2+ = = = = =

PARATHYROID

M M X M X X X X M X X M M M M X X M M X M M M

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 3 MALES

6-32

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(J) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 3 MALES

1
7
3
6 6 6 7 7 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 9 9
7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

KIDNEYS (CONTINUED)

MINERALIZATION, PELVIC, EPITHELIAL.

= = = = = = = = = = = = = = = 2+ = = = = =

URINARY BLADDER

INFLAMMATION, CHRONIC.

MINERALIZATION, EPITHELIAL.

= A X
1+ =
= =

PROSTATE

INFLAMMATION, ACUTE.

X
= = = = = = = = = = = 2+ = = = = = = = = = 2+

TESTES

ATROPHY.

(TESTES), ABSCESS(ES), EPIDIDYMAL.

DEGENERATION.

INFLAMMATION OF TUNIC, ACUTE.

X
= = = = = = = = = = = = = = = 3+ = 2+ = 2+ = 2+
= =

SEMINAL VESICLES

ABSCESS(ES).

INFLAMMATION, ACUTE, PERIADENAL.

X
= =

STERNUM & RIB JUNCTION

X X

FEMUR/BONE MARROW

X X X X X X X X I X X X X X X X X X X X X X X

NASAL CAVITY

INFLAMMATION, ACUTE.

INFLAMMATION, ACUTE AND CHRONIC.

X X X X X X X X I X X X X X X X X X X X X X X
=
= = = = = = = = = = = 1+ = = = = = = = = =

OTHER

(MEDIASTINAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.

(MEDIASTINAL LYMPH NODE), CRYSTALLINE DEPOSITS.

=
= =

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(-) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 4 MALES

6-35

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 4 MALES

96-56

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 1 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4
9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	1	1	1	1	1
2	3	4	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2

POLY(5), EPITHELIAL,
INFLAMMATION, ACUTE.
DYSPLASIA.
CARCINOMA, SQUAMOUS CELL.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85															

HYPERPLASIA.
CARCINOMA, ADENOSQUAMOUS.
EXUDATE, PURULENT.
POLYP(S), EPITHELIAL.
ADENOCARCINOMA.
ARTIFACT(S).

[illegible]

HYALOIDOSIS.
CYST(S), FOLLICULAR.

= X X X X X M X X X M X X X A X X X X A X M X
 =
 21 =

ESOPHAGUS
ADENOCARCINOMA.
CARCINOMA, ADENOSQUAMOUS, INVASIVE.

1. BRONCHITIS-CEFT
 2. CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
 3. UNIL. ALVEOLAR/BRONCHITIS AR.
 4. CARCINOMA, ADENOSQUAMOUS.
 5. INFLAMMATION, GRANULOMATOUS.
 6. ADENOMA.
 7. FULVIC(S), EPITHELIAL.
 8. ADENOCARCINOMA.
 9. INFLAMMATION, ACUTE,
 10. NECROSIS.
 11. LYMPHOMA, MALIGNANT.
 12. HEMORRHAGE.
 13. ARSCSES(ES).
 14. PNEUMONIA, ASPIRATION.
 15. (HAINSTEN BRONCHUS), CARCINOMA, ADENOSQUAMOUS.
 16. (HAINSTEN BRONCHUS), CARCINOMA, SQUAMOUS CELL.
 17. (HAINSTEN BRONCHUS), ADENOCARCINOMA.
 18. SARCOMA, HISTIOCYTIC.

[illegible]

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(H) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 4 MALES

(X) NO SIGNIFICANT LESION RECOGNIZED (W) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (11) MINIMAL (21) SLIGHT
(31) MODERATE (41) SEVERE

GROUP 4 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4
9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	1	1	1	1
2	3	4	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1

PNEUMONIA, ASPIRATION,
(MAINSTEM BRONCHUS), CARCINOMA, ADENOSQUAMOUS,
(MAINSTEM BRONCHUS), ADENOCARCINOMA.

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CARCINOMA, ADENOSQUAMOUS.
INFLAMMATION, GRANULOMATOUS.
ADENOCARCINOMA.
INFLAMMATION, ACUTE.
CARCINOMA, SQUAMOUS CELL.
LYMPHOMA, MALIGNANT.
HEMORRHAGE.
PNEUMONIA, ASPIRATION.

AMYLOIDOSIS.
 NECROSIS,
 INFLAMMATION, ACUTE AND CHRONIC.
 LYMPHOMA, MALIGNANT.
 HYPEREMIA.
 CYST(S), BILIARY,
 (CAUDATE LOBE), ADENOCARCINOMA; NOS.
 SARCOMA, HISTIOCYTIC,
 (MEDIAN LOBE), ADENOMA, HEPATOCELLULAR,
 (MEDIAN LOBE), CYST(S), BILIARY.

HYPERPLASIA, FOLLICULAR.
INFLAMMATION, ACUTE.

AMYLOIDOSIS.
 HYPERPLASIA, RETICULENDOTHELIAL CELL.
 HEMATOPOIESIS, EXTRAMEDULLARY.
 LYMPHOMA, MALIGNANT.
 HEMATOPOIESIS.
 INFLAMMATION, GRANULOMATOUS, CAPSULAR.
 SACCOCA, HISTIOCYTIC.

X A X X X X X X X = X A X X A H K X A X A X = =

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 4 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

PANCREAS (CONTINUED)

LYMPHOMA, MALIGNANT.
INFLAMMATION, GRANULOMATOUS, CAPSULAR.
HYPERPLASIA, ISLET CELL.

= = = = = F = = = = =
= = = = = = = = = = = 3+ =
= = = = = = = = = = = 1+ =

HEART

INFLAMMATION, ACUTE.
CARCINOMA, ADENOSQUAMOUS, INVASIVE.
SARCOMA, HISTIOCYTIC.
ARTERIOPATHY, DEGENERATIVE.

X X X X X X X = X X X X X X X A X X X X X X X X
= = = = = 1+ = = = = =
= = = = = = = = = = =
= = = = = = = = = = =

KIDNEYS

AMYLOIDOSIS.
ATROPHY.
NEPHROPATHY, CHRONIC.
LYMPHOMA, MALIGNANT.
ADENOCARCINOMA, TUBULAR.
INFLAMMATION, PERINEPHRIC, PYOGRANULOMATOUS.
CARCINOMA, ADENOSQUAMOUS, METASTATIC.

= = = = = X X = = = X A X = A A X X A X X X = =
3+1+2+ = 4+ = = 3+ = = = = =
= = = = = = = = = = =
= = = 2+P = = = 1+ = = = = = F
= = = = = = = = = = =
= = = = = = = = = = =
= = = = = = = = = = = 2+ =
= = = = = = = = = = =

URINARY BLADDER

MINERALIZATION, TRANSITIONAL EPITHELIUM.

X A X X X X X X X X X A X X A A X X A X A X X X
= = = = = = = = = = =

PROSTATE

X X X X X X X X X X X A X X A X X X A X A X X X

TESTES

ATROPHY.
DEGENERATION.

= = X X = X X X X = X X A X = A A X X X = = X X X
3+ = = 2+ = = = 2+ = = = 1+ = = = 2+2+ = =
= 1+ = = = = = = = = = = =

SEMINAL VESICLES

X A X X X X X X X X X A X X A A X X A X A X X X

STERNUM & RIB JUNCTION

INFLAMMATION, INTERCOSTAL, ACUTE.

X X X X X X X = X X X X X X X X X X A X X X X X
= = = = = 2+ = = = = =

FEMUR/BONE MARROW

HYPERPLASIA, GRANULOCYTIC.

X X X X X X X X = X X X X X X X X X A X X X X X
= = = = = 3+ = = = = =

NASAL CAVITY

EXUDATE, PURULENT.
INFLAMMATION, ACUTE.
INFLAMMATION, ACUTE AND CHRONIC.
(PARAMASAL TISSUE), INFLAMMATION.

X X X = X X X X = X = X X X X A X X X A X A X X X
= = = 1+ = = = = = = = = = = =
= = = = = = = 1+ = F = = = = = = = = = =
= =

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

© 2006 The Authors
Journal compilation © 2006 Blackwell Publishing Ltd

GROUP 4 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4
9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	1	1	1	1
2	3	4	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1

OTHER

(BRONCHIAL LYMPH NODE), ADENOCARCINOMA, METASTATIC.
(BRONCHIAL LYMPH NODE), GRANULAR DEPOSITS.
(MEDIASTINAL LYMPH NODE), ADENOCARCINOMA, METASTATIC.
(MEDIASTINAL LYMPH NODE), CRYSTALLINE DEPOSITS.
(MEDIASTINAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.
(MASS-CHEST), SARCOMA, HISTIOCYTIC.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	5
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---

(X) NO SIGNIFICANT LESION RECOGNIZED	(M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION	(A) AUTOLYZED
(N) NOT PRESENT IN SECTION	(-) NOT REQUIRED
(P) PRESENT	(1+) MINIMAL
(3+) MODERATE	(2+) SLIGHT
	(4+) SEVERE

GROUP 4 MALES

6-42

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(?) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 4 MALES

57-9

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 4 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4
8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7

LARYNX (CONTINUED)

POLY(S), EPITHELIAL.
INFLAMMATION, ACUTE.
DYSPLASIA.
CARCINOMA, SQUAMOUS CELL.

-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TRACHEA

HYPERPLASIA.
CARCINOMA, ADENOSQUAMOUS.
EXUDATE, PURULENT.
POLY(S), EPITHELIAL.
ADENOCARCINOMA.
ARTIFACT(S).

X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

THYROID

MYXOIDOSIS.
CYST(S), FOLLICULAR.

X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

PARATHYROID

X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ESOPHAGUS

ADENOCARCINOMA.
CARCINOMA, ADENOSQUAMOUS, INVASIVE.

X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LUNG & BRONCHI-LEFT

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CARCINOMA, ADENOSQUAMOUS.
INFLAMMATION, GRANULOMATOUS.
ADENOMA.
POLY(S), EPITHELIAL.
ADENOCARCINOMA.
INFLAMMATION, ACUTE.
NECROSIS.
LYMPHOMA, MALIGNANT.
HEMORRHAGE.
ABSCESS(ES).
PNEUMONIA, ASPIRATION.
(MAINSTEM BRONCHUS), CARCINOMA, ADENOSQUAMOUS.
(MAINSTEM BRONCHUS), CARCINOMA, SQUAMOUS CELL.
(MAINSTEM BRONCHUS), ADENOCARCINOMA.
SARCOMA, HISTIOCYTIC.

2+	2+	2+	3+	2+	3+	2+	2+	2+	2+	2+	2+	2+	2+	2+	2+	2+	2+	2+	2+
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED. (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 4 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4
8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7

LUNG & BRONCHI-LEFT (CONTINUED)

FIBROSARCOMA.
(MAINSTEM BRONCHUS), POLYP(S), EPITHELIAL.

= = = = = F = = = = =
= = = = = P = = = = =

LUNG & BRONCHI-APICAL
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CARCINOMA, ADENOSQUAMOUS.
INFLAMMATION, GRANULOMATOUS.
ADENOCARCINOMA.
INFLAMMATION, ACUTE.
CARCINOMA, SQUAMOUS CELL.
LYMPHOMA, MALIGNANT.
HEMORRHAGE.
PNEUMONIA, ASPIRATION.

H = = = = =
= 2+2+3+2+3+2+2+2+2+2+3+1+2+2+3+2+2+1+2+2+
= = = = = P = = = = = P = = = = =
= = = = = 3+ = = = = = 2+ = = = = =
= = = = = 2+ = = = = = P = = = = =
= = = = = 2+ = = = = =
= = = = = 2+ = = = = =

LUNG & BRONCHI-ABYSSUS
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CARCINOMA, ADENOSQUAMOUS.
INFLAMMATION, GRANULOMATOUS.
ADENOCARCINOMA.
INFLAMMATION, ACUTE.
LYMPHOMA, MALIGNANT.
HEMORRHAGE.
PNEUMONIA, ASPIRATION.

= = = = =
2+2+2+3+2+3+2+2+2+2+2+2+3+1+2+2+3+2+2+1+2+2+
= = = = = F = = = = = F = = = = =
2+ = = = = = F = = = = = 3+ = = = = = 2+ = = = = =
= = = = = F = = = = = 2+ = = = = = P = = = = =
= = = = = 2+ = = = = =
= = = = = 2+ = = = = =

LUNG & BRONCHI-DIAPHRAGMATIC
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.
CARCINOMA, ADENOSQUAMOUS.
INFLAMMATION, GRANULOMATOUS.
POLYP(S), BRONCHIOLAR, EPITHELIAL.
ADENOMA.
ADENOCARCINOMA.
INFLAMMATION, ACUTE.
NECROSIS.
CARCINOMA, SQUAMOUS CELL.
LYMPHOMA, MALIGNANT.
HEMORRHAGE.
ADENOCARCINOMA, BRONCHIOLAR.

= = = = =
2+2+2+3+2+3+2+2+2+2+2+2+3+1+2+2+3+2+2+1+2+2+
= = = = = 2+ = = = = = 2+ = = = = = 2+ = = = = =
= = = = = P = = = = = P = = = = =
2+ = = = = = P = = = = = 3+ = = = = = 2+ = = = = =
= = = = = P = = = = = P = = = = =
= = = = = 2+ = 2+ = = = = = 2+ = = = = =
= = = = = P = = = = =
= = = = = 3+ = = = = =

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 4 MALES

9-48

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GRUPE 4 MALES

47-55

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 4 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4
8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7

OTHER

(BRONCHIAL LYMPH NODE), ADENOCARCINOMA, METASTATIC.
(BRONCHIAL LYMPH NODE), GRANULAR DEPOSITS.
(MEDIASTINAL LYMPH NODE), ADENOCARCINOMA, METASTATIC.
(MEDIASTINAL LYMPH NODE), CRYSTALLINE DEPOSITS.
(MEDIASTINAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.
(HASS-CHEST), SARCOMA, HISTIOCYTIC.

-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 5 MALES

67-5

(2) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

Year	Number of Publications
1980	1
1981	1
1982	1
1983	1
1984	1
1985	1
1986	1
1987	1
1988	1
1989	1
1990	1
1991	1
1992	1
1993	1
1994	1
1995	1
1996	1
1997	1
1998	1
1999	1
2000	1
2001	1
2002	1
2003	1
2004	1
2005	1
2006	1
2007	1
2008	1
2009	1
2010	1

GROUP 5 MALES

6-50

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (--) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 5 MALES

5-51

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 5: MALLS

6-52

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(+) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MOREATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 3 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	6	6	6	6	6
2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1

OTHER (CONTINUED)

(MESENTERY), ABSCESS(ES).

(RENAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.

(RENAL LYMPH NODE), CRYSTALLINE DEPOSITS.

(SMALL INTESTINE), TELESCOPING, POSTMORTEM.

(ORCHIDAL LYMPH NODE), THROMBOSIS, ARTERIAL.

=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED

(N) MISSING

(1) INSUFFICIENT TISSUE PRESENT IN SECTION

(A) AUTOLYZED

(H) NOT PRESENT IN SECTION

(-) NOT REQUIRED

(P) PRESENT

(1+) MINIMAL

(2+) SLIGHT

(3+) MODERATE

(4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 5 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
6	6	6	7	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8
7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6

OTHER (CONTINUED)

(INTESTINE), ABSCESS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(RENAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(RENAL LYMPH NODE), CRYSTALLINE DEPOSITS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(SMALL INTESTINE), TELESPOFING, POSTMORTEM.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(BRONCHIAL LYMPH NODE), THROMBOSIS, ARTERIAL.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED	(M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION	(A) AUTOLYZED
(N) NOT PRESENT IN SECTION	(-) NOT REQUIRED
(P) PRESENT	(1+) MINIMAL
(3+) MODERATE	(2+) SLIGHT
	(4+) SEVERE

GROUP 6 MALES

5-64

(X2) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
 (X1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
 (M) NOT PRESENT IN SECTION (-) NOT REQUIRED
 (P) PRESENT (1) MINIMAL (2+) SLIGHT
 (3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 6 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5
9	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	1	1	1	1
2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1

FEMUR/ROSE MARROW (CONTINUED)

HYPERPLASIA, GRANULOCYTIC.

