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Environmental Restoration Program

OPERABLE UNIT 6, AREA 19 AND AREA 14 VERIFICATION REPORT

MOUND PLANT
MIAMISBURG, OHIO

October 1994

FINAL

(Revision 0)

Department of Energy
Albuquerque Field Office

Environmental Restoration Program
EG&G Mound Applied Technologies

EG&G MOUND-950104000 3

ENVIRONMENTAL RESTORATION PROGRAM

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EG&G MOUND APPLIED TECHNOLOGIES

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LIST OF ACRONYMS

ALARA	as low as reasonably achievable
ATV	all terrain vehicle
BVA	Buried Valley aquifer
CGI	Combustible Gas Indicator
CLP	Contract Laboratory Program
COC	Chain of Custody
COCs	Contaminants of Concern
D&D	Decontamination and Decommissioning
DOE	U.S. Department of Energy
DQO	data quality objective
EG&G	EG&G Mound Applied Technologies
EPA	U.S. Environmental Protection Agency
FFA	Federal Facility Agreement
HAZWRAP	Hazardous Waste Remedial Action Program
ICF KE	ICF Kaiser Engineers, Inc.
ID	inner diameter
IDM	Investigative Derived Materials
MDA	method detected activity
MS/MSDS	matrix spike/matrix duplicate sample
NPL	National Priorities List
OEPA	Ohio Environmental Protection Agency
OU	operable unit
PARCC	precision, accuracy, representativeness, completeness, and comparability
PCB	polychlorinated biphenyl
QA/QC	quality assurance/quality control
QAPP	Quality Assurance Project Plan
RAS	routine analytical service
RBGCV	Risk-Based Guidline Cleanup Value
RBTL	Risk-Based Threshold Level
RI/FS	Remedial Investigation/Feasibility Study
SAP	Sampling and Analysis Plan
SAS	special analytical service
SDG	Sample Delivery Group
SOP	Standard Operating Procedure
SOW	Statement of Work
USEPA	United States Enviornmental Protection Agency
UST	underground storage tank

VOC	volatile organic compound
WD	waste disposal
WDA	waste disposal annex
WTS	waste transfer system

EXECUTIVE SUMMARY

A verification sampling investigation of the Operable Unit 6 (OU6), Area 19 and Area 14, was performed in November 1993. Prior to sampling efforts, proposed drilling locations were determined based upon the surveyed waste transfer line, and clearance was provided for all locations. A series of environmental soil borings and laboratory analysis of soil samples to characterize the nature and extent of radiological and non-radiological contamination was performed. In addition, based on the results of the investigation, the Mound Decontamination and Decommissioning (D&D) Program was assessed to determine if remediation activities at Areas 19 and 14 were successful.

Area 19 and 14 was divided into three separate areas (19-1, 19-2, and 19-3) so that the sampling activities could be performed. Area 14 is located within Area 19-2. A total of three (3) soil borings were drilled and sampled in the Area 19-1. Area 19-1 is located near the Waste Disposal (WD) Building. A total of ten (10) soil borings were drilled and sampled in area 19-2, which corresponds to the former building 41 location. The remaining soil borings were located in Area 19-3 along the former WTS between the SM/PP buildings to the WD Building. A total twenty-five (25) soil borings were performed for Area 19-3. The total amount of soil borings performed for the investigation is 38, plus one additional soil boring near the Test Fire parking lot.

Based on the analytical results and the statistical analysis of the results, the D&D Program has successfully remediated Areas 19-1, 19-2, and 19-3 for radiological compounds (assuming a subsurface cleanup standard for Thorium-228 of 15 pCi/gram). Of the non-radiological parameters, no compounds were identified as potential contaminants of concern.

1. INTRODUCTION

EG&G Mound Applied Technologies (EG&G) operates the Department of Energy (DOE) Mound Plant under contract with the DOE. Historical production and general material handling activities at Mound Plant have contributed to radiological and non-radiological chemical contamination of the environment on the plant property. As a result of past contaminant releases, Mound Plant was placed on the National Priorities List (NPL) in November 1989. In response to this listing, the DOE and the U.S. Environmental Protection Agency (USEPA) entered into a Federal Facility Agreement (FFA) which became effective October 12, 1990. Under the terms of the FFA, the DOE is required to develop and implement a Remedial Investigation/Feasibility Study (RI/FS) and conduct interim actions to protect public health and the environment. One of these interim actions includes the verification sampling and analysis investigation for D&D activities at Area 19 and Area 14 (ICF KE 1993).

Area 19 consists of soils that surrounded two underground waste transfer lines that were used to transfer low-activity and higher-activity plutonium-238 liquid waste. Area 14 consists of a former spill area upslope of the former lift station (Building 41) and downslope from the Waste Disposal Annex (WDA) Building. During the period from 1966 through 1967, Building 38 (PP Building), the WDA Building and the Waste Transfer System (WTS) were constructed to meet the increasing needs of the plutonium processing programs at Mound Plant. The WTS consisted of a series of holding tanks, a lift station (Building 41, subsequently demolished), and steel transfer pipes connecting the SM and PP Buildings to the WDA Building. The former lift station (Building 41) was located at the end of the gravity feed portion of the WTS, at the southeast corner of Area 14. The transfer pipes consisted of a 1.5-inch pipe to transfer the high-risk waste, and a 2-inch pipe to transfer the low-risk waste. The depth below ground surface (bgs) of these lines varied from approximately 4 feet to 17 feet. The low-risk line was in service from 1967 until September, 1974, and the high-risk line was used during the period from 1967 until April, 1976 (DOE 1992a). These two underground waste transfer lines and former Building 41 (Area 14) are the focus of the OU 6 verification sampling effort.

A series of environmental soil borings were drilled to determine if the remediation efforts performed by the Mound D&D Program were successful. Soil borings were performed and soil samples were collected for analysis of chemical and radiological parameters in accordance with the OU 6 Verification Plan. In addition, one additional boring was performed near a stream in the Test Fire parking lot to address EG&G Mound concerns. The subsurface borings were drilled with an All Terrain Vehicle (ATV) Mobile B-57 drill rig using hollow-stem augers. Analytical services were performed by PACE Laboratories, located in Pittsburgh, Pennsylvania and Golden, Colorado and CompuChem located in Durham, North Carolina. A total of 39 soil borings were completed and 92 soil samples were collected for site characterization.

1.1. PURPOSE OF THE VERIFICATION ACTIVITY

The objective of the work activities for Area 19 and Area 14 was to determine the success of the Mound D&D Program remediation effort for soils along the former radioactive WTS. This was accomplished by advancing 13 soil borings (at areas 19-1 and 19-2) and 23 soil borings plus two hand auger locations (in Area 19-3) in areas of concern (Area 19 and Area 14). One additional soil boring was performed near the Test Fire parking lot to address concerns of possible radiological contamination. A total of 39 soil borings were performed with soil samples collected and analyzed for chemical and radiological parameters. Based on the results of the soil sampling, verification of the remedial effort is able to be provided to the regulatory agencies.

1.2. SCOPE OF THE VERIFICATION ACTIVITY

Based on an EG&G Mound and regulatory agency approved work plan, Area 19 and Area 14 was investigated. The scope of the verification activities addressed three individual areas of concern: the 19-1 area (the WTS within the secured WD building area); the 19-2 area (Area 14 and a portion of the WTS from WD to the former lift Station [Building 41]); and the 19-3 area (the WTS from the former lift station [Building 41] up to the SM/PP Building).

The investigation of the 19-1 area (Area 19) included the three soil boring locations within the WD area and the section of the WTS pipeline north of the WD Building where leaks in the pipeline and cleanouts occurred.

The 19-2 location (Area 14 and Area 19) is an area of a former spill that has been remediated under Mound's D&D Program. The area is upslope from the former lift station (Building 41) where the break occurred in the radioactive waste line in 1969. In Area 19-2, a total of 10 soil borings were drilled and sampled for site characterization.

The 19-3 area (Area 19) is the remaining section of the underground waste transfer line. The area investigated included the complete length of the trench excavated during the D&D program to remove the WTS piping. That piping extended from the SM/PP buildings through the former lift station (Building 41) to the WD and WDA buildings on the Main Hill. The first boring (19-3A) location was randomly determined along the former underground line. The 25 remaining soil boring locations were at predetermined distances relative to the randomly determined first boring (19-3A).

1.3. SITE BACKGROUND

1.3.1. Area Description

Mound Plant is located on the eastern side of the Great Miami River valley, within the Till Plains section of the Central Lowlands Province. Bedrock in this area forms a peneplain, which is dissected to a maximum of 900 ft, and the dominant drainage pattern is dendritic. The larger valleys are partially filled with glacial deposits. The modern Great Miami River occupies an ancient valley that was formed by meltwater from continental glaciers. This ancient valley is filled with thick, extensive glacial deposits of permeable sand and gravel that are referred to as the Buried Valley Aquifer (BVA), an important source of groundwater resources (DOE 1989d).

The predominant geographical feature in the region surrounding Mound Plant is the Great Miami River, which flows from northeast to southwest through Miamisburg, although near Mound Plant it flows essentially to the south. Mound Plant is situated on a topographic high area overlooking Miamisburg, the Great Miami River, and the river plain area to the west. The plant is characterized by two topographic high areas divided by a minor northeast-southwest trending valley that is a tributary to the Great Miami River. To the west of the plant is an abandoned section of the Miami-Erie canal that trends parallel to the river. The small stream occupying the plant valley, drains through the southern portion of the canal to the river through the overflow ditch that once served to equalize water levels in the canal. Although the river has been engineered with levees along its entire length, the 100-year floodplain may encroach upon the southwestern margin of the plant along the low-lying area that parallels the overflow ditch.

1.3.2. Area History

Mound Plant occupies 306 acres within the southern city limits of Miamisburg, Ohio (Figure 1.1). The northern boundary of Mound Plant is approximately 0.13 mile south of Mound Avenue in Miamisburg. Mound Avenue curves south, becomes Mound Road, and runs southward along the eastern boundary of the plant. Benner Road forms the southern boundary of Mound Plant, and the Conrail Railroad, formerly the Penn-Central, roughly parallels the western boundary at distances of about 50 to 200 ft (MRC 1985b). A railroad siding enters the plant from the west and services the lower plant valley.

The WTS originates at the SM/PP Building (Figure 1.2) and continues west down the SM/PP Hill to near the former Building 41 (lift station) and then north to the WDA Building. Area 19 represents the WTS and Area 14 is located downslope from WDA Building and upslope from the former lift station (Building 41).

REFERENCE

U.S.G.S. 7.5′ topographic maps Franklin Quadrangle Ohio, dated: 1965, photorevised: 1981, photoinspected: 1984, Miamisburg Quadrangle Ohio, dated: 1965, photorevised: 1987, scale: 1" = 2000′

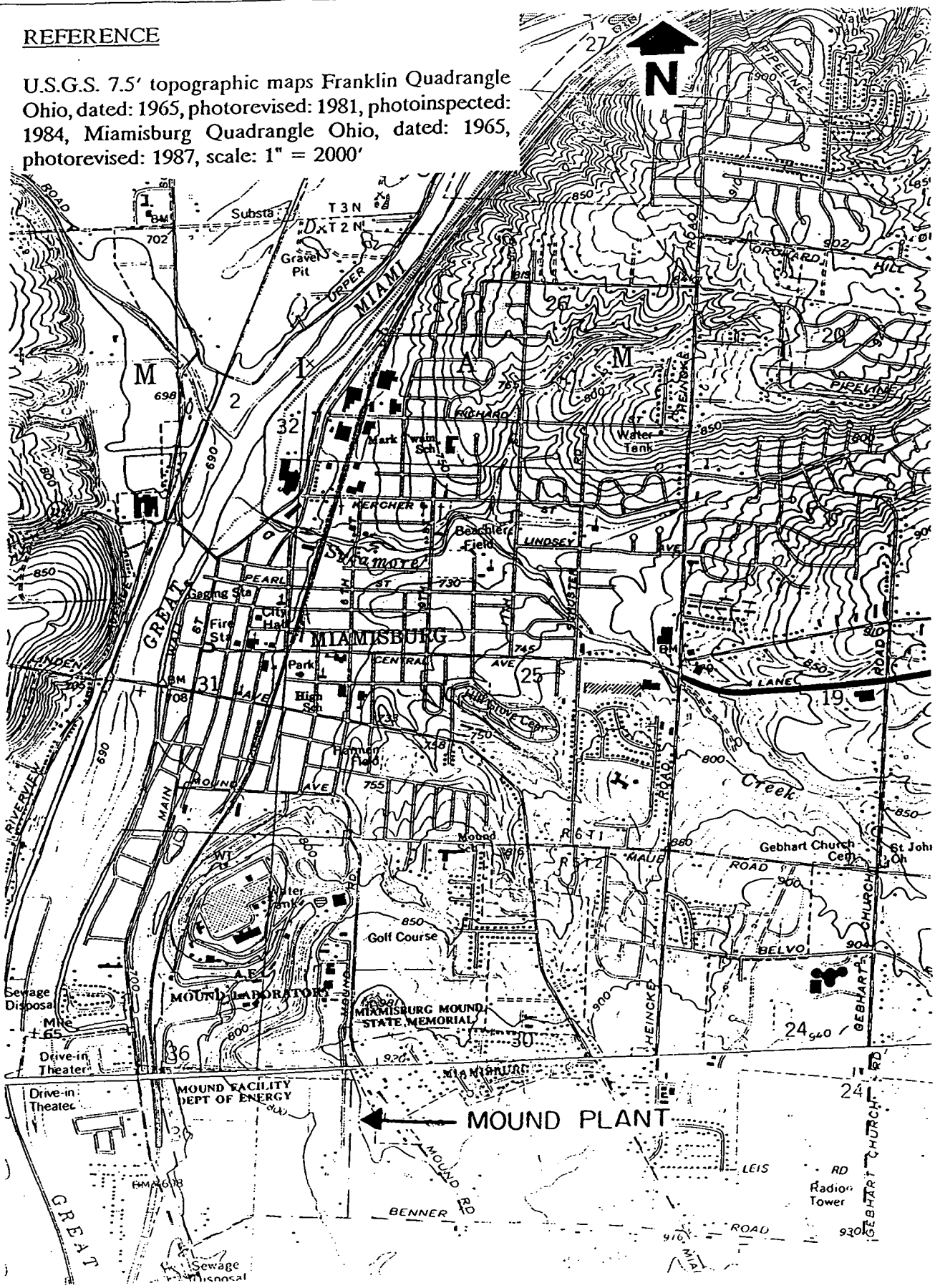

Figure 1.1. Topographic Map of the EG&G Mound Facility and Surrounding Area

2. SAMPLING ACTIVITY SUMMARY

A geographical survey of the former WTS line (prior to soil sampling efforts) was performed. As-built drawings and blueprints were used to determine the approximate location of the former WTS line. Once the approximate location of the WTS line was surveyed, a temporary survey benchmark was flagged so that the soil boring locations could be selected.

Upon completion of surveying activities, the former WTS drilling areas were evaluated for: 1) access; 2) underground utilities; and 3) safety consideration (i.e., angle of slope and overhead utilities, etc.). Based on this evaluation and in consultation with project personnel, some drilling locations were relocated.

The purpose of the subsurface soil sampling investigation was to collect representative soil samples to verify the D&D Program remediation efforts. Subsurface soil samples were obtained using a rubber tired (Mobile B-57) All-Terrain Vehicle (ATV) drill rig. The first subsurface soil boring location was randomly (random distance from the SM Building along the WTS line to the first drilling location) selected and the remaining 24 borings were surveyed at predetermined locations (by approximate 100 foot intervals) along the former WTS line in Area 19-3. The remaining soil borings (13) were located in areas where radiological contamination was remediated (Areas 19-1 and 19-2) near the WDA and the removed Building 41, respectively. Soil boring locations are shown on Figure 2.1. The soil samples were collected for analysis using two and three inch inner diameter (ID) split-spoon samplers. The larger split-spoon was used when more sample volume was needed for the required chemical and radiological analysis.

A total of 39 (38 original borings plus one additional boring) soil borings were performed and 92 soil samples were collected (Table II.1). Table II.1 also provides sampling location, sampling interval, elevation of the surface (referenced to mean sea level) and of the sampling interval and soil classification description. In addition, 42 Quality Assurance/Quality Control (QA/QC) samples were collected in compliance with the OU 6 Verification Plan (Table II.2). The QA/QC samples were collected to check precision, accuracy, and reproducibility of the data. Sampling methodologies and procedures are documented in Section 3. and in Appendix A.