= = = = = P = = = = = 3+ = = = =

NASAL CAVITY

INFLAMMATION, ACUTE.

X X

EXUDATE, PURULENT.

= = = = = 1+ = = = =

EPITAXIS.

= = = = = 1+ = = = =

= = = = = 2+ = = = =

OTHER

= = = = =

(BRONCHIAL LYMPH NODE), CARCINOMA, ADENOSQUAMOUS, METASTATIC.

P = = = = =

(BRONCHIAL LYMPH NODE), CRYSTALLINE DEPOSITS.

2+ = 2+ = = = = = 3+ = = = = = 3+3+ = 14

(BRONCHIAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.

2+ = 3+ = = = = = 3+ = = = = = 3+ =

(TRACHEA), ADENOCARCINOMA, METASTATIC, (LUNG).

P = = = = =

(MEDIASTINAL LYMPH NODE), INFLAMMATION,

P = = = = =

CRANULOMATOUS, ACUTE.

= 3+ = = = = =

(MEDIASTINAL LYMPH NODE), CRYSTALLINE DEPOSITS.

= 2+ = = = = = 3+ = = = = = 3+ = 14

(MEDIASTINAL LYMPH NODE), INFLAMMATION, ACUTE.

= = = 1+ = = = = = P = = = = =

(STOMACH GLAND), HEMORRHAGE.

= = = 1+ = = = = =

(MEDIASTINAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.

= = = = = 3+ = = = = = 3+ = 3+ = 24

(FORE LEG), INFLAMMATION, GRANULOMATOUS.

= = = = = 3+ = = = = =

(AXILLARY LYMPH NODE), INFLAMMATION, GRANULOMATOUS.

= = = = = 2+ = = = = =

(PERIS), INFLAMMATION.

= = = = = 3+ = = = = =

(EPIDIDYMIS), HEMORRHAGE.

= = = = = 3+ = = = = =

(BRONCHIAL LYMPH NODE), CARCINOMA, SQUAMOUS

= = = = = P = = = = =

CELL, METASTATIC.

= = = = =

(BRONCHIAL LYMPH NODE), INFLAMMATION,

= = = = =

CRANULOMATOUS, ACUTE.

= = = = = 2+ = = = = =

(MEDIASTINAL LYMPH NODE), HEMORRHAGE.

= = = = =

(MEDIASTINAL LYMPH NODE), ADENOCARCINOMA, METASTATIC.

= = = = =

(PANCREATIC LYMPH NODE), INFLAMMATION, GRANULOMATOUS.

= = = = =

(PANCREATIC LYMPH NODE), CRYSTALLINE DEPOSITS.

= = = = =

(X) NO SIGNIFICANT LESION RECOGNIZED

(M) MISSING

(1) INSUFFICIENT TISSUE PRESENT IN SECTION

(A) AUTOLYZED

(H) NOT PRESENT IN SECTION

(-) NOT REQUIRED

(1) PRESENT

(1+) MINIMAL

(2) SLIGHT

(3+) MODERATE

(4) SEVERE

GROUP 6 MALES

[illegible]

(X) NO SIGNIFICANT LESION RECOGNIZED	(M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION	(A) AUTOLYZED
(N) NOT PRESENT IN SECTION	(-) NOT REQUIRED
(P) PRESENT	(1+) MINIMAL
(3+) MODERATE	(2+) SLIGHT
	(4+) SEVERE

GROUP 5 MALES

6-67

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (C) NOT REQUIRED
(P) PRESENT (1P) MINIMAL (2P) SLIGHT
(3P) MODERATE (4P) SEVERE

GROUP 4 MALES

5-5

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(-) NOT PRESENT IN SECTION (-) NOT REQUIRED
(+) PRESENT (1+) MINIMAL (2+) SLIGHT
(2+) MODERATE (4+) SEVERE

GROUP 4 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	4	4
7	8	8	9	1	2	3	4	5	6	7	8	9	0	1	2	3	4

(MAINSTEM BRONCHUS), CARCINOMA, ADENOSQUAMOUS.
METAPLASIA, SQUAMOUS, BRONCHIOLAE.

[illegible]

ADENOCARCINOMA.
INFLAMMATION, GRANULOMATOUS.
MACROPHAGES, PIGMENTED.
CARCINOMA, ADENOSQUAMOUS.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, ACUTE AND CHRONIC.
CARCINOMA, SQUAMOUS CELL.
ADENOMA.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
HEMORRHAGE.
ASTHMA, CHRONIC.

2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90										

ADENOCARCINOMA,
INFLAMMATION, GRANULOMATOUS,
MACROPHAGES, PIGMENTED,
CARCINOMA, ADENOSQUAMOUS,
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS,
INFLAMMATION, ACUTE AND CHRONIC,
CARCINOMA, SQUAMOUS CELL,
ADENOMA,
HYPERPLASIA, ALVEOLAR/PNCHOLIOLAR,
HEMORRHAGE,
(MASS), ADENOCARCINOMA,
OTITIS, CHRONIC.

[illegible]

ADENOCARCINOMA, INFLAMMATORY, GRANULOMATOUS, MACROPHAGES, PIGMENTED, CARCINOMA, ADENOSQUAMOUS, CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS, INFLAMMATION, ACUTE AND CHRONIC, CARCINOMA, SQUAMOUS CELL, ADEQUATE, HYPERPLASIA, ALVEOLAR/BRONCHIOLAR, HEMORRHAGE.

2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90										

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
 (1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
 (N) NOT PRESENT IN SECTION (=) NOT REQUIRED
 (P) PRESENT (1+) MINIMAL (2+) SLIGHT
 (3+) MODERATE (4+) SEVERE

GROUP 6 MALES

(X) NO SIGNIFICANT LESION RECOGNIZED	(M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION	(A) AUTOLYZED
(N) NOT PRESENT IN SECTION	(-) NOT REQUIRED
(1) PRESENT	(11) MINIMAL
(3) MODERATE	(21) SLIGHT
	(4) SEVERE

GROUP 6 MALES

6-71

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(H) NOT PRESENT IN SECTION (-) NOT REQUIRED
(+) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 6 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4
7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6

FEMUR BONE MARROW (CONTINUED)

HYPERPLASIA, GRANULOCYTIC.

=====

NASAL CAVITY

INFLAMMATION, ACUTE.

X X

EXULSATE, PURULENT.

=====

EPITAXIS.

=====

OTHER

(BRONCHIAL LYMPH NODE), CARCINOMA, ADENOSQUAMOUS,
METASTATIC.

=====

(BRONCHIAL LYMPH NODE), CRYSTALLINE DEPOSITS.

=====

(BRONCHIAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.

=====

(TRACHEA), ADENOCARCINOMA, METASTATIC, (LUNG).

=====

(MEDIASTINAL LYMPH NODE), INFLAMMATION,

=====

GRANULOMATOUS, ACUTE.

=====

(MEDIASTINAL LYMPH NODE), CRYSTALLINE DEPOSITS.

=====

(MEDIASTINAL LYMPH NODE), INFLAMMATION, ACUTE.

=====

(STOMACH GLAND), HEMORRHAGE.

=====

(MEDIASTINAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.

=====

(FOVEA LEC), INFLAMMATION, GRANULOMATOUS.

=====

(AXILLARY LYMPH NODE), INFLAMMATION, GRANULOMATOUS.

=====

(PENIS), INFLAMMATION.

=====

(EPIDIDYMIS), HEMORRHAGE.

=====

(BRONCHIAL LYMPH NODE), CARCINOMA, SQUAMOUS

=====

CELL, METASTATIC.

=====

(BRONCHIAL LYMPH NODE), INFLAMMATION,

=====

GRANULOMATOUS, ACUTE.

=====

(MEDIASTINAL LYMPH NODE), HEMORRHAGE.

=====

(MEDIASTINAL LYMPH NODE), ADENOCARCINOMA, METASTATIC.

=====

(PANCREATIC LYMPH NODE), INFLAMMATION, GRANULOMATOUS.

=====

(PANCREATIC LYMPH NODE), CRYSTALLINE DEPOSITS.

=====

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 7 MALES

6-73

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (M1) MINIMAL (M2) SLIGHT
(M3) MODERATE (M4) SEVERE

GROUP 7 MALES

(3) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(0) NOT PRESENT IN SECTION (-) NOT REQUIRED
(+) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GEOM: 7 MALES

6-75

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(H) NOT PRESENT IN SECTION (-) NOT REQUIRED
(+) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 7 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1

OTHER (CONTINUED)

(BRONCHIAL LYMPH NODE), CRYSTALLINE DEPOSITS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(PERIESTINAL LYMPH NODE), INFLAMMATION,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(PERIESTINAL LYMPH NODE), INFLAMMATION,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(PERIESTINAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(PERIESTINAL LYMPH NODE), CRYSTALLINE DEPOSITS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(PERIESTINAL LYMPH NODE), AMYLOIDOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(PERIESTINAL LYMPH NODE), INFLAMMATION, ACUTE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 7 MALES

6-77

(3) NO SIGNIFICANT LESION RECOGNIZED (4) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (5) AUTOLYZED
(2) NOT PRESENT IN SECTION (6) NOT REQUIRED
(1) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 2 MALES

[illegible]

6-78

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (MI) MINIMAL (SL) SLIGHT
(MO) MODERATE (S) SEVERE

GROUP 7 MALES

6-79

(X) NO SIGNIFICANT LESION RECOGNIZED	(N) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION	(A) AUTOLYZED
(H) NOT PRESENT IN SECTION	(-) NOT REQUIRED
(F) PRESENT	(1+) MINIMAL
(3+) MODERATE	(2+) SLIGHT
	(4+) SEVERE

GROUP 7 MALES

5-80

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 7 MALES

[illegible]

18-3

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 7 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	9
7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6

OTHER (CONTINUED)

(BRONCHIAL LYMPH NODE), CRYSTALLINE DEPOSITS.	=	24	=	=	=	=	=	=	21	11	=	=	14	=	=	=	=	=	=
(MEDIASTINAL LYMPH NODE), INFLAMMATION,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GRANULOMATOUS, ACUTE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(RENAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(RENAL LYMPH NODE), CRYSTALLINE DEPOSITS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(MEDIASTINAL LYMPH NODE), ARTERIOSCLEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(LIVER), INFLAMMATION, ACUTE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	44

(X) NO SIGNIFICANT LESION RECOGNIZED	(N) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION	(A) AUTOLYZED
(W) NOT PRESENT IN SECTION	(-) NOT REQUIRED
(P) PRESENT	(1+) MINIMAL
(3+) MODERATE	(2+) SLIGHT
	(4+) SEVERE

GROUP 8 MALES

100

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 8 MALES

[illegible]

5-84

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (11) MINIMAL (24) SLIGHT
(31) MODERATE (41) SEVERE

GROUP B MALES

58-85

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(R) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 8 MALES

1
7
5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6
9 9 9 9 9 9 9 9 0 0 0 0 0 0 0 0 1 1 1 1
2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

LUNG & BRONCHI-ASYGUS (CONTINUED)

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
ADENOCARCINOMA.
CARCINOMA, SQUAMOUS CELL.
CARCINOMA, ADENOSQUAMOUS.
PNEUMONIA, ASPIRATION.
HEMORRHAGE.
INFLAMMATION, ACUTE AND CHRONIC.
INFLAMMATION, LYMPHOGRANULOMATOUS.
LYMPHOMA, MALIGNANT.

* 1+ = 1+ = = = = = = = = = 1+ = = = = = 1+
= = P = = = P P = P = P = = = = = P = P
= = = = = P = = P = = = = = = = = = = =
= = = = = = = = = 2+ = 2+ = = = = = = = =
=
=
= =

LUNG & BRONCHI-DIAPHRAGMATIC

ADENOMA.
INFLAMMATION, GRANULOMATOUS.
INFLAMMATION, ACUTE.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
ADENOCARCINOMA.
CARCINOMA, SQUAMOUS CELL.
CARCINOMA, ADENOSQUAMOUS.
PNEUMONIA, ASPIRATION.
HEMORRHAGE.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
INFLAMMATION, ACUTE AND CHRONIC.
INFLAMMATION, LYMPHOGRANULOMATOUS.
(BRONCHIAL LYMPH NODE), HYPERPLASIA.
LYMPHOMA, MALIGNANT.

= = = = = = X = = = X = = = = = X =
= P = P = = = = = = = = = = = = = = =
2+3+3+3+2+3+3+2+2+ = 2+4+ = 3+1+ = 2+ = 3+ = 3+ = 2+
= 1+ = 1+ = = = = = = = = = 1+ = = = = 1+
= = = = = P P P = P P = P P P = = = = = P
= = = = = = = = = 2+ = 2+ = = = = = = = =
=
=
=
= =

LUNG & BRONCHI-CARDIAC

ADENOMA.
INFLAMMATION, GRANULOMATOUS.
INFLAMMATION, ACUTE.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
ADENOCARCINOMA.
CARCINOMA, ADENOSQUAMOUS.
PNEUMONIA, ASPIRATION.
HEMORRHAGE.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
INFLAMMATION, ACUTE AND CHRONIC.
INFLAMMATION, LYMPHOGRANULOMATOUS.
LYMPHOMA, MALIGNANT.

= = = = = = X = = = X = = = = = X = =
2+3+3+3+2+3+3+2+2+ = 2+4+ = 3+1+ = 2+ = 3+ = 3+ = 2+
= 1+ = 1+ = = = = = = = = = 1+ = = = = 1+
= = P = = P = = = = = = = = = P P = = =
= = = = = = = = = 2+ = 2+ = = = = = = = =
=
=
=
= =

LIVER

= = = = = = X X X X X X X X X X = X = X X X X

(X) NO SIGNIFICANT LESION RECOGNIZED. (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP B MALES

6-87

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP B MALES

9-5

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP B MALES

68-9

(X) NO SIGNIFICANT LESION RECOGNIZED	(M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION	(A) AUTOLYZED
(N) NOT PRESENT IN SECTION	(-) NOT REQUIRED
(F) PRESENT	(1+) MINIMAL
(3+) MODERATE	(2+) SLIGHT

GROUP 8 MALES

06-90

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(H) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP B MALES

16-91

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 8 MALES

6-93

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP B HALFS

76-5

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 9 MALES

[illegible]

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 9 MALES

6-96

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (---) NOT REQUIRED
(P) PRESENT (II) MINIMAL (24) SLIGHT
(31) MODERATE (41) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 9 MALES

1
7
6
4 4 4 4 4 4 4 5 5 5 5 5 5 5 5 5 5 6 6 6 6 6
2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6

LUNG & BRONCHI-LEFT (CONTINUED)

EXUDATE, PROTEIN RICH, ALVEOLAR,
INFLAMMATION, GRANULOMATOUS.

= = = = =

LUNG & BRONCHI-APICAL

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS,
INFLAMMATION, ACUTE,
(ALVEOLAR CAPILLARIES), HYALINIZATION,
INFLAMMATION, GRANULOMATOUS,
METAPLASIA, SQUAMOUS.

X X X X X = X X X X = X = X X X X X X X X X X
= = = = 1+ = = = 1+1+ 1+ = = = = = = = = = =
=
=
= =

LUNG & BRONCHI-AZYGOUS

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS,
INFLAMMATION, ACUTE,
(ALVEOLAR CAPILLARIES), HYALINIZATION,
INFLAMMATION, GRANULOMATOUS,
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.

X X X X X = X X = X = X = X X X X X X X X X X
= = = = 1+ = = = 1+ 1+1+ 1+ = = = = = = = = = =
=
=
= =

LUNG & BRONCHI-DIAPHRAGMATIC

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS,
INFLAMMATION, ACUTE,
(ALVEOLAR CAPILLARIES), HYALINIZATION,
INFLAMMATION, GRANULOMATOUS.

X X X X X = X X X X = X = X X X X X X X X X X
= = = = 1+ = = = 1+1+ 1+ = = = = = = = = = =
=
=
= =

LUNG & BRONCHI-CARDIAC

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS,
INFLAMMATION, ACUTE,
(ALVEOLAR CAPILLARIES), HYALINIZATION,
INFLAMMATION, GRANULOMATOUS.