Table II.1. Soil Sample Summary Table

Sample Location	Sample Number	Date Sampled	Date Depth	Surface Elev. (MSL)	Sample Interval (MSL)	Bedrock Depth (MSL)	Complet. Depth (MSL)	Sample Description	USCS Symbol	QA/QC
19-1A	MND14-3037-0006	10/07/93	6-8'	806.84	798.84 - 800.84	792.84	792.84	Brownish grey sandy Silt	SM/ML	
	MND14-3037-0012	10/07/93	12-14'	806.84	792.84 - 794.84	792.84	792.84	Greenish grey Gravel and Silt	GM	
19-1B	MND14-3038-0006	10/11/93	6-8'	801.46	793.46 - 795.46	786.96	786.96	Brown silty Clay	CL	MS/MSD
	MND14-3038-0012	10/11/93	12-14'	801.46	787.46 - 789.46	786.96	786.96	Grey silty Clay	CL	
19-1C	MND14-3039-0006	10/11/93	6-8'	799.4	791.4 - 793.4	786.9	786.9	Greyish brown clayey Silt	ML	
	MND14-3039-1006	10/11/93	6-8'	799.4	791.4 - 793.4	786.9	786.9	Greyish brown clayey Silt	ML	DUP
	MND14-3039-0011	10/11/93	11-12.5'	799.4	786.9 - 788.4	786.9	786.9	Greyish green clayey Silt	ML	
19-2A	MND14-3027-0000	10/08/93	0-2'	740.21	738.21 - 740.21	N.O	718.21	Brown gravelly Silt	GM/ML	
	MND14-3027-0006	10/08/93	6-8'	740.21	732.21 - 734.21	N.O	718.21	Greyish brown clayey Silt	ML	
	MND14-3027-0013	10/08/93	13-15'	740.21	725.21 - 727.21	N.O	718.21	Blackish brown clayey Silt	ML	
	MND14-3027-0020	10/08/93	20-22'	740.21	718.21 - 720.21	N.O	718.21	Blackish grey clayey Silt	ML	
19-2B	MND14-3028-0000	10/04/93	0-2'	743.06	741.06 - 743.06	721.56	721.56	Red/Brown Sand and Gravel	GP	
	MND14-3028-1000	10/04/93	0-2'	743.06	741.06 - 743.06	721.56	721.56	Red/Brown Sand and Gravel	GP	DUP
	MND14-3028-0006	10/04/93	6-8'	743.06	735.06 - 737.06	721.56	721.56	Dark Brown Clay and Silt	CL/ML	
	MND14-3028-0013	10/04/93	13-15'	743.06	728.06 - 730.06	721.56	721.56	Black Brown clayey Silt	ML	
	MND14-3028-0020	10/04/93	20-21.5'	743.06	721.56 - 723.06	721.56	721.56	Dark Grey clayey Silt	ML	
19-2C	MND14-3029-0000	10/05/93	0-2'	742.78	740.78 - 742.78	728.28	727.78	Brown silty Sand	SM	
	MND14-3029-0006	10/05/93	6-8'	742.78	734.78 - 736.78	728.28	727.78	Greyish brown clayey Silt	ML	MS/MSD
	MND14-3029-0013	10/05/93	13-14.5'	742.78	728.28 - 729.78	728.28	727.78	Brownish grey clayey Silt	ML	
19-2D	MND14-3030-0000	10/05/93	0-2'	745.71	743.71 - 745.71	741.71	741.71	Brown sandy Silt	ML	
	MND14-3030-1000	10/05/93	0-2'	745.71	743.71 - 745.71	741.71	741.71	Brown sandy Silt	ML	DUP
19-2E	MND14-3031-0000	10/05/93	0-2'	746.66	744.66 - 746.66	742.66	742.66	Greenish grey silty Clay	CL	
19-2F	MND14-3032-0000	09/30/93	0-2'	747.2	745.2 - 747.2	736.7	736.7	Brown Clay	CL	
	MND14-3032-0006	09/30/93	5-7'	747.2	740.2 - 742.2	736.7	736.7	Brownish black clayey Silt	ML	
19-2G	MND14-3033-0000	10/04/93	0-2'	751.76	749.76 - 751.76	743.76	743.76	Brown gravelly Sand	SP	MS/MSD
	MND14-3033-0006	10/04/93	6-8'	751.76	743.76 - 745.76	743.76	743.76	Grey gravelly Silt	ML	
19-2H	MND14-3034-0000	10/06/93	0-2'	756.55	754.55 - 756.55	748.55	748.55	Brownish grey sandy Silt	ML	
	MND14-3034-1000	10/06/93	0-2'	756.55	754.55 - 756.55	748.55	748.55	Brownish grey sandy Silt	ML	DUP
	MND14-3034-0006	10/06/93	6-8'	756.55	748.55 - 750.55	748.55	748.55	Olive green sandy Silt and Rock	ML	
19-2I	MND14-3035-0000	10/04/93	0-2'	789.77	787.77 - 789.77	768.27	767.77	Greenish grey silty Clay	CL	
	MND14-3035-0006	10/04/93	6-8'	789.77	781.77 - 783.77	768.27	767.77	Brown sandy Clay & Silt, Gravel	ML/CL	
	MND14-3035-0013	10/04/93	13-15'	789.77	774.77 - 776.77	768.27	767.77	Brownish silty Clay & Gravel(fill)	FILL	
	MND14-3035-0020	10/04/93	20-22'	789.77	767.77 - 769.77	768.27	767.77	Grey clayey Silt	ML	

Legend:
N.O. - not observed
M.S.L. - mean sea level
Dup - duplicate soil sample
MS/MSD - matrix spike / matrix spike duplicate

Table II.1. Soil Sample Summary Table (Continued)

Sample Location	Sample Number	Date Sampled	Date Depth	Surface Elev.	Sample Interval	Bedrock Depth	Complet. Depth	Sample Description	USCS Symbol	QA/QC
19-2J	MND14-3036-0000	09/29/93	0-2'	790.18	788.18 - 790.18	768.68	768.18	Red brown clayey Silt	ML	
	MND14-3036-0006	09/29/93	6-8'	790.18	782.18 - 784.18	768.68	768.18	Reddish brown Silt and Clay	ML/CL	
	MND14-3036-0013	09/29/93	13-15'	790.18	775.18 - 777.18	768.68	768.18	Red brown Silt and Clay	ML/CL	
	MND14-3036-0020	09/29/93	20-22'	790.18	768.18 - 770.18	768.68	768.18	Brown Silt and Clay, rock fragments	ML/CL	
19-3A	MND14-3001-0001	10/13/93	1-3'	885.36	882.36 - 884.36	N.O	881.86	Brownish grey gravelly Clay & Silt	ML/CL	
	MND14-3001-1001	10/13/93	1-3'	885.36	882.36 - 884.36	N.O	881.86	Brownish grey gravelly Clay & Silt	ML/CL	DUP
19-3B	MND14-3002-0003	10/13/93	3-4'	884.86	880.86 - 881.86	877.86	877.86	Brown silty Sand	SM	
	MND14-3002-0006	10/13/93	6-7'	884.86	877.86 - 878.86	877.86	877.86	Brownish silty Sand	SM	
19-3C	MND14-3003-0004	10/14/93	4-6'	878.64	872.64 - 874.64	871.64	871.64	Brown sandy Silt	ML	
19-3D	MND14-3004-0004	10/12/93	7-9'	872.35	863.35 - 865.35	857.85	857.35	Brown sandy Silt	ML	
	MND14-3004-0012	10/12/93	12-14'	872.35	858.35 - 860.35	857.85	857.35	Greenish brown gravelly Silt	ML	
19-3E	MND14-3005-0004	09/21/93	4-6'	840.61	832.61 - 836.61	829.11	829.11	Brownish grey gravelly Clay	CL	
	MND14-3005-0010	09/21/93	10-11.5'	840.61	829.11 - 830.61	829.11	829.11	Greyish gravelly Clay with Rock	CL	
19-3F	MND14-3006-0000	09/22/93	0-2'	819.89	817.89 - 819.89	810.39	810.39	Brown gravelly Clay	CL	
	MND14-3006-0005	09/22/93	5-7'	819.89	812.89 - 814.89	810.39	810.39	Brown gravelly Clay	CL	
19-3G	MND14-3007-0001	09/22/93	1-2'	798.62	796.62 - 797.62	786.12	786.12	Brown gravelly Clay	CL	
	MND14-3007-0012	09/22/93	12-12.5'	798.62	786.12 - 786.62	786.12	786.12	Grey brown gravelly Clay	CL	
19-3H	MND14-3008-0001	09/23/93	1-3'	774.26	771.26 - 773.26	763.51	763.26	Brown gravelly Silt	ML	
	MND14-3008-0009	09/23/93	9-11'	774.26	763.26 - 765.26	763.51	763.26	Brown/Grey silty Clay	CL	
19-3I	MND14-3009-0002	09/23/93	2-4'	762.47	758.47 - 760.47	743.67	743.47	Brown sandy silty Clay	CL	
	MND14-3009-0017	09/23/93	17-19'	762.47	743.47 - 745.47	743.67	743.47	Brown sandy silty Clay	CL	
19-3J	MND14-3010-0011	09/28/93	11-13'	753.61	740.61 - 742.61	N.O	731.61	Brown clayey Silt	ML	
	MND14-3010-0020	09/29/93	20-22'	753.61	731.61 - 733.61	N.O	731.61	Black clayey Silt	ML	
	MND14-3010-1020	09/29/93	20-22'	753.61	731.61 - 733.61	N.O	731.61	Black clayey Silt	ML	DUP
19-3K	MND14-3011-0006	09/23/93	6-8'	751.92	743.92 - 745.92	732.32	732.32	Greenish black clayey Silt	ML	
	MND14-3011-0017	09/23/93	17-19'	751.92	732.92 - 734.92	732.32	732.32	Brownish grey silty clayey Gravel	GM/GC	
19-3L	MND14-3012-0001	09/24/93	1-3'	751.38	748.38 - 750.38	N.O	729.38	Brown gravelly Clay	CL	MS/MSD
	MND14-3012-0020	09/24/93	20-22'	751.38	729.38 - 731.38	N.O	729.38	Blackish grey gravelly silty Clay	CL	
19-3M	MND14-3013-0003	09/27/93	3-6'	750.03	744.03 - 747.03	741.43	741.03	Brown gravelly Silt with fractured rock	ML	
	MND14-3013-0008	09/27/93	8-9'	750.03	741.03 - 742.03	741.43	741.03	Reddish brown gravelly Clay	CL	
19-3N	MND14-3014-0001	09/27/93	0.5-2.5'	748.55	746.05 - 748.05	738.55	738.55	Brown gravelly Fill	FILL	
	MND14-3014-0006	09/27/93	7-9'	748.55	739.55 - 741.55	738.55	738.55	Brown gravelly Silt	ML	
19-3O	MND14-3015-0001	09/27/93	1-3'	746.36	743.36 - 745.36	746.36	724.36	Brown sandy silty clayey Gravel	GM/GC	
	MND14-3015-0020	09/27/93	20-22'	746.36	724.36 - 726.36	746.36	724.36	Black clayey Silt	ML	
19-3P	MND14-3016-0010	10/01/93	10-12'	745.39	733.39 - 735.39	N.O	723.39	Brownish green silty Clay	CL	
	MND14-3016-0018	10/01/93	18-20'	745.39	725.39 - 727.39	N.O	723.39	Brown grey silty Clay	CL	
19-3Q	MND14-3017-0007	09/24/93	7-9'	745.05	736.05 - 738.05	N.O	723.05	Brown sandy Clay & Gravel	GL/GC	
	MND14-3017-0020	09/24/93	20-22'	745.05	723.05 - 725.05	N.O	723.05	Greenish grey silty Clay	CL	
	MND14-3017-1020	09/24/93	20-22'	745.05	723.05 - 725.05	N.O	723.05	Greenish grey silty Clay	CL	DUP
19-3R	MND14-3018-0012	10/01/93	10-12'	744.07	732.07 - 734.07	N.O	722.07	Brown clayey Silt	ML	
	MND14-3018-0020	10/01/93	20-22'	744.07	722.07 - 724.07	N.O	722.07	Grey Clay and Silt	ML	

Table II.1. Soil Sample Summary Table (Continued)

Sample Location	Sample Number	Date Sampled	Date Depth	Surface Elev.	Sample Interval	Bedrock Depth	Complet. Depth	Sample Description	USCS Symbol	QA/QC
19-3S	MND14-3019-0007	10/08/93	7-9'	741.78	732.78 - 734.78	N.O	719.78	Brown gravelly Silt	ML	
	MND14-3019-0020	10/08/93	20-22'	741.78	719.78 - 721.78	N.O	719.78	Greyish brown gravelly Silt	ML	
	MND14-3019-1020	10/08/93	20-22'	741.78	719.78 - 721.78	N.O	719.78	Greyish brown gravelly Silt	ML	DUP
19-3T	MND14-3020-0009	10/06/93	9-11.5'	740.61	729.11 - 731.61	N.O	718.61	Brownish grey clayey Silt	ML	MS/MSD
	MND14-3020-0020	10/06/93	20-22'	740.61	718.61 - 720.61	N.O	718.61	Blackish grey clayey Silt	ML	
19-3U	MND14-3021-0005	09/30/93	5-7'	751.78	744.78 - 746.78	737.78	737.78	Blackish grey green silty Clay	CL	
	MND14-3021-0012	09/30/93	12-14'	751.78	737.78 - 739.78	737.78	737.78	Greenish grey clayey Silt with rock	ML	
19-3V	MND14-3022-0005	10/06/93	5-7'	774.36	767.36 - 769.36	763.86	762.86	Greenish grey clayey Silt	ML	
	MND14-3022-0010	10/06/93	10-11.5'	774.36	762.86 - 764.36	763.86	762.86	Brown grey sandy Silt	ML	
19-3W	MND14-3023-0005	10/11/93	5-7'	797.56	790.56 - 792.56	780.56	780.56	Greenish grey silty Clay	CL	
	MND14-3023-0014	10/11/93	14-15.5'	797.56	782.06 - 783.56	780.56	780.56	Greenish grey gravelly clayey Silt	ML	
19-3X	MND14-3024-0004	10/07/93	4-6'	805.85	799.85 - 801.85	793.35	792.85	Greenish grey gravelly Silt	ML	
	MND14-3024-0011	10/07/93	11-12.5	805.85	793.35 - 794.85	793.35	792.85	Greenish grey gravelly Silt	ML	
19-3Y	MND14-3025-0009	10/07/93	9-11.5'	810.94	799.44 - 801.94	793.94	793.44	Olive grey clayey Silt	ML	
	MND14-3025-0016	10/07/93	16-17.5'	810.94	793.44 - 794.94	793.94	793.44	Brown clayey gravelly Silt	ML	
19-4A	MND14-3026-0002	09/29/93	1-3'	747.63	744.63 - 746.63	N.O	725.63	Brown silty Clay	CL	
	MND14-3026-0010	09/29/93	9-11'	747.63	736.63 - 738.63	N.O	725.63	Brownish black silty Clay	CL	
	MND14-3026-0020	09/29/93	20-22'	747.63	725.63 - 727.63	N.O	725.63	Brownish grey silty Clay	CL	

Table II.2. Quality Assurance/Quality Control Samples

Sample Number	Date Sampled	Area	Sample Description
MND14-3007-2000	09/22/93	19-3	Trip Blank
MND14-3009-2000	09/24/93	19-3	Trip Blank
MND14-3017-2000	09/24/93	19-3	Trip Blank
MND14-3013-2000	09/28/93	19-3	Trip Blank
MND14-3010-2000	09/28/93	19-3	Trip Blank
MND14-3036-2000	09/30/93	19-2	Trip Blank
MND14-3032-2000	09/30/93	19-2	Trip Blank
MND14-3016-2000	10/01/93	19-3	Trip Blank
MND14-3035-2000	10/04/93	19-2	Trip Blank
MND14-3028-2000	10/04/93	19-2	Trip Blank
MND14-3030-2000	10/05/93	19-2	Trip Blank
MND14-3029-2000	10/05/93	19-2	Trip Blank
MND14-3024-2000	10/07/93	19-3	Trip Blank
MND14-3037-2000	10/08/93	19-1	Trip Blank
MND14-3038-2000	10/11/93	19-1	Trip Blank
MND14-3039-2000	10/11/93	19-1	Trip Blank
MND14-3004-2000	10/12/93	19-3	Trip Blank
MND14-3001-2000	10/13/93	19-3	Trip Blank
MND14-3003-2000	10/13/93	19-3	Trip Blank
MND14-3016-2000	10/01/93	19-3	Trip Blank
MND14-3037-2000	10/07/93	19-1	Trip Blank
MND14-3006-2000	09/22/93	19-3	Trip Blank
MND14-3007-4000	09/22/93	19-3	Rinsate Blank
MND14-3012-4000	09/24/93	19-3	Rinsate Blank
MND14-3010-4000	09/28/93	19-3	Rinsate Blank
MND14-3035-4000	10/04/93	19-2	Rinsate Blank
MND14-3029-4000	10/05/93	19-2	Rinsate Blank
MND14-3038-4000	10/11/93	19-1	Rinsate Blank
MND14-3027-4000	10/12/93	19-2	Rinsate Blank

Table II.2. Quality Assurance/Quality Control Samples (Continued)

Sample Number	Date Sampled	Area	Sample Description
MND14-3012-3000	09/24/93	19-3	Ambient Air Blank
MND14-3010-3000	09/28/93	19-3	Ambient Air Blank
MND14-3029-3000	10/05/93	19-2	Ambient Air Blank
MND14-3037-3000	10/08/93	19-1	Ambient Air Blank
MND14-3027-3000	10/11/93	19-2	Ambient Air Blank
MND14-3012-6000	09/24/93	19-3	Bottle Blank
MND14-3010-6000	09/28/93	19-3	Bottle Blank
MND14-3029-6000	10/05/93	19-2	Bottle Blank
MND14-3037-6000	10/08/93	19-1	Bottle Blank
MND14-3027-6000	10/11/93	19-2	Bottle Blank
MND14-3040-0000	10/12/93	NA	EG&G Spike Sample
MND14-3041-0010	10/12/93	NA	EG&G Spike Sample
MND14-3042-0020	10/12/93	NA	EG&G Spike Sample

3. SUMMARY OF DQOs

Data Quality Objectives (DQOs) focus on the identification of the end use of the data to be collected and the degree of certainty with respect to precision, accuracy, reproducibilty, completeness, and comparability (PARCC) necessary to satisfy the intended end use. Once the acceptable degree of certainty regarding analytical results is determined, one of the five categories listed below was selected to describe the approach that was taken in the effort to achieve the desired degree of certainty.

- Level 1 - Field Screening. This level is characterized by the use of portable instruments that can provide real-time data to assist in the optimization of sampling point locations and for health and safety support. Data can be generated regarding the presence or absence of certain contaminants (especially volatiles) at sampling locations.

- Level 2 - Field Analysis. This level is characterized by the use of portable analytical instruments than can be used either on-site or in mobile laboratories stationed near a site (close-support laboratories). Depending upon the types of contaminants, sample matrix, and personnel skills, qualitative and quantitative data can be obtained.

- Level 3 - Laboratory analysis using methods other than the CLP RAS. This level is used primarily in support of engineering studies using standard EPA-approved procedures.

- Level 4 - Contract Laboratory Program (CLP) Routine Analytical Services (RAS). This level is characterized by rigorous quality assurance/quality control (QA/QC) protocols and documentation and provides qualitative and quantitative analytical data.

- Level 5 - Non-standard Methods. Analyses that may require method modification and/or development. CLP Special Analytical Services (SAS) are Level V. The radiological analysis of soils was construed to be Level 5 DQO.

The DQOs levels 1, 2, 4, and 5 were used to successfully complete the WTS investigation. Level 1 field screening was performed with: an HNu with a 11.7 eV probe; a Combustible Gas Indicator (CGI); a Miniram (dust particulate monitor); and a FIDLER probe (used for detecting radiological contaminants: Pu-238 and Th-232). The field screening was performed as health and safety support to provide real time data during sampling. The data was used to determine if the work environment was safe. Level 2 field analysis was performed on-site by Mound personnel for each soil sample collected. Mound personnel use a sodium iodide bicron detector that measures x-rays or gamma rays from two radioactive source elements. Level 4 and 5 DQO samples were performed on select and random locations based on the SAP. These soil samples were collected and analyzed in a laboratory for full CLP type parameters and select radiological parameters (Isotopic Plutonium, Isotopic Uranium, Isotopic Thorium, Gamma Spectrometry and Tritium).