X X X X X = X X X X = X = X X X X X X X X X X
= = = = 1+ = = = 1+1+ 1+ = = = = = = = = = =
=
=
= =

LIVER

AMYLOIDOSIS,
CYST(S), BILIARY,
CYSTADENOMA, BILIARY, PAPILLARY,
INFLAMMATION, ACUTE AND CHRONIC,
PIGMENTATION, POSTHORMONAL,
INFLAMMATION, ACUTE.

X = X = X X X = = X X X X X X = = X X X X = = X X
= 2+ = = = = = 2+ = = = = = 2+ = = = = = 1+ = =
= = = 2+ = = = 3+2+ = = = 2+ = = = = = 1+ = =
= = = = = P = = = = = = = = = = = = = = = =
=
= =

GALLBLADDER

X A X X X M A X A X X M X A A A X A A X X A X A A

SPLEEN

AMYLOIDOSIS.

X = X X = M X X X X X = X X K = X = X X X X = X X
= 2+ = = = = = = = = = = = 2+ 2+ = = = = =

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 9 MALES

6-38

(X) NO SIGNIFICANT LESION RECOGNIZED. (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 9 MALES

66-99

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 5 MALES

101-5

(X) NO SIGNIFICANT LESION RECOGNIZED. (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 9 MALES

6-102

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 10 MALES

6-103

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 10 MALES

6-104

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1F) MINIMAL (2I) SLIGHT
(3I) MODERATE (4I) SEVERE

GROUP 10 MALES

6-107

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(H) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 10 MALES

1
7
6
9
2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6

HEART (CONTINUED)

DEGENERATION.
THROMBOSIS.
INFLAMMATION, CHRONIC.
SARCOMA, RETICULUM CELL.
SARCOMA, METASTATIC, NOS.
ARTERITIS, CHRONIC.

= = = = = 2+ = = = = = = = = = = = = = = =
= = = = = 2+ = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = 4+ = = = = =
= = = = = = = = = = = = = = = F = = = = =
= = = = = = = = = = = = = = = P = = = = =
= = = = = = = = = = = = = = = = = = = =

KIDNEYS

AMYLOIDOSIS.
NEPHROPATHY, CHRONIC.
SARCOMA, RETICULUM CELL.
SARCOMA, METASTATIC, NOS.
MINERALIZATION.
ARTERITIS, CHRONIC.

= = = = X = = = X X X X = = X = X X = X = X X
2+4+ = 3+ = 4+ = = = = = = = = = = = = = = =
= 1+2+ = 1+ = 2+ = = = = 2+1+ = 2+ = 1+ = 1+ = =
= = = = = = = = = = = = = = = P = = = = =
=
= = = = = = = = = = = = = = = = = = = =

URINARY BLADDER

DIVERTICULUM, CYSTIC.

X X X X X A X X X X X A X X X X = X A A X X X X
= = = = = = = = = = = = = = = P = = = = =

PROSTATE

X X M X X X X X X X X X X X M X X X X X M X X

TESTES

ATROPHY.
INFLAMMATION, GRANULOMATOUS.
DEGENERATION.
ARTERITIS, CHRONIC.

= = = X X X = = = X X X X X = X = A A = = X X X
1+2+3+ = = = 2+3+2+ = = = = 3+ = 3+ = 1+1+ = =
= 2+ = 3+ = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = = = =

SEMINAL VESICLES

X X X X X X X X X X X X X X X X X A X X X X X

STERNUM & RIB JUNCTION

HYPERPLASIA, MYELOID.
HYPERPLASIA, GRANULOCYTIC.
(BONE MARROW), HYPERPLASIA.
(MARROW), EXTRUSION.

X X X X X X X X = X X X X X = X = X X X X X X X
= = = = = = = = = 4+ = = = = = = = = = = =
= = = = = = = = = = = = = = 4+ = 3+ = = = = =
= = = = = = = = = = = = = = = = = = = =

FEMUR/BONE MARROW

HYPERPLASIA, MYELOID.
HYPERPLASIA, GRANULOCYTIC.
(BONE MARROW), HYPERPLASIA.

M X X I X X X X X = X X X X X = X = X X X X X X X
= = = = = = = = = 4+ = = = = = = = = = = =
= = = = = = = = = = = = = = 4+ = 3+ = = = = =
= = = = = = = = = = = = = = = = = = = =

NASAL CAVITY

INFLAMMATION, ACUTE.

X
= =

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 10 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7
9	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0
2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1

EPITAXIS.
EXUDATE, FURULENT.
ARTIFACI(S).

[illegible]

(MASS-ORIGIN UNCERTAIN), ABSCESS(ES),
(BRONCHIAL LYMPH NODE), CRYSTALLINE DEPOSITS,
(MEDIASTINAL LYMPH NODE), CARCINOMA, SQUAMOUS CELL,
(MEDIASTINAL LYMPH NODE), CARCINOMA,
SQUAMOUS CELL, METASTATIC,
(MEDIASTINAL LYMPH NODE), CRYSTALLINE DEPOSITS,
(CECAL NODULE), SARCOMA, NOS.

[illegible]

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 10 MALES

5-110

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 10 MALES

1
7
7
1 1 1 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 4 4 4 4
7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

DUODENUM (CONTINUED)

CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.

= = = = =

JEJUNUM

INTRALUMINAL BLOOD.

X X X A X X M A A A X A A X A X M X A X A A A = X
= = = = = 3+

CECUM

CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.
INFLAMMATION, ACUTE AND CHRONIC.
ULCER(S).
EDEMA.
INFLAMMATION, CHRONIC.
SARCOMA, NOS.
NEMATODIASIS.

X A = A X X M A A A = A A = A A A A = X = A = A X
= = = = = 2+ = = = = = 1+ 2+ 3+ = =
= = = = = 2+ = = = = = 1+ = = = = =
= = = = = 2+ = = = = = 1+ = = = = =
= = = = = 2+ = = = = = 1+ = = = = =
= = = = = 2+ = = = = = 1+ = = = = =

ILEUM

INTRALUMINAL BLOOD.

X M X M X X M A A A X A A X A X M A A X A A A = X
= = = = = 3+

COLON/RECTUM

CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.
INFLAMMATION, ACUTE AND CHRONIC.
ULCER(S).
ABSCESS(ES).
INFLAMMATION, CHRONIC.
NEMATODIASIS.
HEMORRHAGE.

X M X A X X M A A A = A X X X = X X X A X A X X
= = = = = 2+ = = = = = 2+ = = = = =
= = = = = 2+ = = = = = 2+ = = = = =
= = = = = 2+ = = = = = 2+ = = = = =
= = = = = 2+ = = = = = 2+ = = = = =
= = = = = 2+ = = = = = 2+ = = = = =

MESENTERIC LYMPH NODE

HYPERPLASIA.
INFLAMMATION, GRANULOMATOUS.
TUMOR EMBOLUS.
PLASMACYTOSIS.
FIBROSIS.
FIBROSARCOMA.

X X X = X M M A A X = X X = X X M X X X = X X X M
= = = = = 2+ = = = = = 2+ = = = = =
= = = = = 2+ = = = = = 2+ = = = = =
= = = = = 2+ = = = = = 2+ = = = = =
= = = = = 2+ = = = = = 2+ = = = = =
= = = = = 2+ = = = = = 2+ = = = = =

LARYNX

HYPERPLASIA.
POLYP(S), EPITHELIAL.
CARCINOMA, SQUAMOUS CELL.
INFLAMMATION, ACUTE.
HYPERPLASIA.
ASPIRATION, FOREIGN MATERIAL.

X M = X X X X X X = X X X = X X X X X X X = X
= = = = = 1+ = = = = =
= = = = = P = = = = = P = = = = =
= = = = = P = = = = = P = = = = =
= = = = = P = = = = = P = = = = =
= = = = = P = = = = = P = = = = =

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 10 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
1	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	4	4
7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6

METAPLASIA, SQUAMOUS.
ADENOCARCINOMA, INVASIVE.

[illegible]

CARCINOMA, ADENOSQUAMOUS.
POLY(S), EPITHELIAL.
CARCINOMA, SQUAMOUS CELL.
ADENOCARCINOMA.
ASPIRATION, FOREIGN MATERIAL.
CARCINOSARCOMA.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	5
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---

AMYLOIDOSIS.
TUMOR EMBOLUS.

ESOPHAGUS

X H H X X H X H H H X X X H X H X X H X X X
Y Y Y Y Y Y Y Y Y Y Y Y Y I Y Y X Y Y Y Y Y

CARCINOMA, ADENOSQUAMOUS,
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS,
INFLAMMATION, BRAINULOMATOUS.
CARCINOMA, SQUAMOUS CELL.
INFLAMMATION, ACUTE.
ADENOCARCINOMA.
ADENOMA.
THROMBUS, FIBRIN, CAPILLARY,
POLYPS, BRONCHOLAR, EPITHELIAL,
(MAJINSTEIN BRONCHIUS), CARCINOMA, SQUAMOUS CELL,
CARCINOMA, SQUAMOUS CELL, METASTATIC.
EXUDATE, PROTEIN RICH, ALVEOLAR,
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR,
SARCOMA, METASTATIC, NOS.
PNEUMONIA, ASPIRATION,
ADENOCARCINOMA, METASTATIC.
CARCINOMA, ANAPLASTIC,
HYPERPLASIA, BRONCHIOLAR,
METAPLASIA, SQUAMOUS,
HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.
ADENOCARCINOMA, INVASIVE,

[illegible]

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (R) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 10 MALES

1
7
1
1 1 1 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 4 4
7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

LUNG & BRONCHI-APICAL	= M = M = = = X = = = = = X = = = = =
CARCINOMA, ADENOSQUAMOUS.	= = = = =
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.	2+ 1+ 2+2+2+1+ 1+1+1+1+2+1+1+ 1+1+2+2+1+2+2+
INFLAMMATION, GRANULOMATOUS.	= = = 2+ = = = = 3+ = = = = 3+ =
CARCINOMA, SQUAMOUS CELL.	= = = = =
INFLAMMATION, ACUTE.	= = = = =
ADENOCARCINOMA.	= = = = =
THROMBUS, FIBRIN, CAPILLARY.	= = = = =
CARCINOMA, SQUAMOUS CELL, METASTATIC.	= = = = =
PNEUMONIA, ASPIRATION.	= = = = = 3+ = = = = =
ADENOCARCINOMA, METASTATIC.	P = = = = =
LUNG & BRONCHI-ABYSSUS	= = = = =
CARCINOMA, ADENOSQUAMOUS.	= = = = = X = = = = X X M =
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.	2+2+1+1+2+2+2+1+ 1+1+1+1+2+1+1+ 1+1+2+2+ = 2+
INFLAMMATION, GRANULOMATOUS.	= 2+ = 2+ = = = 3+ = = = =
CARCINOMA, SQUAMOUS CELL.	= P P = = = P = = = = P = = = =
INFLAMMATION, ACUTE.	= = = = =
ADENOCARCINOMA.	= = = = =
ADENOMA.	= = = = =
THROMBUS, FIBRIN, CAPILLARY.	= = = = =
CARCINOMA, SQUAMOUS CELL, METASTATIC.	= = = = =
PNEUMONIA, ASPIRATION.	= = = = = 3+ = = = = =
ADENOCARCINOMA, METASTATIC.	P = = = = =
LUNG & BRONCHI-DIAPHRAGMATIC	= = = = =
CARCINOMA, ADENOSQUAMOUS.	= = = = = X = = = = =
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.	2+2+1+1+2+2+2+1+ 1+1+1+1+2+1+1+ 1+1+2+2+2+1+2+2+
INFLAMMATION, GRANULOMATOUS.	= 2+ = 2+ = = = 3+ = = = =
CARCINOMA, SQUAMOUS CELL.	= P P = = P P = = = = P = = = =
INFLAMMATION, ACUTE.	= = = = =
ADENOCARCINOMA.	= = = = =
ADENOMA.	= = = = =
POLYP(S), BRONCHIOLAR.	= = = = =
THROMBUS, FIBRIN, CAPILLARY.	= = = = =
CARCINOMA, BRONCHOGENIC.	= = = = =
CARCINOMA, SQUAMOUS CELL, METASTATIC.	= = = = =
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	= = = = =
SARCOMA, NOS.	= = = = =
PNEUMONIA, ASPIRATION.	= = = = = 3+ = = = = =
ADENOCARCINOMA, METASTATIC.	P = = = = =
HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.	= = = = = 2+ = = = = =

6-113

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 10 MALES

5-174

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 10 MALES

1
7
7
1 1 1 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 4
7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

HEART (CONTINUED)

DEGENERATION,
THROMBOSIS,
INFLAMMATION, CHRONIC,
SARCOMA, RETICULUM CELL,
SARCOMA, METASTATIC, NOS,
ARTERITIS, CHRONIC.

=
=
=
=
=
= =

KIDNEYS

AMYLOIDOSIS,
NEPHROPATHY, CHRONIC,
SARCOMA, RETICULUM CELL,
SARCOMA, METASTATIC, NOS,
MINERALIZATION,
ARTERITIS, CHRONIC.

X X = X = = X X X = = X = X X X = X = X
= 1+2+ = = = = = 2+ = 3+ = = = 2+3+ =
= = = 1+1+1+ = = = 2+ = 1+ = = = 1+ =
=
=
= =

URINARY BLADDER
DIVERTICULUM, CYSTIC.

X A X X X X X A X A X X X X X A X A X X X X X X

PROSTATE

X H X X X X H X H X X X X H A H X X H X X X X X X

TESTES

ATROPHY,
INFLAMMATION, GRANULOMATOUS,
DEGENERATION,
ARTERITIS, CHRONIC.

X X H = X = = X = X X = = A X = X X X X X = X
= = 3+ 3+3+ 2+ = 2+ = 3+ = 2+ = = = 3+3+ =
=
=
= =

SEMINAL VESICLES

X X X X X X X X X X X X X A X X X X X X X X X X

STERNUM & RIB JUNCTION

HYPERPLASIA, MYELOID,
HYPERPLASIA, GRANULOCYTIC,
(BONE MARROW), HYPERPLASIA,
(MARROW), EXTRUSION.

X X X X X X = X = X X X X X = X H = X X X X X = X
=
= = = = = 3+ = = = = = = = = = = = = = = =
= = = = = 3+ = = = = = P = P = = = = = = =

FEMUR/BONE MARROW

HYPERPLASIA, MYELOID,
HYPERPLASIA, GRANULOCYTIC,
(BONE MARROW), HYPERPLASIA.

X X X X X X = X = X X X X X X H X X X X X X X X
=
= = = = = 3+ = = = = = = = = = = = = = = =
= = = = = 3+ = = = = = = = = = = = = = = =

NASAL CAVITY

INFLAMMATION, ACUTE.

X X = X X X X X X X X X X = X = X X X X X X X
= =

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 10 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4
7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6

EPITAXIS.
EXUDATE, PURULENT.
ARTIFACT(S).

[illegible]

(MASS-ORIGIN UNCERTAIN), ABSCESS(ES),
(BRONCHIAL LYMPH NODE), CRYSTALLINE DEPOSITS,
(MEDIASTINAL LYMPH NODE), CARCINOMA, SQUAMOUS CELL,
(MEDIASTINAL LYMPH NODE), CARCINOMA,
SQUAMOUS CELL, METASTATIC,
(MEDIASTINAL LYMPH NODE), CRYSTALLINE DEPOSITS,
(CECAL NODULE), SARCOMA, NOS.