The data quality objectives (DQOs) for the soil sampling efforts were to obtain both qualitative and quantitative data. Field screening of soil samples by Mound provided qualitative data. At all the soil boring

locations, Mound personnel split soil samples for the purpose of screening the samples prior to leaving the site. Off-site laboratory analyses by EG&G Mound approved laboratories for radiological and chemical analysis provided quantitative data. Based on these results, the effectiveness of the D&D Program remedial action will be assessed.

3.1. REFERENCE TO PROCEDURES AND REVISIONS USED

Field sampling procedures used during this verification sampling effort complied with the requirements of Mound ER Program Standard Operating Procedures (SOPs). The applicable SOPs include:

- SOP 1.1 General Instructions for Field Personnel
- SOP 1.3 Sample Control and Documentation
- SOP 1.5 Guide to Handling, Packaging and Shipping of Samples
- SOP 1.6 General Equipment Decontamination
- SOP 1.8 Personnel Decontamination - Level D Protection
- SOP 1.9 Personnel Decontamination - Level C Protection
- SOP 1.15 Guide to Management of Investigation-Derived Material
- SOP 4.1 Soil Boring
- SOP 5.1 Soil and Rock Borehole Logging and Sampling
- SOP 5.3 Subsurface Soil Sampling with Hand Auger and Thin Wall Sampler
- SOP 6.1 Health and Safety Monitoring of Combustible Gas Levels
- SOP 6.2 Health and Safety Monitoring of Combustible Gas Levels of Organic Vapors with Photoionization Detector

Work activities were based on the OU 6 Verification Plan (SAIC 1993). Soil sampling procedures were consistent with Section 5.3.3 (Soil Sampling) of the OU 6 Verification Plan and the SOPs 4.1 and 5.1. Quality control samples for the OU 6 verification sampling were based on Section 5.3.4 (Field Quality Control Samples) SOP 1.3, Table III.1 and the OU 6 Quality Assurance Project Plan (QAPP) (SAIC 1993).

3.1.1. Procedures for Soil Sample Collection

Subsurface soil samples were collected according to the procedures established in the OU 6 Verification Plan. A field geologist stratigraphically logged the soil samples consistent with Mound SOP's 4.1 and 5.1. Soil samples were logged using the Burmister Soil Classification System with Unified Soil Classification Symbols included as a reference. Appendix A, SOP A.1 contains more detailed specifications on the soil sample collection procedures.

3.1.2. Procedures to Insure Sample Collection Integrity

In performing the subsurface investigation of the Area 19 and Area 14 WTS, established procedures were followed to produce data of useable quality. To help achieve this objective, care was exercised during sample collection to prevent cross contamination of the sample, and to increase the chance sample was representative. Procedures followed to help maximize the integrity of the sample included:

1. Samples were obtained from undisturbed soil below the hollow stem augers;
2. Samples were collected immediately after the boring was advanced to the desired sampling depth;
3. Decontaminated low carbon-steel split-spoon samplers were used for each sample;
4. The drilling contractor was not permitted to use oil, grease, or other petroleum-based lubricants on the drill rods, casing, or sampling tools; and
5. Excessively disturbed or loose material that was not representative of the interval sampled, was discarded and containerized per SOP 1.15 "Guide to Collection of Investigation-Derived Waste".

3.1.3. Procedures of Logging Soils

The Burmister Soil Classification System was used to classify soil samples. Specific soil structure, layering, texture, consistency, moisture content, and approximate percentages of gravels, sands, silts, and clay were noted in a bound field notebook. The field notebook also include interpretations of subsurface materials and conditions encountered, sample locations, and other notes pertinent to information on drilling operations (i.e., auger refusal and split-spoon refusal).

Table II.1 summarizes soil sampling efforts with brief soil sample descriptions and USCS classification symbols. In addition, the elevation of the sampling interval is documented relative to mean sea level (MSL). The elevation of the top of bedrock relative to MSL is also listed. Detailed procedures on logging soils are provided in Appendix A, SOP A.2.

3.1.4. Decontamination

Sampling tools (stainless steel pans, scoops, and split-spoons) were decontaminated prior to, and after sampling by steam cleaning as specified in the OU 6 Verification Plan and in SOP 1.6. The sampling equipment was wrapped in aluminum foil after drying, with the dull side against the equipment. Because the use of solvents such as hexane or acetone was not permitted by Mound (generation of a mixed waste), all the sampling equipment was decontaminated by use of steam cleaning. The drilling equipment

was steam cleaned upon their arrival at the site, between drilling locations, and when the drilling contractor left the site. Mound Health Physic monitors performed wipe samples on all drilling and steam equipment prior to leaving the site to check the cleanliness of the equipment. All liquids generated from steam cleaning operations were containerized in drums and transported to the Mound Investigative Derived Materials (IDM) Area upon the completion of the project.

3.2. REFERENCE TO THE QAPP

Quality Assurance/Quality Control sampling occurred during the verification sampling efforts. Field rinsate, trip, ambient air, duplicate, matrix spike/matrix spike duplicates, bank and temperature blank samples were collected to comply with the QAPP. Any deviations from the SAP are summarized in Section 3.4.3.

3.2.1. Field Control Samples

Field quality control samples were collected consistent with Ohio EPA and USEPA sampling protocols. Listed below are the frequency and type of QA/QC samples collected at areas 19-1, 19-2 and 19-3 (Table II.2):

1. Rinsate samples were collected on a frequency of one per every 10 samples. The purpose of the rinsate samples was to determine the effectiveness and consistency of the equipment decontamination process.

2. Ambient air blanks were collected at a frequency of one for every 20 samples. Ambient air samples were used to evaluate the presence of ambient VOC contaminants at the sampling site.

3. Sample bank blanks (bottle) were collected at a frequency of one for every 20 samples. The sample bank blanks were used to evaluate the potential presence of VOC's where the samples are commonly handled before shipment.

4. Duplicate soil samples were collected at a frequency of one per every 10 samples. Duplicate samples were used to evaluate the reproducibility of the field sampling procedures.

5. Trip blank samples were sent with all coolers shipped to the laboratories. The trip blanks are used to determine if the sample cooler or bottles were effected by any potential contaminant during shipment.

6. Matrix Spike/Matrix Spike Duplicate Samples (MS/MSD) were collected at a frequency of one per every 20 samples. The purpose of the matrix spike/matrix spike duplicate samples are to monitor the effects of the sampling matrix on analytical results.

7. Temperature blanks were sent with all coolers shipped to the laboratories. The temperature blanks are used to monitor sample cooler temperatures.

3.2.2. Sample Preservation, Labeling, Containerization, Holding Times, and Chain-of-Custody Seal

For the purpose of determining the appropriate sample packaging and shipment requirements (per USDOT regulations), samples were split with E&G Mound Health Physics monitors who collected wipe samples and screened all samples for radiation prior to shipment. All samples were preserved with ice (Table III.1) and were shipped in ice chests to EG&G Mound approved laboratories within 48 hours of sample collection (via Federal Express). Table III.1 details the required preservative, container type, methods and holding by each analyte. Water samples (blank) were preserved with HCL, NAOH, H_2SO4, and HNO_3 (hydrochloric acid, sodium hydroxide, sulfuric acid, and nitric acid) and were maintained at 4°C temperature with ice.

All environmental samples were shipped under nonradioactive materials airbills because the samples do not show significant radiological contamination. All soil samples were shipped in accordance with USDOT regulations and consistent with Mound ER Program SOP 1.5 "Guide to Handling, Packaging, and Shipping of Samples".

Custody seals were used to show that no tampering had occurred between the time the sample left Mound Plant when it arrived at the analytical laboratory. It is an adhesive seal and was placed over the sample cooler, so that the lid cannot be opened without breaking the seal. Custody Seals contained the following information: 1) Sample date; 2) Sample number for the event; 3) Signature of the person sealing the container.

3.2.3. Sample Identification

All samples collected during the field investigation were labeled with a site-specific sample code as specified in Section 4 of the OU 6 Verification Plan. The site-specific sample identification code was to identify the site, sample location, sample type, and series numbers for sample locations with more than one sample.

The site specific sample code was based on the following system:

MND14-3001-0010

- Site - "MND14" = EG&G Mound Facility Areas 19-1, 19-2 and 19-3.
- Location - "3000" = Soil Boring Along the Underground Waste Transfer Line or in Area 14. The last two digits indicate the soil boring number such as 30<u>01</u> = Area 19-3 location 1.

Table III.1. Preservation and Holding Times for Soils

Analyte	Method	Container[a] Type/(Sample Size)	Preservation	Holding Time[b]
VOCs	CLP SOW[c] Mod D	Amber glass vial with teflon-lined lid (120 g)	Cool 4°C	14 days
SVOCs	CLP SOW Mod D	Amber glass jar with teflon-lined lid (100 g)	Cool 4°C	7 days extraction, 40 days for analysis[d]
PCBs/Pesticides	CLP SOW Mod D	Amber glass jar with teflon-lined lid (100 g)	Cool 4°C	7 days extraction, 40 days for analysis[d]
Metals (including cyanide and tantalum)	CLP SOW Mod A	Wide-mouth polyethylene bottle (400 g)	Cool 4°C	6 months; 28 days for mercury; 14 days for cyanide
Fluoride	E340.2	Wide-mouth polyethylene bottle (50 g)	Cool 4°C	28 days
Nitrate-Nitrite Chloride Sulfate	E353.2 SW9250 E375.2	Wide-mouth polyethylene bottle (100 g)	Cool 4°C	28 days
Ammonia	E350.1	Wide-mouth polyethylene bottle (50 g)	Cool 4°C	28 days
Tritium	E906.0	Wide-mouth glass bottle (250 g)	None	N/A
Radionuclides Gamma Spectrometry $Pu^{238/239/240}$ $Th^{228/230/232}$ $U^{234/235/238}$	 E901.1 E907.0 E907.0 E907.0	Wide-mouth nalgene bottle (750 g)	None	N/A

Note: Holding times for CLP analyses are based on "Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses," EPA, July 1, 1988 and "Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses," EPA, February 1, 1988.