2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886	1885	1884	1883	1882	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871	1870	1869	1868	1867	1866	1865	1864	1863	1862	1861	1860	1859	1858	1857	1856	1855	1854	1853	1852	1851	1850	1849	1848	1847	1846	1845	1844	1843	1842	1841	1840	1839	1838	1837	1836	1835	1834	1833	1832	1831	1830	1829	1828	1827	1826	1825	1824	1823	1822	1821	1820	1819	1818	1817	1816	1815	1814	1813	1812	1811	1810	1809	1808	1807	1806	1805	1804	1803	1802	1801	1800	1799	1798	1797	1796	1795	1794	1793	1792	1791	1790	1789	1788	1787	1786	1785	1784	1783	1782	1781	1780	1779	1778	1777	1776	1775	1774	1773	1772	1771	1770	1769	1768	1767	1766	1765	1764	1763	1762	1761	1760	1759	1758	1757	1756	1755	1754	1753	1752	1751	1750	1749	1748	1747	1746	1745	1744	1743	1742	1741	1740	1739	1738	1737	1736	1735	1734	1733	1732	1731	1730	1729	1728	1727	1726	1725	1724	1723	1722	1721	1720	1719	1718	1717	1716	1715	1714	1713	1712	1711	1710	1709	1708	1707	1706	1705	1704	1703	1702	1701	1700	1699	1698	1697	1696	1695	1694	1693	1692	1691	1690	1689	1688	1687	1686	1685	1684	1683	1682	1681	1680	1679	1678	1677	1676	1675	1674	1673	1672	1671	1670	1669	1668	1667	1666	1665	1664	1663	1662	1661	1660	1659	1658	1657	1656	1655	1654	1653	1652	1651	1650	1649	1648	1647	1646	1645	1644	1643	1642	1641	1640	1639	1638	1637	1636	1635	1634	1633	1632	1631	1630	1629	1628	1627	1626	1625	1624	1623	1622	1621	1620	1619	1618	1617	1616	1615	1614	1613	1612	1611	1610	1609	1608	1607	1606	1605	1604	1603	1602	1601	1600	1599	1598	1597	1596	1595	1594	1593	1592	1591	1590	1589	1588	1587	1586	1585	1584	1583	1582	1581	1580	1579	1578	1577	1576	1575	1574	1573	1572	1571	1570	1569	1568	1567	1566	1565	1564
------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

(M) MISSING
(A) AUTOLYZED
(-) NOT REQUIRED
+) SLIGHT
ERE

GROUP 11 MALES

[illegible]

6-117

* (X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
 (1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
 (0) NOT PRESENT IN SECTION (-) NOT REQUIRED
 (P) PRESENT (1+) MINIMAL (2+) SLIGHT
 (3+) MODERATE (4+) SEVERE

GROUP 11 MALES

1
7
7
4 4 4 4 4 4 4 4 5 5 5 5 5 5 6 6 6 6 6 6 6 6
2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5

INFLAMMATION, MUCOSAL.
NECROSIS.
PIGMENTATION, POSTMORTEM.
PAPILLOMA.

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541</
----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-------

HYPEREMIA.

X A X X X A X X X X X I A X A A X X A A A X X A
 =

HEMORRHAGE.
DILATATION OF LYMPHATICS.

X A X X X A X X X X X X A A X - X A X X A A
= = = = = = = = = = = = = = = 1 + = = = =

CYSTIC HYPERPLASIA, CRYST EPITHELIUM.
INFLAMMATION, PYOGRANULOMATOUS.
INFLAMMATION, CHRONIC.
INFLAMMATION, ACUTE AND CHRONIC.
HEMOPTHAGE.

[illegible]

DILATATION OF LYMPHATICS.
HYPEREMIA.

CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.
 INFLAMMATION, CHRONIC.
 INFLAMMATION, ACUTE AND CHRONIC.
 HEMORRHAGE.
 ADENOCARCINOMA.
 METASTASIS.

[illegible]

INFLAMMATION, GRANULOMATOUS,
HYPERPLASIA,
CRYSTALLINE DEPOSITS,
LEUKEMIA, MEGAKARYOCYTIC,

[illegible]

X X Y Z Z Y Z X

H X X X X X X X Y Y X X Y X X Y Y Y Y Y Z Y X X Y

$$Y \times X \times X \times X \times Y \times X \times X \times Y \times Y \times Y = Y \times Y \times X \times X \times Y \times Y = Y \times Y \times Y \times Y \times Y \times A$$

(3) NO SIGNIFICANT LESION RECOGNIZED	(M) MISSING
(7) INSUFFICIENT TISSUE PRESENT IN SECTION	(A) AUTOLYZED
(8) NOT PRESENT IN SECTION	(-) NOT REQUIRED
(9) FOCAL	(1) MINIMAL
(31) MODERATE	(21) SLIGHT
	(41) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 11 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
4	4	4	4	4	4	5	5	5	5	5	5	5	5	6	6	6	6	6	6
2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1

LUNG & PNEUMOTIC-CARDIAC (CONTINUED)

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION, GRANULOMATOUS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NEOPLASMS, NOS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
OSTEOSARCOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPEREMIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA, MEGAKARYOCYTIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERCELLULARITY, ALVEOLAR SEPTUMS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LIVER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AMYLOIDOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
VACUOLATION, CYTOPLASMIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S), BILIARY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA, MEGAKARYOCYTIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SARCOMA, GRANULOCYTIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CHOLELITH(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SPLEEN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AMYLOIDOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERCELLULARITY OF RED PULP.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMATOPHESIS, EXTRAMEDULLARY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	M	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HEART	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
VALVULITIS, CHRONIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
VALVULITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS, EPICARDIAL.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOIDOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NEPHROPATHY, CHRONIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INFLAMMATION, CHRONIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

5-120

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) FREQUENT (1+) MINIMAL (2+) SLIGHT
(2+) MODERATE (4+) SEVERE

GROUP 11: MALES

GROUP 11 MALES

6-121

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 11: MALES

6-122

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 11 NALES

GROUP 11 NALES

[illegible]

5-123

(X) NO SIGNIFICANT LESION RECOGNIZED	(M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION	(A) AUTOLYZED
(N) NOT PRESENT IN SECTION	(-) NOT REQUIRED
(+) PRESENT	(1+) MINIMAL
(2+) MODERATE	(2+) SLIGHT
	(4+) SEVERE

GROUP 11 MALES

5-124

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(2) NOT PRESENT IN SECTION (-) NOT REQUIRED
(+) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 11 MALES

1
7
7
8 4 6 7 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 8
7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

LUNG & BRONCHI-CARDIAC (CONTINUED)

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.
NEUTROPHIL(S), NOS.
OSTEOSARCOMA, METASTATIC.
HYPEREMIA.
LEUKEMIA, MEGAKARYOCYTIC.
HYPERCELLULARITY, ALVEOLAR SEPTUMS.

= = = 1+ = = = = 1+ 1+1+ = = = 1+ 1+ =
= = = = = = = 3+ = = = = = = = = =
= = = = = = = = = = = = = = = = = =
3+ = = = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = =

LIVER

AMYLOIDOSIS.
NECROSIS.
VACUOLATION, CYTOPLASMIC.
CYST(S), BILIARY.
LEUKEMIA, MEGAKARYOCYTIC.
SARCOMA, GRANULOCYTIC.

X X = = X X X X = X = X X X = = X X X = = X X = X
= = 1+1+ = = = 2+ = 2+ = = 1+ = = = 3+ = = = =
= = = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = =

GALLBLADDER

CHOLELITH(S).

A A A X = X X A A X X X X X A X X X X A X X X X
= = = 2+ = = = = = = = = = = = = = = = = = =

SPLEEN

AMYLOIDOSIS.
HYPERCELLULARITY OF RED PULP.
HEMATOPOIESIS, EXTRAMEDULLARY.

X X = X X X X X = X = X X X X X X X = = X X X X
= = 2+ = = = 3+ = = = = = = = = = 3+ = = = =
= = = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = =

PANCREAS

X X X X X X X X H H X X X X X X X X X X X X X X

HEART

THROMBOSIS.
VALVULITIS, CHRONIC.
VALVULITIS.
FIBROSIS, EPICARDIAL.

X X X X X X X X = X X X X X X X X X X X X X X
= = = = = = = 3+ = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = =

KIDNEYS

AMYLOIDOSIS.
NEPHROPATHY, CHRONIC.

= = = = X X X = X = X X = = X = = = X X = X
= = 4+2+ = = = 3+ = 3+ = = 4+3+ = 2+1+3+2+ = 1+ =
2+1+ = 1+ = = = = = = = 2+ = = = = = = =

URINARY BLADDER

INFLAMMATION, CHRONIC.
PYELOPLASIA.
MINERALIZATION.

X A X X X = X X X X X X X = X X 1 X X X 1 X X X
= = = = = = = = = = = = = = = = = =
= = = = 2+ = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = =

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(+) PRESENT (1+) MINIMAL (2+) SLIGHT
(2+) MODERATE (4+) SEVERE

GROUP 11 MALES

6-126

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (11) MINIMAL (21) SLIGHT
(31) MODERATE (44) SEVERE

GROUP 12 MALES

6-127

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 12 MALES

1
7
7
9
2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6

JEJUNUM (CONTINUED)

INFLAMMATION, ACUTE AND CHRONIC.
INFLAMMATION, HEMORRHAGIC.

= 2+ = =

CECUM

HYPEREMIA,
INFLAMMATION, CHRONIC,
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM,
DILATATION, CRYPT.

X A A A = A X X A X = = X A = X X A X A A A A X
= = = = 2+ = = = = = = = = = = = = = = = =
= = = = 1+ = = = = 1+2+ = = = = = = = = = = =
= = = = = = = = = = 2+ = = = = = = = = = = =

ILEUM

INFLAMMATION, ACUTE AND CHRONIC,
HEMORRHAGE.

X X A A A X X = N X X X X H A X X A X X X A A A X
= = = = = 2+ = = = = = = = = = = = = = = = =
= =

COLON/RECTUM

DILATATION, CRYPT.

X X X X A X X X A X X X X X = X X A X X X A X A X
= = = = = = = = = = = 2+ = = = = = = = = = = =

MESENTERIC LYMPH NODE

INFLAMMATION, ACUTE AND CHRONIC,
HYPERPLASIA,
SARCOMA, NOS.
ERYTHROCYTOSIS, SINUSOIDAL.

X X X X = I X X X X I X X X X X X X X X H = A X
= = = = 3+ = = = = = = = = = = = = = = = =
= 2+ = =
= =

LARYNX

POLYP(S), EPITHELIAL,
ADENOCARCINOMA,
CARCINOMA, IN SITU,
CARCINOMA, SQUAMOUS CELL,
HYPERPLASIA,
METAPLASIA, SQUAMOUS,
ARTERITIS, CHRONIC,
HYPERPLASIA, SQUAMOUS CELL,
HYPERPLASIA, SUBMUCOSAL, GLANDULAR.

X = = X = = = = X = X = X = X X X X X X X X X X
= F = = = = F = = = = F = = = = = = = = = = =
=
=
= = = = 1+ = = = = 1+ = = = = = = = = = = =
= = = = 1+ = = = = = = = = = = = = = = = =
= = = = 2+ = = = = = = = = = = = = = = = =
= =

TRACHEA

POLYP(S), EPITHELIAL,
DYSPLASIA,
CARCINOMA, SQUAMOUS CELL,
HYPERPLASIA,
INFLAMMATION, ACUTE,
EXUDATE, PURULENT,
FOREIGN MATERIAL.

X = X = X X X X = = X X X = X X X X = X X X X = X
= = = F = = = = = = = = = F = = = = = = = = =
= 2+ =
= = = = = = = = = F P = = = = = = = = = = =
=
=
=
= =

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 12 MALES

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(-) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 12 MALES

1
7
7 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8
9 9 9 9 9 9 9 9 0 0 0 0 0 0 0 0 0 0 1 1 1 1
2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6

LUNG & BRONCHI-AZYGOS (CONTINUED)

PNEUMONIA, ASPIRATION.
ABSCESS(ES).
ADENOCARCINOMA, BRONCHIOLAR.
INFLAMMATION, GRANULOMATOUS.
EXUDATE, PROTEIN RICH, ALVEOLAR.

= = = = = = = = = P = = = = =
= = = = = = = = = = = = = P = = = = =
= = = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = =

LUNG & BRONCHI-DIAPHRAGMATIC

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
ADENOCARCINOMA.
CARCINOMA, SQUAMOUS CELL.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
(HAINSTEM BRONCHUS), CARCINOMA, SQUAMOUS CELL.
CARCINOMA, ADENOSQUAMOUS.
INFLAMMATION, ACUTE.
CARCINOMA, SQUAMOUS CELL, (BRONCHIOLAR ORIGIN).
PNEUMONIA, ASPIRATION.
MINERALIZATION.
HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.
INFLAMMATION, GRANULOMATOUS.

= = = = = = = = = X = = = = =
2+1+3+1+P 2+2+1+1+2+1+1+2+1+1+ = = = 1+ = 1+2+1+
= P P = = = = P = = = P P = = = P = = =
= = = = = = = = = P = = = = = = = = =
= = = = 2+ = = = = = = = = = = = = =
= = = = P = = = = P P = = = = P = = = =
= = = = = = = = = P = = = = 4+ = = = = =
= = = = = = = = = P = = = = = = = = =
= = = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = = =

LUNG & BRONCHI-CARDIAC

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
ADENOCARCINOMA.
CARCINOMA, ADENOSQUAMOUS.
INFLAMMATION, ACUTE.
PNEUMONIA, ASPIRATION.
HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.
INFLAMMATION, GRANULOMATOUS.

= = = = = = = = = X X X = = = X X = = =
2+1+3+1+P 2+2+1+1+2+1+1+2+2+ = = = 1+ = 1+2+1+
= = = = = = = = = P = = = = = P = = = = =
= = = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = 4+ = = = = =
= = = = = = = = = P = = = = = = = = =
= = = = = = = = = = = = = = = = = =

LIVER

DEGENERATION.
NECROSIS.
HYPEREMIA.
AMYLOIDOSIS.
ECTASIA, SINUSOIDAL.
HYPERPLASIA, BILE DUCT.
INFLAMMATION, NOS.
PIGMENTATION, CYTOPLASMIC.
VACUOLATION, CYTOPLASMIC.
CYST(S), BILIARY.
(CAUDATE LOBE), VACUOLATION, CYTOPLASMIC.

X X = X = X X X X X X = = X X = = X X X X = X
= 3+ = = = = = = = = = = = = = = = = =
= 3+ 2+ = = = = = = = = = = = = = 2+ = =
= 4+ 4+ = = = = = = = = = = = = = = = =
= = = = = = = = = 2+ = 1+ = = = = = = =
= = = = = = = = = 4+ = = = = = = = = = =
= = = = = = = = = = = = = 2+ = = = = = =
= = = = = = = = = = = = = 2+ = = = = = =
= = = = = = = = = = = = = = = = = = 2+ =
= =

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 12 MALES

6-131

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) FRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 12 MALES

6-132

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 12 SALES

6-133

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 12 MALES

1
7
8
1 1 1 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3
7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

JEJUNUM (CONTINUED)

INFLAMMATION, ACUTE AND CHRONIC.
INFLAMMATION, HEMORRHAGIC.

= = = = = 2+ = = = =

CECUM

HYPEREMIA.
INFLAMMATION, CHRONIC.
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.
DILATATION, CRYPT.

A A I X A = A A X = A A X X A A X X A X = H X A A
= = = = 1+ = = = =
= = = = = 1+ = = = = 3+ = = = =
= = = = = = = = = =

ILEUM

INFLAMMATION, ACUTE AND CHRONIC.
HEMORRHAGE.

H X X X A = A A X X X A X X A X X A X A H X A A
= = = = = 4+ = = = =

COLON/RECTUM

DILATATION, CRYPT.

X X X X A X A X X X X A X X X A X X X X X A

MESENTERIC LYMPH NODE

INFLAMMATION, ACUTE AND CHRONIC.
HYPERPLASIA.
SARCOMA, NOS.
ERYTHROCYTOSIS, SINUSOIDAL.

H X = X H X I H X H X A X H = X X X X X A = X X X
= = = = = 2+ = = = =
= F = = = = = 2+ = = = =

LARYNX

POLYP(S), EPITHELIAL.
ADENOCARCINOMA.
CARCINOMA, IN SITU.
CARCINOMA, SQUAMOUS CELL.
HYPERPLASIA.
METAPLASIA, SQUAMOUS.
ARTERITIS, CHRONIC.
HYPERPLASIA, SQUAMOUS CELL.
HYPERPLASIA, SUBMUCOSAL, GLANDULAR.

= X X X X X = X = = X X X H X X X = X X X =
P = = = = P = = = = P = = = =
= = = = P = = = =
= = = = = 2+ = = = = 2+ = = = =
= = = = = 3+ = = = = 2+ = = = =
= = = = = 3+ = = = = 2+ = = = =

TRACHEA

POLYP(S), EPITHELIAL.
DYSPLASIA.
CARCINOMA, SQUAMOUS CELL.
HYPERPLASIA.
INFLAMMATION, ACUTE.
EXUDATE, PURULENT.
FOREIGN MATERIAL.

X = = X X X X = X X X = X X X X = X = X X X X
P = = = = P = = = = P = = = =
= = = = = 2+ = = = =
= = = = = 1+ = = = =
= = = = = P = = = =
= = = = = P = = = =

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 12 MALES

1
7
8
1 1 1 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4
7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

TRACHEA (CONTINUED)

METAPLASIA.

= 3+ = = = = = = = = = = = = = = = = = =

THYROID

CARCINOMA, NOS.

X X = 1 X X X X X X X X X X X X X X X X X X
= P = = = = = = = = = = = = = = = = = =

PARATHYROID

M X M M M X X X I X X M X M M M X X X M M X X X

ESOPHAGUS

X X M X

LUNG & BRONCHI-LEFT

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.

= = = = = = = = = = = = = = = = = =

ADENOCARCINOMA.

1+ = 2+ = 2+ = 2+2+1+1+1+1+1+2+1+3+2+2+ = 2+1+1+1+2+

CARCINOMA, SQUAMOUS CELL.

= = = = = = = = = = = = = = = = = =

HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.

= = = = = = = = = = = = = = = = = =

CARCINOMA, ADENOSQUAMOUS.

P P = P = = = = = = = = = = = = = = = = = =

INFLAMMATION, ACUTE.

4+ = = = = = = = = = = = = = = = = = =

ADENOMA.

= = P = = = = = = = = = = = = = = = = = =

PNEUMONIA, ASPIRATION.

= = = = = = = = = = = = = = = = = =

ABSCESS(ES).

= = = = = = = = = = = = = = = = = =

CARCINOMA, ANAPLASTIC, METASTATIC.

= = = = = = = = = = = = = = = = = =

HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.

= = = = = = = = = = = = = = = = = =

NEOPLASM(S), NOS.

= = = = = = = = = = = = = = = = = =

INFLAMMATION, GRANULOMATOUS.

= = = = = = = = = = = = = = = = = =

EXUDATE, PROTEIN RICH, ALVEOLAR.

= = = = = = = = = = = = = = = = = =

LUNG & BRONCHI-RIGHT

= X = = X = = = X = = = X = = M = X = = = X =

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.

1+ = 2+ = 2+ = 2+2+ = 1+1+1+ = 2+ = 3+ = 2+ = 2+1+1+ = 2+

ADENOCARCINOMA.

= = P = = = = = = = = = = = = = = = = = =

HYPERPLASIA, SQUAMOUS.

= = = = = = = = = = = = = = = = = =

CARCINOMA, ADENOSQUAMOUS.

= = = = = = = = = = = = = = = = = =

INFLAMMATION, ACUTE.

4+ = 4+ = = = = = = = = = = = = = = = = = =

PNEUMONIA, ASPIRATION.

= = = = = = = = = = = = = = = = = =

HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.

= = = = = = = = = = = = = = = = = =

INFLAMMATION, GRANULOMATOUS.

= = = = = = = = = = = = = = = = = =

LUNG & BRONCHI-ANTERIOR

= = = = X X X = = = = = X = = = M M X = = = =

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.

1+ = 2+ = = = = 2+2+1+1+1+1+ = 2+1+3+ = = 2+1+1+1+2+

ADENOCARCINOMA.

= = = = = = = = = = = = = = = = = =

CARCINOMA, SQUAMOUS CELL.

= = = = = = = = = = = = = = = = = =

CARCINOMA, ADENOSQUAMOUS.

= = P = = = = = = = = = = = = = = = = = =

INFLAMMATION, ACUTE.

4+ = 4+ = = = = = = = = = = = = = = = = = =

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(-) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 12 MALES

[illegible]

PNEUMONIA, ASPIRATION,
ABSCESS(ES),
APENOCARCINOMA, BRONCHIOLAR,
INFLAMMATION, GRANULOMATOUS,
EXUDATE, PROTEIN RICH, ALVEOLAR.

10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531
----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

LUNG & BRONCHI-CARDIAC
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
ADENOCARCINOMA.
CARCINOMA, ADENOSQUAMOUS.
INFLAMMATION, ACUTE.
PNEUMONIA, ASPIRATION.
HYPERPLASIA, BRONCHIOALAR, EPITHELIAL.
INFLAMMATION, GRANULOMATOUS.

[illegible]

DEGENERATION.
NECROSIS.
HYPEREMIA.
AMYLOIDOSIS.
ECTASIA, SINUSOIDAL.
HYPERPLASIA, BILE DUCT.
INFLAMMATION, NOS.
FIBROTIC, CYTOPLASMIC.
VACUOLATION, CYTOPLASMIC.
CYST(S), BILARY.
(CAUSTIC LOBE), VACUOLATION, CYTOPLASMIC.

[illegible]

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 12 MALES

1
7
8
1 1 1 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 4 4
7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

SEMINAL VESICLES (CONTINUED)

INFLAMMATION, ACUTE.

= = = = = 3+ = = = = =

STERNUM & RIB JUNCTION

ENDOSTOSIS.

X X = X

ARTIFACT(S).

= = P = = = = =

HYPERPLASIA, GRANULOCYTIC.

= = = = = 2+ = = = = =

FEMUR/BONE MARROW

ENDOSTOSIS.

X X

NASAL CAVITY

EXUDATE, PURULENT.

X X

FOREIGN MATERIAL.

= = = = =

OTHER

(RIR); CARCINOMA, SQUAMOUS CELL.
(MEDIASTINAL LYMPH NODE); CRYSTALLINE DEPOSITS.
(MEDIASTINAL LYMPH NODE); CARCINOMA,
SQUAMOUS CELL; METASTATIC.

= = = = =

= = = = = 1+ 2+ = = = = = 1+ 2+ = = = = =

P = = = = =

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(H) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 13 MALES

6-139

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(+) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 13 MALES

097-9

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 13 MALES

6-141

(2) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(0) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 13 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
4	4	4	4	4	4	4	4	5	5	5	5	5	5	6	6	6	6	6
2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0

HYPOLODOSTIS.
DILATATION; TUBULAR.
NEPHROPATHY, CHRONIC.

X A X X X A X X X X M X X X X X X X X X A X X X
= =

X X Y X Y X X X X X X X X X X X X X M X X Y
= = = = = = = = = = = = = = = = = = = =

X X X M X X X X X X X X X X X X X X X X X X

= =

X X

X X X H X X X X X X X X X X X X X X X X X X

21

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(+) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 13 MALES

6-143

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(P) NOT PRESENT IN SECTION (-) NOT REQUIRED
(+) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 13 MALES

[illegible]

6-144

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(+) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 13 MALES

5-145

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(+) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 13 MALES

6-146

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 14 MOLES

6-47

(X) NO SIGNIFICANT LESION RECOGNIZED. (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (Y) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 14 MOLES

871-5

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 14 MALES

641-9

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 14 MALES

1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1

LIVER (CONTINUED)

LYMPHOMA, MALIGNANT, HISTIOCYTIC,
(MEDIAN LOBE), LYMPHOMA, MALIGNANT, HISTIOCYTIC,
(LATERAL), LYMPHOMA, MALIGNANT, HISTIOCYTIC,
VACUOLATION, SINGLE CELL,
HYPERPLASIA, HEPATOCELLULAR,
CYST(S), BILIARY.

GALLBLADDER

SPLEEN

AMYLOIDOSIS,
HEMATOPOIESIS, EXTRAMEDULLARY,
REFLECTION OF LYMPHOCYTES,
HEMATOPOIESIS,
INFARCT(S),
HYPERPLASIA, RETICULOENDOTHELIAL CELL.

PANCREAS

AMYLOIDOSIS.

HEART

CARCINOMA, SQUAMOUS CELL, METASTATIC,
THROMBOSIS,
INFLAMMATION, CHRONIC,
DEGENERATION, GRANULAR,
(INTRAMYOCARDIAL ARTERY), INTIMAL HYPERPLASIA,
SARCOMA, RETICULUM CELL, METASTATIC.

KIDNEYS

NEPHROPATHY, CHRONIC,
MINERALIZATION,
AMYLOIDOSIS,
DILATATION, TUBULAR,
CAST(S),
ATROPHY, TUBULAR,
SARCOMA, RETICULUM CELL,
NEPHRITIS, SEPTIC, EMPHATIC,
HYPERCELLULARITY, GLOMERULAR.

URINARY BLADDER

FIBROSIS, SUBMUCOSAL.

=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
X	A	A	A	A	A	X	A	A	X	A	A	A	A	A	A	X	A	A	A
X	M	A	X	X	=	X	=	X	X	X	A	A	=	X	X	X	M	X	M
=	=	=	=	=	3+	1+	=	=	=	=	=	2+	=	=	=	=	=	=	2+
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
X	X	A	X	X	=	X	X	A	X	X	A	A	X	X	X	X	M	X	X
=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=
X	X	X	=	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
X	=	X	X	=	X	=	X	X	X	X	=	X	X	X	A	X	X	X	A
=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	1+	1+	=	=	=	3+	3+	=	=	=	=	=	=	=	=	2+
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
X	X	A	X	A	I	M	A	X	X	A	A	X	X	M	X	A	X	X	A
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(H) NOT PRESENT IN SECTION (-) NOT REPRODUCED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 14 MALES

251-3

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 14 MALES

6-153

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 14 MALES

6-152

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 14 MALES

1
7
9
1 1 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 4 4
8 9 0 1 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

THYROID (CONTINUED)

HYALOIDOSIS.
CYST(S), FOLLICULAR.

= = = = = 3+ = = 2+ = = = = = = = =

PARATHYROID

M X M X M X X M X X M X X X M X M X M X M

ESOPHAGUS

INFLAMMATION, ACUTE, FRIESOPHAGEAL,

X
= = = = = 2+ = = = = = = = =

LUNG & BRONCHI-LEFT

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
CARCINOMA, SQUAMOUS CELL.
INFLAMMATION, GRANULOMATOUS.
(MAINSTEM BRONCHUS), ADENOCARCINOMA.
INFLAMMATION, ACUTE.
ADENOCARCINOMA.
PNEUMONIA, ASPIRATION.
(MASS), CARCINOMA, SQUAMOUS CELL.
CARCINOMA, ADENOSQUAMOUS.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
ADENOMA.
ADENOCARCINOMA, BRONCHIOLAR.
METAPLASIA, SQUAMOUS.
SARCOMA, RETICULUM CELL.

2+2+2+2+1+2+1+2+2+2+2+P 2+2+ 2+1+1+2+2+ 1+1+
= = = = = P = = = = = F = = = = =
= = = = = 1+ = = = = = = = = = = =
= = = = = 3+ = = = = = = = = = = =
P = = = = = P = = = = = = = = = = P = = = =
=
=
= = = = = 1+ = = = = = P = = = = = = = = =
P =
= = = = = 1+ = = = = = = = = = = = = = = =
= =

LUNG & BRONCHI-APICAL

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.
TUMOR EMBOLUS.
INFLAMMATION, ACUTE.
ADENOCARCINOMA.
PNEUMONIA, ASPIRATION.
SARCOMA, RETICULUM CELL.

= = = = = X = = = = = = = = = = X = = = =
2+2+2+2+1+2+ 2+2+1+2+P 2+2+ 2+1+1+2+2+ 1+1+
=
=
=
P =
=
= =

LUNG & BRONCHI-azygous

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
CARCINOMA, SQUAMOUS CELL.
INFLAMMATION, GRANULOMATOUS.
INFLAMMATION, ACUTE.
ADENOCARCINOMA.
PNEUMONIA, ASPIRATION.
CARCINOMA, ADENOSQUAMOUS.

2+2+2+2+1+2+1+2+2+1+2+P 2+2+ 2+1+1+2+2+ 1+1+
= = = = = P = = = = = P = = = = =
=
=
P = = = = = P = = = = = = = = = = = = = = =
=
= = = = = 4+ = = = = = = = = = = = = = = =
= =

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

6-55

GROUP 1A: MALES

GROUP 14 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
9	5	9	5	9	5	9	5	9	5	9	5	9	5	9	5	9	5	9	5
1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4
8	9	0	1	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8

LUNG & BRONCHI-AZYGOS (CONTINUED)

(MASS); CARCINOMA, ADENOSQUAMOUS.
EXUDATE, PROTEIN RICH, ALVEOLAR.
SARCOMA; RETICULUM CELL,

LUNG & BRONCHI-DIAPHRAGMATIC

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
CARCINOMA, SQUAMOUS CELL.
NECROSIS.
INFLAMMATION, GRANULOMATOUS.
INFLAMMATION, ACUTE.
ADENOCARCINOMA.
PNEUMONIA, ASPIRATION.
CARCINOMA, ADENOSQUAMOUS.
HEMORRHAGE.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
ADENOMA.
POLYP(S), BRONCHIOLAR, EPITHELIAL.
ADENOCARCINOMA, BRONCHIOLAR.
EXUDATE, PROTEIN RICH, ALVEOLAR.
SARCOMA, RETICULUM CELL.
BACTERIAL COLONIES.

LUNG & BRONCHI-CARDIAC

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
PIGMENTATION, HEPATOCYITIC.
INFLAMMATION, GRANULOMATOUS.
TUMOR EMBOLUS. . . .
PNEUMONIA, ASPIRATION.
CARCINOMA, ADENOSQUAMOUS.
HEMORRHAGE. . . .
POLYP(S), BRONCHIOLAR, EPITHELIAL.
SARCOMA, RETICULUM CELL.

LIVER

NECROSIS.
HYPEREMIA.
AMYLOIDOSIS.
DEGENERATION.
(LATERAL); HYPEREMIA,
INFLAMMATION, CHRONIC.
SARCOMA, RETICULUM CELL.

[illegible]

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (R) NOT REQUIRED
(P) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 14 MALES

5-157

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 14 MALES

6-158

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 15 MALES

6-159

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 15 MALES

1
7
9
4 4 4 4 4 4 4 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6
2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6

STOMACH (CONTINUED)

HEMORRHAGE.
HYPEREMIA.
PIGMENTATION, POSTMORTEM.
INFLAMMATION, ACUTE.
PIGMENTATION.
ULCER(S).

= = = = = = = = = 3+ = = = 2+ = = =
= = = = = = = = = 3+ = = = = = = =
= = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = = =

DUODENUM

A X X A X A A X A A X X A A X X X X A X A X A X

JEJUNUM

A X A A X A A X A A A X A A X X X X A X A X A X

CECUM

INFLAMMATION, ACUTE AND CHRONIC.
HEMORRHAGE.
EDEMA.
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.
INFLAMMATION, CHRONIC.
EDEMA, SUBMUCOSAL.

A = X A X A A = A A A A A = X A X X A = A = A X
= 2+ = = = = = = = = = = = = = = = 2+ = = =
= = = = = 1+ = = = = = = = = = = = = = = =
= = = = = = = = = = = 4+ = = = = = = = = = =
= = = = = = = = = = = 2+ = = = = = = = = = =
= = = = = = = = = = = 2+ = = = = = = = = = =

ILEUM

X X X A X A A X A A A A A X X A X X A N A N A X

COLON/RECTUM

INFLAMMATION, ACUTE AND CHRONIC.
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.
EDEMA, SUBMUCOSAL.

A X X A X X A X X A X A A X = X X X A X A X X X
=
= = = = = = = = = = = 1+ = = = = = = = = = =
= = = = = = = = = = = 2+ = = = = = = = = = =

MESENTERIC LYMPH NODE

HYPERPLASIA.
ECTASIA, SINUSOIDAL.
ERYTHROCYTOSIS, SINUSOIDAL.