[a]Sample containers will be certified clean by the laboratory according to EPA standards.
[b]From date of collection..
[c]Latest version
[d]From date of extraction

N/A - Not Applicable

1000 - Area 19-1
2000 - Area 19-2
3000 - Area 19-3

- Sample Type - "0000" = The first two digits indicate the type of sample. Such as 0000 = a soil sample.

  0000 - soil sample
  1000 - duplicate sample
  2000 - trip blank
  3000 - ambient air blank
  4000 - rinsate blank
  6000 - bottle blank

- Sample Depth - "0010" = The last two digits in the sample numbering scheme indicate the depth of the sampling interval. Such as 0010 = a sample depth of ten feet.

For use in the data tables of this report, the MND14-00 prefix was not included. This was done as there is no need for the prefix in the tables and to save space.

3.3. IDENTIFICATION OF NOTEBOOKS AND RECORDS FOR THE ACTIVITIES

3.3.1. Documentation In Field Notebooks

Field team members were required to keep a field logbook to document all field activities. This documentation was consistent with Mound ER Program SOP 1.3, Sample Control and Documentation. The logbooks were a bound notebook with water resistant pages. Log book entries were dated, legible, and contained accurate and inclusive documentation of site activities. The following guidelines were used when entering information into a logbook:

- Logbook entries were written in black ink.
- Time was reported as military time.
- There were no blank spaces in the logbook entries (if a line was not completely filled in, a line was drawn through the blank portion and initialed- this is so comments can not be added at a later date).
- The date was recorded at the beginning of the logbook entry for a given day and below the last entry of that day.
- Each logbook entry was signed at the end of each day or before someone else wrote in the logbook.
- Any crossed out entry in the logbook was initialed by the person that crossed it out.
- Pages in the logbook were numbered consecutively, and signed and dated (top of each page) by the person writing the day's log.

- At the beginning of each day the following information was recorded: date, start time, and weather.

- The level of protection required for the sampling activity noting any changes to the level of protection as per the HASP and or the site Health and Safety Officer/Designee.

- The location and time when samples were collected.

- Any deviation from the sampling plan and rationale for the deviation was explained.

- Individual(s) responsible for sample shipping included in their field notebooks all information in reference to shipping. This included:

  - Sample identification number
  - Time and date sampled
  - Time and date shipped
  - Name of commercial carrier
  - Airbill number
  - Name of laboratory(s)
  - Type of analyses

3.3.2. Sample Logsheets

After each sampling episode was completed, sample data sheets (or logsheets) were completed and referenced in the logbook and placed in a three-ring binder for future reference. Sample logsheets act as an initial chain-of-custody form to relinquish custody from sampling personnel to sample paperwork handlers.

The Sample Logsheet Forms were completed after samples were obtained. Sample log sheets were compiled within a sample log notebook and placed in a suitable 3-ring binder for future reference. This reference will act as a log for the following information:

- The Mound sample number. The site logbook reflects the existence of other documents such as chain-of-custody forms and field data sheets;

- If the samples are shipped via a commercial carrier, the chain of custody number was recorded;

- The laboratory that is analyzing the samples was identified;

- Sampler, original of sample, type of sample (matrix); and

- The date and time of soil sample collection, depth interval of soil sample and the description of soil sample was recorded.

Once the information on the sample logsheets was completed in the field, these sheets were used to fill out the chain of custody (COC). The sample logsheets act as an initial chain of custody form and contains all the information necessary to complete the official COC.

3.3.3. Chain of Custody

Field personnel completed chain-of-custody forms in the field prior to sample shipment. The laboratories supplied the chain-of-custody forms and custody seals. The information on the chain-of-custody form included:

- The sample identification (refer to Section 3.2.3), matrix, time of sample collection, date of sample collection, number of sample containers, and preservations of samples (if any);
- Analysis requested per sample, which included specific radiological parameters (Tritium, Isotopic Plutonium, Isotopic Thorium, Isotopic Uranium, and Gamma Spectrometry);
- Shipping carrier (Federal Express), airbill number, cooler number, and project number;
- General analytical parameters which included (Fluoride, Chloride, Sulfate, Ammonia, and Nitrite-Nitrate, VOCs, SVOC, pesticide/PCB, inorganic);
- Mound soil screening results (less than 100 pCi/gram); and
- Sampling personnel who completed paperwork and relinquished custody.

3.3.4. Equipment Calibration Logsheets

Field team members were required to keep Field Equipment Calibration logsheets to be used to document all non-radiological field calibration activities. The calibration logbook was a bound notebook with pages for specific instruments (i.e., Hnu, CGI, and Miniram). Equipment logsheets entries were dated, legible, and contain calibration information such as type and configuration of equipment (i.e., Hnu with 11.7 eV probe), calibration standard used, adjustment made to instruments, initial and final calibration readings.

3.4. DESCRIPTIONS OF DEVIATIONS FROM THE ACTIVITIES AS PLANNED

3.4.1. Soil Boring Locations

Based on the Mound OU 6 Verification Plan, surveyors determined the location of soil boring locations. Using Mound control monuments (Monument No. 20), the soil boring locations were surveyed and located in Areas 19 and 14. Surveyors completed an initial survey and determined that the Mound control monument No. 20, was erroneous. A new control monument was located and the proper

coordinates and elevations were assigned to the former monument No. 20, which was renamed traverse 202 by the surveyors. Upon completion of surveying, the boring locations in both secured and unsecured areas were verified and inspected for above and below ground utilities at proposed boring locations. Some of the proposed drilling locations were located under overhead power lines or within five feet of underground utilities and health and safety procedures required that drilling locations be moved. For the most part, the movements were parallel to the direction of the WTS. In area 19-2, the original 19-2H location was relocated to an alternate location because the drill rig could not set up on the originally surveyed location. Specifically, the angle of the hillside slope was considered to be unsafe to set the drill rig, so an alternate drilling location was selected. At the 19-3A location, only hand augering was permitted because of the large number of underground utilities. Five hand auger borings were advanced to a depth of 3.5 feet but could not get below that depth because of a subsurface obstruction.

A summary of modifications made to original locations due to the presence of utilities is presented in Table III.2. Table III.2 indicates the boring location, change from original location (if any), and the reason for the change (i.e., overhead power lines or underground lines). All changes from the original locations were made on the direction of the Mound personnel. Finally, the changes were necessary in order to facilitate the completion of the soil boring verification project. The aforementioned changes in soil boring location are expected to have no impact on the quality of the investigations, because the original drilling locations were selected on a random basis as described in Section 1.2.

3.4.2. Sampling Procedures for Areas 19-1, 19-2, and 19-3

3.4.2.1. Sampling Procedures for Area 19-1

A total of three soil borings were completed with samples collected at 6, 12, 15, and 18 feet below ground surface (depth may be less if bedrock was encountered) (Table III.3). Soil samples were collected in accordance with the OU 6 Verification Plan. Quality Assurance/Quality Control samples were also collected (rinsate, bank, ambient air, and trip blank). Bedrock in the Area 19-1 was generally less than 15 feet below ground surface, which limited the total number of soil samples collected.

3.4.2.2. Sampling Procedures for Area 19-2

In the Area 14 (or 19-2) location, 10 soil borings were performed. Table III.3 summarizes the proposed soil sampling rationale and depths of sample collection. Soil samples were collected at depths of 0, 6, 13 and 20 feet below ground surface (unless bedrock was encountered). Soil samples were collected in accordance with the OU 6 Verification Plan. Quality Control/Quality Assurance (QA/QC) samples (rinsate, ambient air, bank and trip blanks) were also collected. Bedrock was encountered between 6 to

Table III.2. Summary Table of Changed Boring Locations

Boring	Changed Position	Reason
19-3A	NR	NA
19-3B	NR	NA
19-3C	25 Feet East	Roadway, UGL, OHL
19-3D	5 Feet Northwest	UGL
19-3E	3 Feet East	UGL
19-3F	3 Feet East	UGL
19-3G	3 Feet East	UGL
19-3H	3 Feet East	UGL
19-3I	3 Feet East, 3 Feet South	UGL
19-3J	3 Feet East	UGL
19-3K	NR	NA
19-3L	5 Feet West	OHL, UGL
19-3M	15 Feet West	UGL
19-3N	NR	NA
19-3O	9 Feet West	UGL
19-3P	NR	NA
19-3Q	3 Feet North	UGL
19-3R	20 Feet East	OHL, UGL
19-3S	NR	NA
19-3T	5 Feet East	UGL
19-3U	10 Feet Northeast	UGL
19-3V	5 Feet West	UGL
19-3W	25 Feet North	OHL, UGL
19-3X	NR	NA
19-3Y	NR	NA
19-2A	10 Feet Northwest	UGL
19-2B	NR	NA
19-2C	NR	NA
19-2D	3 Feet West	UGL
19-2E	NR	NA
19-2F	5 Feet South	UGL
19-2G	NR	NA

Table III.2. Summary Table of Changed Boring Locations (Continued)

Boring	Changed Position	Reason
19-2H	Moved to Lower Alternate Grid Location 25 feet South-Southeast	Unsafe, Due to Steep Angle of Hill
19-2I	20 Feet North-Northeast	UGL
19-2J	NR	NA
19-1A	NR	NA
19-1B	15 Feet South	UGL
19-1C	NR	NA
19-4A	11' West Headwall	Added sample, not in original plan

NR - Not Relocated
NA - Not Applicable
UGL - Underground Lines
OHL - Overhead Lines

Table III.3. Summary Table of Proposed Sample Locations and Depths[1]

Location	Sample No.[2]	Depth[3]		Location	Sample No.[2]	Depth[3]
19-1a	1-4	6,12,15,18*		19-3g	65,66	a,b
19-1b	5-8	6,12,15,18		19-3h	67,68	a,b
19-1c	9-12	6,12,15,18		19-3i	69,70	a,b
19-2a#	13-16	0,6,13,20*		19-3j	71,72	a,b
19-2b#	17-20	0,6,13,20		19-3k	73,74	a,b
19-2c#	21-24	0,6,13,20		19-3l	75,76	a,b
19-2d#	25-28	0,6,13,20		19-3m	77,78	a,b
19-2e#	29-32	0,6,13,20		19-3n	79,80	a,b
19-2f#	33-36	0,6,13,20		19-3o	81,82	a,b
19-2g#	37-40	0,6,13,20		19-3p	83,84	a,b
19-2h#	41-44	0,6,13,20		19-3q	85,86	a,b
19-2i#	45-48	0,6,13,20		19-3r	87,88	a,b
19-2j#	49-52	0,6,13,20		19-3s	89,90	a,b
19-3a	53,54	1, = 5		19-3t	91,92	a,b
19-3b	55,56	a,b		19-3u	93,94	a,b
19-3c	57,58	a,b		19-3v	95,96	a,b
19-3d	59,60	a,b		19-3w	97,98	a,b
19-3e	61,62	a,b		19-3x	99,100	a,b
19-3f	63,64	a,b		19-3y	101,102	a,b

NOTES:

1 The summary of the soil samples collected in the field can be found on Table II.1 in Section 2 of this report.
2 Specific sample designations were established as specified in Section 4 of the OU 6 Verification Plan.
3 Feet below ground level.
* Depth was less if bedrock was encountered.
\# Area 19-2 includes Area 14.
a Depth of sample was between the surface and a depth of 17 feet; exact depth was determined for each location using a random number system (a set of dice).
b Dependent upon depth to bedrock; maximum depth = 20 feet.

greater than 20 feet below ground surface. At one boring location 19-2H, the angle of the hill or slope was very steep which constituted a potential safety problem and an alternate drilling location was selected.

3.4.2.3. Sampling Procedures for Area 19-3

Per the OU 6 Verification Plan, a soil boring program was implemented to collect samples for verification of remedial efforts performed by the D&D Program. The OU 6 Verification Plan soil sampling protocols for Area 19-3 are as follows "Approximately 50 samples will be obtained from the former WTS pipeline (19-3). The first soil boring will be drilled at the approximate location of the former underground storage tanks for the high-risk and low-risk wastes (between the SM and PP Buildings). Two samples will be obtained, one at a depth of approximately one foot and the second in the 18 inch sampling interval just above bedrock. The second soil boring will be drilled at a distance of 38 feet (a randomly selected distance) from the initial borehole, and a soil sample will be collected in the backfill at a depth to be determined from a random number table. A minimum distance of three feet will be maintained between the backfill sample and the second sample that will be taken just above the fill/bedrock interface or at a maximum depth of 20 feet if bedrock is not encountered. If the first sample depth, selected from the table of random numbers does not maintain a 3-foot interval, another random number will be selected. This process will be repeated, as necessary to ensure that the two samples are not obtained from the same sample depth. An additional 46 samples will be obtained at 100 foot intervals along the entire length of the former WTS pipeline, using the same sampling scheme described for the second borehole."

Modifications and additions to the aforementioned OU 6 Verification Plan protocols for Area 19-3 consist of:

1. A random number system was used to generate sample depths for area 19-3. The system, consisting of a set of three dice, was used to determine the sampling depths randomly in the field. This is not expected to impact the ultimate quality of the investigation.

2. Sample location 19-3A was advanced with a hand auger to a depth of 3.5 feet at five locations. The hand augering drilling methodology could not penetrate below a depth of 3.5 because of subsurface obstructions (rock fill). Mound personnel agreed that advancement of the hand auger boring was futile and suspended hand augering at that location. The reason that this location was abandoned, was because the 19-3B location (the location of the former radiological UST) is approximately 38 feet from the 19-3A location and was sampled to 18 inches above the top of bedrock. The impact of not completing the 19-3A location to the top of bedrock will not impact the total site verification sampling program.

3. Using the above-mentioned random sampling system, soil samples were collected based on random numbers produced in the field. If at boring location 19-3E, the random numbers generated in the field were 4 and 16 (which is the depth of the sampling interval) then the first sample was collected at a depth of four to six feet bgs. The second sample was supposed

to be collected at a depth of 16 to 18 feet bgs, but bedrock was observed at a depth of 7.0 feet bgs. In cases where the depth of bedrock was less than the randomly generated number, a sample above bedrock was collected for analysis. If the distance between the first sample and bedrock is less than three feet a sample was collected at a near surface depth.

Since the depth of bedrock was not known prior to drilling and varied from location to location, a field judgement was required to implement the sampling program. In cases were bedrock was very shallow, usually only one soil sample was collected. Generally, of all the 19-3 Area sample locations, two soil samples were collected from each location which is expected to provide adequate coverage of the soil boring locations.

3.4.3. Quality Assurance/Quality Control

The QA/QC samples collected for Area 19-1 were collected in compliance with the OU 6 Verification Plan. A total of seven soil samples were collected for analysis as well as one rinsate blank, one ambient air blank and a bottle blank. A total of 30 soil samples were collected for Area 19-2 for analysis as well as three rinsate blanks, two ambient air blanks and two bank blank samples. A total of 55 soil samples were collected for Area 19-3, as well as three rinsate samples, two ambient air blanks and two bank blanks.

Areas 19-1 and 19-2 QA/QC samples were collected per the OU 6 Verification Plan. For Area 19-3, an additional number of QA/QC samples should have been collected per the OU 6 Verification Plan, specifically two rinsate blanks, one ambient air blank and one bottle blank. Based on a review of the Area 19-3 QA/QC samples obtained, trace amounts of acetone, 1,1,2,2-tetrachloroethane, 2-butanone, 2-hexanone, and bromoform were detected in very small amounts (mostly in Sample #MND14-3010-6000). Therefore, the additional QA/QC samples that were not collected, should not effect the final results of the study. Enough information exists to assess the Area 19 and 14 remediation success.

3.4.4. Additional Boring

An additional boring (19-4A) near the Test Fire parking lot was included as part of this sampling effort in order to address historic concerns about a stream near the Test Fire parking lot. A soil boring was drilled to a depth of 22 feet without observing bedrock. Soil samples were collected at depths of 1-3, 10-12, and 20-22 feet below ground surface (bgs). The sample numbers included MND14-3026-0002, MND14-302-0010, and MND14-3026-0020. The samples were analyzed for the same parameters (full CLP plus radiological parameters) as the other Area 19-3 soil samples.

4. SUMMARY OF THE DATA VALIDATION RESULTS

4.1. DATA VALIDATION

4.1.1. Description of Data Validation Methods

4.1.1.1. Chemical Compounds

Data validation was performed on the volatile organic, semi-volatile organic, inorganic and pesticide/PCB analytical data prepared by an EG&G Mound approved laboratory. The volatile organic data were presented in six data packages and represented 134 aqueous, air and solid samples including QC samples. The air samples were QC samples. The semi-volatile organic, pesticide/PCB, and inorganic data were presented in six data packages and included 97 aqueous and solid samples including PC samples. The volatile organics, semi-volatile organics, pesticides/PCBs and metals were analyzed following the EPA Contract Laboratory Program (CLP) statement of work methodologies (EPA, 1990a, 1991). Chlorides were analyzed following EPA SW-846 Method 9250. Ammonia, fluorides, nitrate/nitrites and sulfates were analyzed using EPA Methods E350.1, E340.2, E353.2 and E375.2 respectively. The data validation was performed in accordance to the "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," 1990; the "Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses," 1988; "Operable Unit 6, Decontamination and Decommissioning Verification Work Plan, Quality Assurance Project Plan"; and the laboratory standard operating procedures. The data packages reviewed included, ICFK-1, ICFK-2, ICFK-3, ICFK-4, ICFK-5, ICFK-6. These data packages contained the analytical results of the volatile organic, inorganic, and pesticide/PCB compounds. The quality control parameters and the criteria used for the data validation of the organic and inorganic data are described in the Functional Guidelines and the Quality Assurance Project Plans.