X X X M X X A X X X X X A X X X X = A X M M X M
=
= = = = = = = = = = = = = = = 1+ = = = = = = =
= =

LARYNX

PIGMENTATION, GRANULAR.
CRYSTALLINE DEPOSITS.
INFLAMMATION, CHRONIC.
INFLAMMATION, ACUTE.
PIGMENTATION, SUBMUCOSAL, GRANULAR.

X X = X X X A X X X = X I A X X X X X X X X X X
= = 2+ = = = = = = = = = = = = = = = = = = =
= = = = = = = = = 1+ = = = = = = = = = = =
=
= =

TRACHEA

X X X X X A X X X X X A X X X X X X X X X X

THYROID

X X X = I X M X X X = X M M X X X X X = X M X X

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 15 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9

HYDROID (CONTINUED)

AMYLOIDOSIS.

FARATHYROID

ESOPHAGUS

LUNG & BRONCHI-LEFT

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS,
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
INFLAMMATION, INTERSTITIAL.
HYSTIOCYTOSIS.
HYSTIOCYTOSIS; ALVEOLAR.

[illegible]

LUNG & BRONCHI-APICAL.

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.
HYPERPLASIA, ALVEOLAR/BRONCHOLAR.
INFLAMMATION, INTERSTITIAL.
HYSTIOCYTOSIS,
HYSTIOCYTOSIS, ALVEOLAR.

[illegible]

LUNG & BRONCHI-ASYGOUS

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.
HYPERPLASIA, ALVEOLAR/BRONCHOLAR.
INFLAMMATION, INTERSTITIAL.
HYSTIOCYTOSIS.
HYSTIOCYTOSIS, ALVEOLAR.

[illegible]

LUNG & BRONCHI-DIAPHRAGMATIC

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.
HYPERPLASIA, ALVEOLAR/BRONCHOLAR.
INFLAMMATION, INTERSTITIAL.
HYSTIOCYTOSIS,
HYSTIOCYTOSIS, ALVEOLAR.

[illegible]

LUNG & BRONCHI-CARDIAC

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS,

[illegible]

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 15 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
2	1	4	5	6	7	8	9	5	3	4	5	6	7	8	9	5	3

HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
INFLAMMATION, INTERSTITIAL.
HYSTIOCYTOSIS,
HYSTIOCYTOSIS, ALVEOLAR.

[illegible]

AMYLOIDOSIS.
CYST(S), BILIARY.
VACUOLATION, CYTOPLASMIC.
INFLAMMATION; GRANULOCYTIC, PIGMENTED.
NECROSIS.

SFLEEN . . .
 ANYLOIPOSIS . . .
 HEMANDIOSARCOMA . . .

HEART
INFLAMMATION, GRANULOMATOUS.
THROMBOSIS.
DEGENERATION.
NEURILEMMOMA, MALIGNANT.
EPICARDITIS, ACUTE AND CHRONIC.

AMYLOIDOSIS,
NEPHROPATHY, CHRONIC.
DILATATION, TURBID.
COST(S).

$$\begin{array}{ccccccccc}
 & = & A & = & A & = & A \\
 3+ & 3+3+3+ & 3+ & 3+3+1+ & 2+ & 3+3+2+3+3+ & 2+ \\
 1+ & & 1+ & & 2+ & & 2+1+ \\
 1+ & 2+ & & & & &
 \end{array}$$

URINARY BLADDER:
CYSTITIS, HYPERPLASTIC, ACUTE AND CHRONIC.
UROLITH(S).

PROSTATE
ATROPHY.
INFLAMMATION, ACUTE.

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 15 MALES

TESTES	M X = X = X = X = X = X = X = X = X = N X X =
AMYLOIDOSIS.	= = = = = 2+ = = = = =
ATROPHY.	= = 3+2+ = 1+ = 3+ = = 3+2+ = 1+ = = 2+ = 3+3+ = = 1+
DEGENERATION.	= = = = = = = = = = = = = = = =
INFARCT(S).	= = = = = = = = = = = = = = = =
SEMINAL VESICLES	X X X X X X X X X X X X X A X X X X X A X A X X X
STERNUM & RIB JUNCTION	X X X X X X A X X X X X X X X X X X X X X X X
FEMUR/BONE MARROW	X X I X X X A X X X X X X X A X X X X X X X X X
NASAL CAVITY:	X X X X X A X X X X X X X I X X X X X A X X X X X
INFLAMMATION, ACUTE.	= = = = = = = = = = = = = = = =
ARTIFACT(S).	= = = = = = = = = = = = = = = =
OTHER	= = = = = = = = = = = 3+ = 3+ = 2+ = = 3+ 2+2+ = =
(MEDIASTINAL LYMPH NODE), CRYSTALLINE DEPOSITS.	= = = = = = = = = = = = = = = 4+
(MEDIASTINAL LYMPH NODE), HYPEREMIA.	= = = = = = = = = = = = = = = =
(BRONCHIAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.	= = = = = = = = = = = = = = = =
(BRONCHIAL LYMPH NODE), CRYSTALLINE DEPOSITS.	= = = = = = = = = = = = = = = =
(MEDIASTINAL LYMPH NODE), PIGMENTATION.	= = = = = = = = = = = = = = = =

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 15 MALES

791-9

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 15 MALES

1
7
9
6 6 6 7 7 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 9 9
7 6 9 0 1 2 3 4 5 6 7 8 9 0 1 3 4 5 6 7 8 9 0 1

STOMACH (CONTINUED)

HEMORRHAGE.
HYPEREMIA.
PIGMENTATION, POSTMORTEM.
INFLAMMATION, ACUTE.
PIGMENTATION.
ULCER(S).

= 2+ =
=
=
F =
= =

DUODENUM

X X A X A X X X X A X X X X A A X A M X X A X

JEJUNUM

A X A X A X X X X A X X X X A A A A M X X A M

CECUM

INFLAMMATION, ACUTE AND CHRONIC.
HEMORRHAGE.
EDEMA.
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.
INFLAMMATION, CHRONIC.
EDEMA, SUBMUCOSAL.

A = A X A A X = = A X X = X X A A A A X X A A X
= 2+ = = = = = 3+ = = = = = = = = = = = = = = = =
=
=
=
= =

ILEUM

A X A X A X A X X A X X X X A A A A X X X A X

COLON/RECTUM

INFLAMMATION, ACUTE AND CHRONIC.
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.
EDEMA, SUBMUCOSAL.

A = A X A X X X X A X X X X A X X A X X X A X
= 2+ =
= 2+ =
= =

MESENTERIC LYMPH NODE

HYPERPLASIA.
ECTASIA, SINUSOIDAL.
ERYTHROCYTOSIS, SINUSOIDAL.

X X = X X X X = X = X X X X A X X = X X I M X
= = = = = 2+ = = = = = = = = = = = = = = = =
=
= = 3+ = = = = = 2+ = = = = = = = = = = = = = =

LARYNX

PIGMENTATION, GRANULAR.
CRYSTALLINE DEPOSITS.
INFLAMMATION, CHRONIC.
INFLAMMATION, ACUTE.
PIGMENTATION, SUBMUCOSAL, GRANULAR.

X X X = X X X = X X X X X I X X X X X X M X =
=
=
= = = 3+ =
= = = = = 2+ = = = = = = = = = = = = = = = = = =

TRACHEA

X A M

THYROID

= = = = X = X X X = X X X M A X X X X X M X

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 15 MALES

1
2
3
4
5
6
7 7

THYROID (CONTINUED)

AMYLOIDOSIS.

2+1+3+2+ 2+ = = 2+ = = = = = = = = = =

PARATHYROID

X X X M M X M X X X X X M M A X X X X M M X

ESOPHAGUS

X X X X X X X X X X X X X X X X X X X M X M

LUNG & BRONCHI-LEFT

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
INFLAMMATION, INTERSTITIAL.
HYSTIOCYTOSIS.
HYSTIOCYTOSIS, ALVEOLAR.

= = = X = = = = = = = = = = = = = = = =
3+3+2+3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+
3+3+2+2+ 3+ 3+ = 3+ = 3+3+ 2+2+2+ 3+ 3+3+
= = = = = = = = = = = = = = = =
= = = = = 3+ = = = = = = = = = 2+ = = =
= = = = = 2+ = = = = = = = = = 2+ = = =

LUNG & BRONCHI-APICAL

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
INFLAMMATION, INTERSTITIAL.
HYSTIOCYTOSIS.
HYSTIOCYTOSIS, ALVEOLAR.

= = = X = = = = = = = = = = = = = = = =
3+3+2+3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+
3+3+2+2+ 3+ 3+ = 3+ = 3+3+ 2+2+2+ 3+ 3+3+
= = = = = = = = = = = = = = = =
= = = = = 3+ = = = = = = = = = 2+ = = =
= = = = = 2+ = = = = = = = = = 2+ = = =

LUNG & BRONCHI-AZYGOUS

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
INFLAMMATION, INTERSTITIAL.
HYSTIOCYTOSIS.
HYSTIOCYTOSIS, ALVEOLAR.

= = = X = = = = = = = = = = = = = = = =
3+3+2+3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+
3+3+2+2+ 3+ 3+ = 3+ = 3+3+ 2+2+2+ 3+ 3+3+
= = = = = = = = = = = = = = = =
= = = = = 3+ = = = = = = = = = 2+ = = =
= = = = = 2+ = = = = = = = = = 2+ = = =

LUNG & BRONCHI-DIAPHRAGMATIC

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
INFLAMMATION, INTERSTITIAL.
HYSTIOCYTOSIS.
HYSTIOCYTOSIS, ALVEOLAR.

= = = X = = = = = = = = = = = = = = = =
3+3+2+3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+
3+3+2+2+ 3+ 3+ = 3+ = 3+3+ 2+2+2+ 3+ 3+3+
= = = = = = = = = = = = = = = =
= = = = = 3+ = = = = = = = = = 2+ = = =
= = = = = 2+ = = = = = = = = = 2+ = = =

LUNG & BRONCHI-CARDIAC

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, GRANULOMATOUS.

= = = X = = = = = = = = = = = = = = = =
3+3+2+3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+ 3+
3+3+2+2+ 3+ 3+ = 3+ = 3+3+ 2+2+2+ 3+ 3+3+

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 15 MALES

1
7
9
6 6 6 7 7 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8
7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 3 4 5 6 7 8 9 0 1

LUNG & BRONCHI-CARDIAC (CONTINUED)

HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
INFLAMMATION, INTERSTITIAL.
HYSTIOCYTOSIS.
HYSTIOCYTOSIS, ALVEOLAR.

=
=
=
= =

LIVER

AMYLOIDOSIS.
CYST(S), BILIARY.
VACUOLATION, CYTOPLASMIC.
INFLAMMATION, GRANULOCYTIC, PIGMENTED.
NECROSIS.

X = = = X = = = X X X = = = = = X X X X X
1+1+ = = = = = 2+2+ = = = 2+ = 2+ = 2+2+ = = =
= = = = = 2+ = = = = = = = = = = = = = = = =
= = = 2+ = 2+ = = = = = = = = = = = = = = = =
= = = = = 2+ = = = = = = = = = = = = = = = =
= =

GALLBLADDER

CHOLELITH(S).

A A A X A X A A X A X A X X A A A X A X X = 1
= =

SPLEEN

AMYLOIDOSIS.
HEMANGIOSARCOMA.

X X = = X = X X X = X X X = X A X X = X X X A X
= = 2+3+ = 3+ = = 3+ = = = 2+ = = = 2+ = = = = =
= =

PANCREAS

X X X X X X X X X X X X X X X A X X X X X A X

HEART

INFLAMMATION, GRANULOMATOUS.
THROMBOSIS.
DEGENERATION.
NEURILEMMOMA, MALIGNANT.
EPICARDITIS, ACUTE AND CHRONIC.

X X = X X X X X X X = X X X X X X X = X X X
= = = = = = = = = = = 2+ = = = = = = = = = = =
= = 3+ =
= = = = = = = = = = = 1+ = = = = = = = = = = =
= =

KIDNEYS

AMYLOIDOSIS.
NEPHROPATHY, CHRONIC.
DILATATION, TUBULAR.
CAST(S).

= = = = = X X = = X = X = = A X = = X = X X
3+2+3+3+ = 3+ = 3+4+ = = = 3+ = 2+ = 3+1+ = 3+ = =
= = = 2+ = = = = = 2+ = = = 1+ = = = = = = =
= =

URINARY BLADDER

CYSTITIS, HYPERPLASTIC, ACUTE AND CHRONIC.
UROLITH(S).

X 1 X 1 M X X X X A X X X X A X X X X X X A X
=
= =

PROSTATE

ATROPHY.
INFLAMMATION, ACUTE.

X X X X X X M X M X X X X X A X X X X X X M X
=
= =

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUPE 16 MALES

[illegible]

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 16 MALES

6-170

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(-) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 16 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	8	9	8	8	8	8	8	8	8	9	8	8	8
9	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0
9	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	1	1	1	1
2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1

HYPERPLASIA.
INFLAMMATION, ACUTE AND CHRONIC.
CARCINOMA, NOS.

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541</
----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-------

CARCINOMA, SQUAMOUS CELL.
POLY(P5), EPITHELIAL.
HYPERPLASIA,
DYSPLASIA, MUCOSAL:

AMYLOIDOSIS.

ESOPHAGUS.
POLYP(S), EPITHELIAL.

H H H H H X X X X X X X X X H H H H X H
 X X X X X X X X X X X X X X X X X X X
 = = = = = = = = = = = = = = = = = = =

INFLAMMATION, ACUTE.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, INTERSTITIAL.
ABSCESS(ES).
INFLAMMATION, GRANULOMATOUS.
ADENOCARCINOMA.
CARCINOMA, SQUAMOUS CELL.
LYMPHOMA, MALIGNANT, HISTIOCYTIC.
CARCINOMA, ADENOSQUAMOUS.
ADENOMA.
(MAINSTEM BRONCHUS), POLYP(S), EPITHELIAL.
(HAINSTEM BRONCHUS), CARCINOMA, SQUAMOUS CELL.
INFLAMMATION, PYOGRANULOMATOUS.
INFLAMMATION, ACUTE AND CHRONIC.
SARCOMA, HISTIOCYTIC.
INFLAMMATION, ASPIRATION.

[illegible]

INFLAMMATION, ACUTE.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.

$$4+3+3+3 = 3+4+3+4+3+3 \quad 2f \quad 2+2+3+3+4+3+4+3+3+4+3+3+3$$

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 16 MALES

1
7 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8
9 9 9 9 9 9 9 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0
9 9 9 9 9 9 9 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0
2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6

LUNG & BRONCHI-APICAL (CONTINUED)

INFLAMMATION, INTERSTITIAL.
INFLAMMATION, GRANULOMATOUS.
ADENOCARCINOMA.
CARCINOMA, SQUAMOUS CELL.
LYMPHOMA, MALIGNANT, HISTIOCYTIC.
CARCINOMA, ADENOSQUAMOUS.
ADENOMA.
INFLAMMATION, PYOGRANULOMATOUS.
INFLAMMATION, ACUTE AND CHRONIC.
SARCOMA, HISTIOCYTIC.
INFLAMMATION, ASPIRATION.

3+ = = = = = 3+ = = = = = 2+3+ = = = = =
= 3+ = 3+ = 3+ = 1+ = = 3+ = = = = 3+3+ = = = 3+ = 2+4+
= P = P =
=
=
=
=
=
=
=
=
= =

LUNG & BRONCHI-AZYGOUS

INFLAMMATION, ACUTE.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, INTERSTITIAL.
ABSCESS(ES).
INFLAMMATION, GRANULOMATOUS.
ADENOCARCINOMA.
CARCINOMA, SQUAMOUS CELL.
LYMPHOMA, MALIGNANT, HISTIOCYTIC.
ADENOMA.
INFLAMMATION, PYOGRANULOMATOUS.
INFLAMMATION, ACUTE AND CHRONIC.
NEOPLASIA(S), NOS.
SARCOMA, HISTIOCYTIC.
INFLAMMATION, ASPIRATION.