4.1.1.2. Radiological Compounds

Data validation was performed on the isotopic data for americium-241, tritium, isotopic plutonium, isotopic thorium, and isotopic uranium content presented in 6 radiological data packages. These data packages included 101 aqueous and solid samples prepared by CompuChem Laboratory in Durham, North Carolina. Americium-241 was analyzed by gamma spectroscopy using EPA Method 901.1. Tritium was analyzed by liquid scintillation using EPA Method 906. Isotopic plutonium, thorium, and uranium were analyzed by alpha spectroscopy using CompuChem method CCM 1046, "Standard Operating Procedure For The Separation of Isotopic Plutonium, Thorium, and Uranium in Water, Soil, Animal Matter, and Air Filters." The data validation was performed in accordance with the "OU-9 Quality Assurance Project Plan,

Mound Plant, Site-Wide, Final, Revision 3, Appendix H" and the laboratory standard operating procedures. The radiological data packages reviewed included:

SDG 1	SDG 4
SDG 2	SDG 5
SDG 3	SDG 6

The following information presents the quality control parameters and the criteria used for the data validation of the radiological samples.

- Holding time - If the holding time was exceeded, the data results were qualified as estimated (J) or (UJ).

- Calibration - Verified the calibration used for each isotope of interest by one of two methods. This was done by either counting a standard of the isotope prepared in the same matrix or by calculating from an efficiency versus energy calibration curve. The data reduction was verified according to the calculations used to calculate the sample data.

- Mixed Standard (Gamma Spectrometry) - Verified that a standard containing a mixture of isotopes covering the energy range of interest was counted and that the results obtained were within ±5 percent of the known value. If this criterion was not met, all data results associated with the mixed sample isotope were qualified as estimated, (J). If the standard recovery was grossly exceeded, all results associated with the mixed standard isotope that was out of control were qualified unusable, (R).

- Source Checks - Verified that the check source was counted each day and that its value is within three times the standard deviation (3xSD) of its mean value for each counter used. If this criterion was not met, the all data results that were measured before the next acceptable check source count was obtained were qualified as estimated (J).

- Background - Verified that the background was counted for each counter at least once each week. It also verified that the background was within 3xSD of its mean and the appropriate background was used to subtract from the sample counts. If the background was >3xSD, all data results measured using the background were qualified as estimated (J).

- Efficiency - Verified that the correct efficiency calculation was used for determining isotope results.

- Yield (Tracer Chemical Recovery) - Verified that the yield was correctly determined using the counts obtained for the tracers (^{242}Pu), (^{229}Th), and (^{232}U) added at the start of the sample analysis and that the yield was correctly applied to each isotope. If the yield (chemical recovery) did not meet the required 20-110 percent criteria, all data associated with that tracer were qualified as estimated, (J), for solid samples and unusable, (R) for aqueous samples.

- Method Blank - Verified that the method blank activity was less than or equal to two ($\leq$ 2x) the Method Detected Activity (MDA). If the blank activity was greater than 2x the MDA and the sample activity was less than 3x the blank activity, then the results were unusable, (R). If the blank activity was greater than 2x the MDA and the sample activity was greater than 3x the blank activity, the results were qualified as estimated, (J).

- Method Spike (Laboratory Control Sample) - Verified that one method spike was run per 20 samples of a given matrix or one per batch of samples prepared per day, whichever is more frequent. The results must be within 3xSD of the known value. If the method spike results are greater than 3xSD, and the method spike was outside the specified criteria of 70-130 percent, then the results were qualified estimated, (J). If the recovery grossly exceeded the criteria, then the results were qualified as unusable, (R) based on professional judgement.

- Matrix Spike - Verified that one matrix spike was run per 20 samples of a similar matrix. The results must be within 3xSD of the known value. If the results are greater than 3xSD, the data reviewers used their professional judgement. For aqueous samples, if the matrix spike was outside the specified criteria of 70-130 percent, the results were qualified as estimated, (J). If the recovery grossly exceeded the criteria, the results were qualified as unusable, (R). For solid samples, if the spike recovery did not meet the specified criteria of 70-130 percent no actions or qualifications were applied, based on professional judgement.

- Replicate - Verified that one replicate sample was run per 20 samples of a similar matrix and that the result was within 4xSD of the normalized range. If this criterion was not met, the results for the original and replicate samples were qualified as estimated, (J).

- Duplicate - Verified that a duplicate field sample was taken for every 10 or fewer field samples. For water duplicate, results must be within 4xSD of the result for the original. If this criterion was not met, all the results associated with the duplicate analysis were qualified as estimated, (J).

- Result - Verified that the sample results were properly reported with any associated error. Also, all data qualification letters present were verified.

4.1.2. Summary of the Case Narratives and Usability Statements

4.1.2.1. Volatile Organic Compounds

The following paragraphs provide a synopsis of the data validation package summaries. For more information, the actual validation results are presented in Table IV.1. To save space, the MND14-n0 (MND 14-10, MND14-20, MND14-30) prefix was not included as part of the sample identification number in Table IV.1.

The ICFK-1 and ICFK-6 data package summaries did not identify any major problems with the data found in these packages.

The data package summary for ICFK-2 stated: "Several samples were reanalyzed due to low internal standard areas. The results from the reanalyses were used for samples MND14-3032-0006, MND14-3014-0000, MND14-3015-0020, MND14-3014-0006 and MND14-3014-0001 since the internal standard results were more in compliance during the reanalysis". The effect on the data from the reanalysis was that the data were judged to be useable.

Table IV. 1. Volatile Organic Analytical Data (Continued)

Sample Number	RBTL / RBGCV	090002	100011	101020	103000	104000	106000	110017	130003	130006	140001RA	140006RA	150001	150020RA	320000RA	320006RA	330000	360000	360006	360013	360020
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/L	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Compound																					
1,1,1-Trichloroethane	7000000	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
1,1,2,2-Tetrachloroethane	6500	11.00 U	11.00 U	11.00 U	0.90 J	10.00 U	5.00 J	11.00 U	11.00 U	11.00 I	11.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	11.00 UJ	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
1,1,2-Trichloroethane	30000	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
1,1-Dichloroethane	7800000	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	0.40 J	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
1,1-Dichloroethene	2800	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
1,2-Dichloroethane	7.00E+13	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
1,2-Dichloroethene (total)	700000	11.00 U	11.00 U	0.09 J	10.00 U	10.00 U	10.00 U	11.00 U	4.00 J	6.00 J	11.00 U	1.00 J	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
1,2-Dichloropropane	25000	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
2-Butanone	3900000	11.00 U	11.00 U	9.00 J	10.00 U	10.00 U	13.00	11.00 U	18.00 J	11.00 U	11.00 U	10.00 J	11.00 U	11.00 U	1.00 J	11.00 U	5.00 J	11.00 U	11.00 U	12.00 U	23.00 J
2-Hexanone	NE	11.00 U	11.00 U	3.00 J	10.00 U	10.00 U	9.00 J	11.00 U	34.00 J	11.00 J	11.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	11.00 UJ	11.00 U	11.00 U	11.00 U	12.00 U	12.00 J
4-Methyl-2-Pentanone	3900000	11.00 U	11.00 U	6.00 J	10.00 U	10.00 U	6.00 J	11.00 U	13.00 J	11.00 U	11.00 U	10.00 J	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	8.00 J
Acetone	7800000	11.00 U	11.00 U	17.00 B	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 B	12.00 B	11.00 U	23.00 B	11.00 U	42.00 J	11.00 U	11.00 U	12.00 U	11.00 U
Benzene	22000	11.00 U	1.00 J	1.00 J	10.00 U	10.00 U	10.00 U	11.00 U	2.00 J	11.00 U	11.00 U	0.80 J	2.00 J	0.80 UJ	11.00 U	11.00 U	11.00 U	11.00 U	1.00 J	0.80 J	2.00 J
Bromodichloromethane	10000	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
Bromoform	220000	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	2.00 J	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
Bromomethane	110000	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
Carbon Disulfide	7800000	11.00 U	11.00 U	4.00 J	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
Carbon Tetrachloride	4900	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
Chlorobenzene	1600000	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	11.00 J	11.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	11.00 UJ	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
Chloroethane	1600000	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
Chloroform	260000	11.00 U	0.80 J	0.50 J	10.00 U	10.00 U	10.00 U	0.30 J	0.80 J	0.40 J	0.50 J	0.30 J	0.80 J	0.50 J	11.00 U	11.00 U	11.00 U	0.40 J	1.00 J	12.00 U	0.30 J
Chloromethane	130000	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
Dibromochloromethane	7600	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	0.20 J	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
Ethylbenzene	7800000	11.00 U	2.00 J	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	6.00 J	11.00 I	3.00 J	1.00 J	4.00 J	11.00 UJ	11.00 U	3.00 J	7.00 J	11.00 U	11.00 U	12.00 U	2.00 J
Methylene Chloride	230000	10.00 J	30.00 J	44.00 J	10.00 U	0.70 J	10.00 U	10.00 J	28.00 J	19.00 J	19.00	11.00	30.00 J	42.00	24.00	25.00	43.00 J	15.00 J	17.00 J	25.00 J	6.00 J
Styrene	57000	11.00 U	0.80 J	1.00 J	10.00 U	10.00 U	10.00 U	11.00 U	2.00 J	0.50 J	11.00 U	11.00 U	0.80 J	0.80 J	11.00 U	0.80 J	2.00 J	11.00 U	1.00 J	0.30 J	0.70 J
Tetrachloroethene	33000	11.00 U	11.00 U	1.00 J	10.00 U	10.00 U	10.00 U	11.00 U	2.00 J	8.00 J	11.00 U	1.00 J	6.00 J	4.00 J	11.00 U	11.00 UJ	11.00