=
=
=
4+3+3+3+ = 3+4+3+4+3+3+2+2+3+3+4+3+4+3+3+3+3+3+
3+ = = = = = 3+ = = = = = 2+3+ = = = = =
= 3+ = 3+ = = 1+ = = 3+ = = = = 3+3+ = = = 3+ = 2+4+
=
=
=
=
=
=
= =

LUNG & BRONCHI-DIAPHRAGMATIC

INFLAMMATION, ACUTE.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, INTERSTITIAL.
INFLAMMATION, GRANULOMATOUS.
ADENOCARCINOMA.
CARCINOMA, SQUAMOUS CELL.
LYMPHOMA, MALIGNANT, HISTIOCYTIC.
CARCINOMA, ADENOSQUAMOUS.
ADENOMA.
INFLAMMATION, PYOGRANULOMATOUS.

=
=
4+3+3+3+ = 3+4+3+4+3+3+2+2+3+3+4+3+4+3+3+3+3+
3+ = = = = = 3+ = = = = = 2+3+ = = = = =
= 3+3+3+ = = 1+ = = 3+ = = = = 3+3+ = = = 3+ = 2+4+
=
=
=
=
=
=
= =

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(-) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 16 Holes

9-173

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 16 MALES

GROUP 16 MALES

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 16 MALES

FEMUR/BONE MARROW
HYPERPLASIA,
(MARROW), THROMBOSIS,
(COSTOCHONDRAL JUNCTION), OSTEOSARCOMA.

NASAL CAVITY
EPITAXIS,
EXUDATE, PURULENT.

OTHER

(MEDIASTINAL LYMPH NODE), CRYSTALLINE DEPOSITS.

(EPIDIDYHIS), ABSCESS(ES).

(MEDIASTINAL LYMPH NODE), PIGMENTATION.

(BRONCHIAL LYMPH NODE); PIGMENTATION.

(BRONCHIAL LYMPH NODE), CARCINOMA, SQUAMOUS

CELL, INVASIVE.

(MEDIASTINAL LYMPH NODE), INFLAMMATION; GRANULOMATOUS.

(MEDIASTINAL LYMPH NODE); NECROSIS.

(BRONCHIAL LYMPH NODE); INFLAMMATION, GRANULOMATOUS.

(BRONCHIAL LYMPH NODE); CRYSTALLINE DEPOSITS.

(BRONCHIAL LYMPH NODE); HEMORRHAGE.

(BRONCHIAL LYMPH NODE); CELLULAR INFILTRATION; NOS.

(MEDIASTINAL LYMPH NODE): CELLULAR INFILTRATION; NOS.

(MEDIASTINAL LYMPH NODE); CELLULAR INFILTRATION; NOS.
(MEDIASTINAL LYMPH NODE); ADENOCARCINOMA; METASTATIC.

(MEDIASTINAL LYMPH NODE); ADENOCARCINOMA, METASTATIC.
(BRONCHIAL LYMPH NODE); ADENOCARCINOMA, METASTATIC.

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 16 MALES

6-176

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 16 MALES

6-177

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 16 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4
7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6

LUNG & BRONCHI APICAL (CONTINUED)

INFLAMMATION, INTERSTITIAL.	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION, GRANULOMATOUS.	=	=	3+4+3+	3+	2+	=	=	4+2+4+4+	=	3+3+	=	3+3+2+3+	=	=	=	=	=	=	=
ADENOCARCINOMA.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, SQUAMOUS CELL.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOMA, MALIGNANT, HISTIOCYTIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, ADENOSQUAMOUS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	P	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION, PYOGRANULOMATOUS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION, ACUTE AND CHRONIC.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SARCOMA, HISTIOCYTIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION, ASPIRATION.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=

LUNG & BRONCHI-AZYGOUS

INFLAMMATION, ACUTE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	2+	2+
INFLAMMATION, INTERSTITIAL.	3+3+3+	3+3+	3+4+	3+3+	3+3+	3+3+	3+4+	3+3+	3+4+	3+4+	3+4+	3+4+	3+4+	3+4+	3+4+	3+4+	3+4+	3+4+	3+4+
ABSCESS(ES).	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION, GRANULOMATOUS.	=	=	3+4+3+	3+	2+	=	=	4+2+4+4+	=	3+3+	=	3+3+2+3+	=	=	=	=	=	=	=
ADENOCARCINOMA.	=	P	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, SQUAMOUS CELL.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOMA, MALIGNANT, HISTIOCYTIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION, PYOGRANULOMATOUS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION, ACUTE AND CHRONIC.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NEOPLASM(S), NOS.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SARCOMA, HISTIOCYTIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION, ASPIRATION.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=

LUNG & BRONCHI-DIAPHRAGMATIC

INFLAMMATION, ACUTE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.	=	2+	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	2+	2+
INFLAMMATION, INTERSTITIAL.	3+3+3+	3+3+	3+4+	3+3+	3+3+	3+3+	3+4+	3+3+	3+4+	3+4+	3+4+	3+4+	3+4+	3+4+	3+4+	3+4+	3+4+	3+4+	3+4+
INFLAMMATION, GRANULOMATOUS.	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOCARCINOMA.	=	=	3+4+3+	3+	2+	=	=	4+2+	4+	3+3+	=	3+3+2+3+	=	=	=	=	=	=	=
CARCINOMA, SQUAMOUS CELL.	=	P	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOMA, MALIGNANT, HISTIOCYTIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, ADENOSQUAMOUS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION, PYOGRANULOMATOUS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(R) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 17 MALES

6-187

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 17 MALES

[illegible]

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(2) NOT PRESENT IN SECTION (-) NOT REQUIRED
(3) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 17 MOLES

[illegible]

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

TO CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 17 MALES

1
8
0
6 6 6 7 7 7 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 9
7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

TESTES (CONTINUED)

ATROPHY,
DEGENERATION,
(ONE TESTES NOT PRESENT),
ARTERITIS, ACUTE,
SEMINAL VESICLES,
INFARCT(S), ACUTE,
STERNUM & RIB JUNCTION
(BONE MARROW), HYPERPLASIA,
FEMUR/BONE MARROW
(BONE MARROW), HYPERPLASIA,
NASAL CAVITY
INFLAMMATION, ACUTE,
OTHER
(RENAL LYMPH NODE), HYPERPLASIA,

= = = 2+ = 2+3+2+2+1+ = 3+2+ = 1+ = 2+ = 2+ = 1+1+
= = = = = = = = = 1+ = = = = = = = = =
=
X X X A X X X X X X X X X X X X X X X X X X
=
X
=
X M X X I X X X I I X X X X X X X X X X X X
=
X
=
= =

6-132

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 1B MALES

761-9

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 19 MALES

6-195

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 18 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	0	0	0
2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1

INFLAMMATION, GRANULOMATOUS.
INFLAMMATION, PYOGRANULOMATOUS.

CARCINOMA, SQUAMOUS CELL.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
ADENOCARCINOMA.
INFLAMMATION, ACUTE.
PNEUMONIA, ASPIRATION.
CARCINOMA, ADENOSQUAMOUS.
ADENOMA.
INFLAMMATION, ACUTE AND CHRONIC.
INFLAMMATION, GRANULOMATOUS.
INFLAMMATION, PYOGRANULOMATOUS.
ADENOCARCINOMA, METASTATIC.
FETALIZATION OF ALVEOLAR LINING CELLS.

HEMORRHAGE.
CARCINOMA, SQUAMOUS CELL.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
POLYP(S), EPITHELIAL.
ADENOCARCINOMA.
INFLAMMATION, ACUTE.
PNEUMONIA, ASPIRATION.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CARCINOMA, ADENOSQUAMOUS.
CARCINOID.
ADENOMA.
INFLAMMATION, ACUTE AND CHRONIC.
INFLAMMATION, GRANULOMATOUS.
INFLAMMATION, PYOGRAMULOMATOUS.
HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.

CARCINOMA, SQUAMOUS CELL.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
ADENOCARCINOMA. . .
INFLAMMATION, ACUTE. .
PNEUMONIA, ASPIRATION.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 18 MALES

1
8
0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1
9 9 9 9 9 9 9 9 0 0 0 0 0 0 0 0 1 1 1 1 1 1
2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6

LUNG & BRONCHI-CARDIAC (CONTINUED)

CARCINOMA, ADENOSQUAMOUS.
INFLAMMATION, ACUTE AND CHRONIC.
INFLAMMATION, GRANULOMATOUS.
INFLAMMATION, PYOGRANULOMATOUS.
HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.

=
=
=
=
= =

LIVER

NECROSIS.
THROMBOSIS.
CYST(S), BILIARY.
GRANULOPHOSIS.
AMYLIDOSIS.
CYTOPLASMIC RAREFACTION(S).
PIGMENTATION, HEPATOCYtic, CYTOPLASMIC.
VACUOLATION, CYTOPLASMIC.
SARCOMA, HISTIOCYTIC.
HYPEREMIA.

= X X X X X = A X = X X = X = X = = = X = X X =
2+ = = = = = 1+ = = = = = 2+ = = = = = 2+ = = = = =
=
=
=
=
=
= =

GALLBLADDER

HYPERPLASIA.

A A A A A A A A A A X A A X = A A X A X X X X X A X
= =

SPLEEN

HYPERPLASIA, RETICULOENDOTHELIAL CELL.
HEMATOPHOSIS, EXTRAMEDULLARY.
AMYLIDOSIS.

X = X X X X X X X X = X = = = X X = X X X X X X X
2+ = = = = = = = = = 2+ = 2+ = = = = = = = = = = = =
=
= =

PANCREAS

HYPERPLASIA, ISLET CELL.

X
= =

HEART

DEGENERATION.
THROMBOSIS.
ADENOCARCINOMA, INVASIVE.
AMYLIDOSIS.
ADENOCARCINOMA, METASTATIC.
MINERALIZATION, ARTERIAL.
(AORTA), MINERALIZATION.
CARCINOMA, SQUAMOUS CELL, METASTATIC.

= X X X = X X A X X X X X X X X X X X X X X X X X X
=
3+ =
=
=
=
=
= =

KIDNEYS

NECROSIS, TUBULAR.

= = X X X = X A = = X X = X X = = = = X = X X =
2+ =

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(H) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 18 MALES

661-9

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 18 MALES

STOMACH (CONTINUED)

EDEMA, SUBMUCOSAL.
HYPERPLASIA, SQUAMOUS.
ULCER(S).
PIGMENTATION, POSTMORTEM.

DUODENUM

JE JUNK

CECUM

ILEUM

COLON/RECTUM

MESENTERIC LYMPH NODE

LARYNX

TRACHEA

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(H) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 18 MALES

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 19 MALES

[illegible]

6-205

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 19 MALES

6-206

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUPE 19 MAÏES

6-207

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 19 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	6	6	6	6	6
2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1

CHOLELITH(S).

AMYLOIDOSIS.
NECROSIS.

X X X X X X A X X X X X A X X X X X X =

= = = = = = = = = = = = = = = = = =

5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

AMYLOIDOSIS,
METAPLASIA, EOSINOPHILIC.

INFLAMMATION; CHRONIC.
THROMBOSIS;
DEGENERATION;
MINERALIZATION.

ANYLOIDOSIS,
NEPHROPATHY, CHRONIC,
ATROPHY,

$$\begin{matrix} X & A & X & X & X & X & H & X & X & X & X & X & A & X & X & I \\ = & = & = & = & = & = & = & = & = & = & = & = & = & = & = & = \end{matrix} \quad \begin{matrix} 1 \\ 1 \end{matrix} = \begin{matrix} X & X & X & X & I \\ = & = & = & = & = \end{matrix}$$

X X X X X X X X X X X X X X X H X X X I X H X

[illegible]

INFLAMMATION, ACUTE,
DEGENERATION,
ATROPHY.

(LEFT), HEMORRHAGE, INTERSTITIAL. SPERMATOGENIC ARREST.

INFLAMMATION, ACUTE.

X X X X X I X X X X X X X X X X X X X X X X X X X

$$X X X X X X X X = X X X X X X X X - = X X X X X$$

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 19 MALES

[illegible]

INFLAMMATION, ACUTE.
EXUDATE, PURULENT.

$\frac{1}{2} + \frac{1}{2} = 1$

OTHER: (MEDIASTINAL LYMPH NODE), INFLAMMATION, GRANULOMATOUS.
(MEDIASTINAL LYMPH NODE), CRYSTALLINE DEPOSITS.

[illegible]

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 17 MALES

[illegible]

6-210

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 19 MALES

6-212

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(R) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 19 MALES

6-213

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 20 MALES

6-215

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (R) NOT REQUIRED
(P) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUPE 20 MÂLES

6-217

(K) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 20 MALES

6-219

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 20 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	4	4
7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6

JEJUNUM (CONTINUED)

HEMORRHAGE.

= = = = =

CECUM

INFLAMMATION, CHRONIC.
INFLAMMATION, ACUTE.
HEMORRHAGE.
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.
EDEMA, MUCOSAL.
INFLAMMATION, ACUTE AND CHRONIC.

X X M A X A A A X A A = A X A X A A = X A = X A A
= = = = =
= = = = =
= = = = =
= = = = =
= = = = =
= = = = =

ILEUM

INFLAMMATION, CHRONIC.
HEMORRHAGE.

A X X A X X M A X = A X A X M A A H X X A X X A A
= = = = =
= = = = =
= = = = =

COLON/RECTUM

INFLAMMATION, CHRONIC.
INFLAMMATION, ACUTE.
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.
HEMATODIASIS.

X X X = X X X X X = X X X X A X A X X X X = X A A
= = = = =
= = = = =
= = = = =

MESENTERIC LYMPH NODE

HYPERPLASIA.
INFLAMMATION, ACUTE.
ERYTHROCYTOSIS, SINUSOIDAL.
DYSPLASIA, MUCOSAL.
HYPERPLASIA, RETICULUM CELL.

M M X X X X X X = I X X M A M = M M X = X A X
= = = = =
= = = = =
= = = = =
= = = = =

LARYNX

CARCINOMA, SQUAMOUS CELL.
HYPERPLASIA.
INFLAMMATION, ACUTE.
POLYP(S), EPITHELIAL.
PAPILLOMA, SQUAMOUS.
HYPERPLASIA, SUBMUCOSAL, GLANDULAR.

X X X = X X X X X X = X X = X X M X = X X X X X
= = = = =
= = = = =
= = = = =
= = = = =

TRACHEA

HYPERPLASIA.
CARCINOMA, ADENOSQUAMOUS.
POLYP(S), EPITHELIAL.
ADENOCARCINOMA.
DYSPLASIA, MUCOSAL.

= = X X = X X = X - X - X X X X = X X X X X X X
= = = = =
= = = = =
= = = = =
= = = = =

(X) NO SIGNIFICANT LESION RECOGNIZED. (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 20 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5

PNEUMONIA; ASPIRATION, ACUTE.
HYPEREMIA.
PNEUMONIA, ASPIRATION.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CARCINOMA; ADRENOCORTICAL, METASTATIC.

																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					</
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----

CARCINOMA, SQUAMOUS CELL.
CARCINOMA, ADENOSQUAMOUS.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, ACUTE.
ADENOCARCINOMA.
INFLAMMATION, GRANULOMATOUS.
PNEUMONIA, ASPIRATION, ACUTE.
POLY (S), BRONCHIOLAR, EPITHELIAL.
HYPEREMIA.
PNEUMONIA, ASPIRATION.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CARCINOMA, ADRENOCORTICAL, METASTATIC.

[illegible]

CARCINOMA, SQUAMOUS CELL.
CARCINOMA, ADENOSQUAMOUS.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, ACUTE.
ADENOCARCINOMA.
INFLAMMATION, GRANULOMATOUS.
PNEUMONIA: ASPIRATION, ACUTE.
POLYP(S), BRONCHIOAL, EPITHELIAL.
INFLAMMATION, ACUTE AND CHRONIC.
ADENOCARCINOMA, METASTATIC.
HYPEREMIA.
PNEUMONIA, ASPIRATION.
HYPERPLASIA: ALVEOLAR/BRONCHIOAL.
CARCINOMA, ADRENOCORTICAL, METASTATIC.

[illegible]

CARCINOMA, SQUAMOUS CELL.
CARCINOMA, ADENOSQUAMOUS.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, ACUTE.

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 20 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6

LUNG & MEDIAN CARDIAC (CONTINUED)

ADENOCARCINOMA,
INFLAMMATION, GRANULOMATOUS,
MINERALIZATION,
PNEUMONIA, ASPIRATION, ACUTE,
HYPERPLASIA, BRONCHIOAL, EPITHELIAL,
HYPEREMIA,
PNEUMONIA, ASPIRATION,
HYPERPLASIA, ALVEOLAR/BRONCHIOAL,
CARCINOMA, ADRENOCORTICAL, METASTATIC.

=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

LIVER

AMYLOIDOSIS,
CYST(S), BILIARY,
NECROSIS,
VACUOLATION, CYTOPLASMIC,
HYPEREMIA.

=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

GALLBLADDER

A	X	A	A	X	A	X	A	X	A	A	X	A	A	A	A	A	X	A	A
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

SPLEEN

AMYLOIDOSIS,
HYPERPLASIA, RETICULOENDOTHELIAL CELL,
SARCOMA, RETICULUM CELL,
HEMATOPOIESIS, EXTRAMEDULLARY.

X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

PANCREAS

METAPLASIA, EOSINOPHILIC,
HYPERPLASIA, RETICULOENDOTHELIAL CELL,
(MASS), ABSCESS(ES).

X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

HEART

DEGENERATION,
FIBROPLASIA.

X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

KIDNEYS

AMYLOIDOSIS,
(RENAL LYMPH NODE), HYPERPLASIA,
NEPHROPATHY, CHRONIC,
DILATATION, TUBULAR,
PYELITIS, ACUTE,
INFARCT(S).

X	=	X	=	=	=	=	X	X	X	=	=	X	X	X	=	X	X	=	X
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (S) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 21 MALES

1
8
2
4 4 4 4 4 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6

CECUM (CONTINUED)

INFLAMMATION,
INFLAMMATION, CHRONIC.
EDEMA,
HEMORRHAGE,
INFLAMMATION, ACUTE AND CHRONIC,
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM.

= = = = = 2+ = = = = = = = = = = = = = = = =
= = = = = = = = = = = = = = = 2+ = = = = = =
=
= = = = = = = = = = = = = = = 1+ = = = = = =
= =

ILEUM
INFLAMMATION, ACUTE AND CHRONIC.

A X A A A X X X X X X X X X A A X X A A X X A A X X
= =

COLON/RECTUM
INFLAMMATION, CHRONIC,
NEBROTICIASIS,
INFLAMMATION, ACUTE AND CHRONIC,
CYSTIC HYPERPLASIA, CRYPT EPITHELIUM,
ULCER(S).

A X A A X A X X X X - X X X A X = = A X X A A X X
= = = = = = = = = = = = = = = 2+ = = = = = =
=
=
= =

MESENTERIC LYMPH NODE
HYPERPLASIA.

X X M X M X X X X X X X X X X X X X X X A A X M
= =

LARYNX
INFLAMMATION, GRANULOMATOUS,
INFLAMMATION, ACUTE,
CRYSTALLINE DEPOSITS.

X X X X X X X X = X X = X X X X X X X X X A X X
= = = = = = = = = = = = = = = 1+ = = = = = =
= = = = = = = = = = = = = = = 2+ = = = = = =
= = = = = = = = = = = = = = = 1+ = = = = = =

TRACHEA
INFLAMMATION, ACUTE.

X X X X X X X X = X X X X X X X X X X X A X X
= = = = = = = = = = = = = = = 2+ = = = = = =
= =

THYROID
AMYLOIDOSIS,
CARCINOMA, C-CELL.

X X X X X X X I X X X X X X X X X A M X X A X X
=
= =

PARATHYROID
HYPERPLASIA.

X M X X M M X M X M X M X X = X M I X M X M M X X
= 2+ = = = = = =

ESOPHAGUS

X X X M X X X X X X X X X X X X X X X A X X
= =

LUNG & BRONCHI-LEFT
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.

X =
= 1+2+2+2+2+2+2+1+2+2+2+2+2+2+2+2+1+1+2+1+2+2+2+2+1

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 22 Males

[illegible]

6-242

(X) NO SIGNIFICANT LESION RECOGNIZED	(M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION	(A) AUTOLYZED
(N) NOT PRESENT IN SECTION	(-) NOT REQUIRED
(P) PRESENT	(1) MINIMAL
(3) MODERATE	(4) SEVERE
	(2) SLIGHT

GROUP 22 HALE'S

6-245

(X) NO SIGNIFICANT LESION RECOGNIZED. (H) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (J) NOT REQUIRED
(P) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 23 MALES

GROUP 23 MALES

[illegible]

6-247

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 23 MALES

[illegible]

6-248

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1) MINIMAL (S) SLIGHT
(2) MODERATE (4) SEVERE

GROUP 23 HOLES

5-249

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(0) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 23 MALES

6-250

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION () NOT REQUIRED
(1) PRESENT (11) MINIMAL (21) SLIGHT
(31) MODERATE (41) SEVERE

GROUP 23 MALES

1	1	1	1	1	-1	1	1	1	1	1	1	1	1	1	1	1
8	8	8	8	8	8	8	8	9	9	8	8	8	8	8	6	8
3	3	3	3	3	3	3	7	7	3	3	3	3	3	3	3	3
6	6	6	7	7	7	7	7	7	7	7	8	8	8	8	8	9
7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3

X X X X = X X X X X X H X X X X X
= = = = =
= = = =

14

¹ ² ³ ⁴ ⁵ ⁶ ⁷ ⁸ ⁹ ¹⁰ ¹¹ ¹² ¹³ ¹⁴ ¹⁵ ¹⁶ ¹⁷ ¹⁸ ¹⁹ ²⁰ ²¹ ²² ²³ ²⁴ ²⁵ ²⁶ ²⁷ ²⁸ ²⁹ ³⁰ ³¹ ³²

X X X X X X X X X X X X X X H Y X X Y X Y Y Y

X X X X X X X X X X X X X H H X H X X X X X

X X X X I I X X X X X X X X X X X X X X X X

X X X X X X X X Z X X X X X A X X X X X Z X X X

X X X X H H X X X X X X H X X X X X X

$$X = X = X \quad X = X = X = X = X = X = X = X = X = X$$

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85															

$$\overset{1}{X} \overset{2}{X} \overset{3}{H} \overset{4}{H} \overset{5}{H} \overset{6}{H} \overset{7}{X} \overset{8}{X} \overset{9}{X} \overset{10}{X} \overset{11}{H} \overset{12}{H} \overset{13}{H} = A \overset{14}{H} \overset{15}{X} \overset{16}{X} \overset{17}{H} \overset{18}{X} \overset{19}{X} \overset{20}{X} \overset{21}{H} \overset{22}{X}$$

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

XXXXXXXXXX XXXXAAA = = XXXXXXXX

10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531
----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

X X X A X X X H X X A X A A A A A X X X A X A X

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	5
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 23 MALES

GROUP 23 MALES

[illegible]

6-252

(X) NO SIGNIFICANT LESION RECOGNIZED. (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GEORGE 23 HALLS

6-253

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 23 MALES

[illegible]

AMYLOIDOSIS.
HEMATOPOIESIS, EXTRAMEDULLARY.
LYMPHOMA, MALIGNANT.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	5
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---

X X X X X X X H X X X X X A X X X X Z X X A Y

THROMBOSIS.
INFLAMMATION: CHRONIC, ATRIAL.

[illegible]

ANEMIA, CHRONIC;
NEPHROPATHY, CHRONIC.

X X X X X X X X X X X X X H A X X X X X X X A X

X I X X X X X X I X X X X A X X X X X X X X X

ATROPHY.
DEGENERATION.

X X

X X

X X

X X X X X X X X X X X X X A X X X H X H H H X

EXUDATE, PURULENT,
INFLAMMATION, ACUTE.

(MEDIASTINAL LYMPH NODE); CRYSTALLINE DEPOSITS.
(MEDIASTINAL LYMPH NODE); ADENOCARCINOMA, METASTATIC.
(MEDIASTINAL LYMPH NODE); INFLAMMATION, GRANULOMATOUS.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	5
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---

(M) MISSING
(A) AUTOLYZED
(-) NOT REQUIRED
(S) SLIGHT
(E) ERE

GROUP 24 MALES

6-255

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 24 MALES

6-256

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION () NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 24 MALES

1
8
4
1 1 1 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 4 4
7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6

LUNG & BRONCHI-APICAL (CONTINUED)

INFLAMMATION, ACUTE.
ADENOCARCINOMA.
PNEUMONIA, ASPIRATION.
CARCINOMA, SQUAMOUS CELL.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
INFLAMMATION, GRANULOMATOUS.
CARCINOMA, ADENOSQUAMOUS.
POLYPSIS, BRONCHIOLAR, EPITHELIAL.
INFLAMMATION, HISTIOCYTIC.
CARCINOMA.

=
=
=
=
=
3+ =
=
=
=
= =

LUNG & BRONCHI-ALVEOLAR

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, ACUTE.
PNEUMONIA, ASPIRATION.
CARCINOMA, SQUAMOUS CELL.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
INFLAMMATION, GRANULOMATOUS.
CARCINOMA, ADENOSQUAMOUS.
INFLAMMATION, HISTIOCYTIC.
HISTIOCYTOSIS.
EXUDATE, PROTEIN RICH, ALVEOLAR.
CARCINOMA, CORTICAL CELL, METASTATIC.

=
1+2+1+3+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+
=
=
=
=
3+ =
=
=
=
= =

LUNG & BRONCHI-DIAPHRAGMATIC

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, ACUTE.
ADENOCARCINOMA.
PNEUMONIA, ASPIRATION.
CARCINOMA, SQUAMOUS CELL.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
INFLAMMATION, GRANULOMATOUS.
CARCINOMA, ADENOSQUAMOUS.
ADENOMA.
CARCINOMA, ADENOSQUAMOUS, METASTATIC.
INFLAMMATION, HISTIOCYTIC.

=
1+2+1+3+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+
=
=
=
=
=
=
=
=
= =

LUNG & BRONCHI-CARDIAC

CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
INFLAMMATION, ACUTE.
PNEUMONIA, ASPIRATION.

=
1+2+1+3+2+2+2+2+2+2+2+2+2+2+2+2+2+2+2+
=
=
=
=
=
=
=
=
= =

6-258

(X) NO SIGNIFICANT LESION RECOGNIZED. (N) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(-) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 24 MALES

6-259

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 24 MALES

6-261

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 24 MALES

6-262

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 24 MALES

6-263

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(1) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 24 MALES

5-264

(K) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 24 MALES

6-265

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(-) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 24 MALES

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(II) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 25 MALES

6-267

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(H) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 25 MALES

6-268

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 25 MALES

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(J) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(H) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 25 MALES

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (11) MINIMAL (2+) SLIGHT
(3) MODERATE (4) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 25 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
4	4	4	4	4	4	5	5	5	5	5	5	5	5	6	6	6	6	6	6
2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1

OTHER (CONTINUED)

(MASS), INFLAMMATION, ACUTE,
(MEDIASTINAL LYMPH NODE), DILATATION.

= = = = =
= = = = =

(X) NO SIGNIFICANT LESION RECOGNIZED	(M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION	(A) AUTOLYZED
(N) NOT PRESENT IN SECTION	(-) NOT REQUIRED
(P) PRESENT	(1+) MINIMAL
(3+) MODERATE	(2+) SLIGHT
	(4+) SEVERE

GROUP 25 MALES

1
9 8 9 9 8
4
6 6 6 7
7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0

XX

[illegible]

X X X X X X X H X X X H X X X H X X X X X X X X X X

X X X X X X X X X X X X X X X X I X X X X X X X

X
= =

X X X X H X X X H X X X X X X X X X X X X X X X X X X X

[illegible]

H H H H X X H X H H X H X X H X X X X X H H H X X
 =

X X X X X A X A X X A X X X X X X X M X X X
= = = = = = = = = = = = = = = = = =

X X X A X X A A A A X A X X X X A X A X X A X N X

X X X A X X A A A X A X A X A X X A X X A X X X

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (T) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 25 MALES

6-273

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 25 MALES

6-275

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(J) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(H) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 25 MALES

GROUP 25 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
6	6	6	7	7	7	7	7	7	7	8	8	8	8	8	9	9	9
7	7	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4

OTHER (CONTINUED)

(MASS), INFLAMMATION, ACUTE,
(MEDIASTINAL LYMPH NODE), DILATATION.

51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 26 MALES

[illegible]

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 24 MALES

5-278

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (+) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 26 MALES

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1) MINIMAL (2) SLIGHT
(3) MODERATE (4) SEVERE

GROUP 26 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9

CARCINOMA, SQUAMOUS CELL.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
ADENOCARCINOMA.
ADENOMA.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CARCINOMA, ADENOSQUAMOUS.
EMPHYSEMA.
PNEUMONIA, ASPIRATION.
INFLAMMATION, GRANULOMATOUS.
EMPHYSEMA, RULOUS.

[illegible]

INFLAMMATION, ACUTE.
CARCINOMA, SQUAMOUS CELL.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
ADENOCARCINOMA.
ADENOMA.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CARCINOMA, ADENOSQUAMOUS.
HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.
ADENOCARCINOMA, BRONCHIOLAR.
ADENOCARCINOMA, METASTATIC.
EMPHYSEMA.
PNEUMONIA, ASPIRATION.
METAPLASIA, SQUAMOUS.
INFLAMMATION, GRANULOMATOUS.

[illegible]

INFLAMMATION, ACUTE.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
ADENOMA.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CARCINOMA, ADENOSQUAMOUS.
PNEUMONIA, ASPIRATION.
METAPLASIA, SQUAMOUS.
INFLAMMATION, GRANULOMATOUS.
SCARRING.

[illegible]

INFLAMMATION, ACUTE.
AMYLOIDOSIS.

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(II) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 26 MALES

6-281

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 28 MALES

6-282

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 25 MALES

5-283

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 26 MALES

6-284

(X) NO SIGNIFICANT LESION RECOGNIZED (H) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 26 HOLES

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(F) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CO-CARCINOGENICITY OF FOUNDRY PARTICULATES
SILICA AND SILICA SAND SUBSTITUTES

GROUP 26 MALES

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7

LUNG & BRONCHI-AZYGOS (CONTINUED)

CARCINOMA, SQUAMOUS CELL.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
ADENOCARCINOMA.
ADENOMA.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CARCINOMA, ADENOSQUAMOUS.
EMPHYSEMA.
PNEUMONIA, ASPIRATION.
INFLAMMATION, GRANULOMATOUS.
EMPHYSEMA, BULLOUS.

2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

LUNG & BRONCHI-DIAPHRAGMATIC

INFLAMMATION, ACUTE.
CARCINOMA, SQUAMOUS CELL.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
ADENOCARCINOMA.
ADENOMA.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CARCINOMA, ADENOSQUAMOUS.
HYPERPLASIA, BRONCHIOLAR, EPITHELIAL.
ADENOCARCINOMA, BRONCHIOLAR.
ADENOCARCINOMA, METASTATIC.
EMPHYSEMA.
PNEUMONIA, ASPIRATION.
METAPLASIA, SQUAMOUS.
INFLAMMATION, GRANULOMATOUS.

2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

LUNG & BRONCHI-CARDIAC

INFLAMMATION, ACUTE.
CRYSTALLINE DEPOSITS IN DISTAL AIRWAYS.
ADENOMA.
HYPERPLASIA, ALVEOLAR/BRONCHIOLAR.
CARCINOMA, ADENOSQUAMOUS.
PNEUMONIA, ASPIRATION.
METAPLASIA, SQUAMOUS.
INFLAMMATION, GRANULOMATOUS.
SCARRING.

2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

LIVER

INFLAMMATION, ACUTE.
AMYLOIDOSIS.

X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

(X) NO SIGNIFICANT LESION RECOGNIZED (N) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(0) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 26 MALES

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(H) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 26 MALES

6-288

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(1) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE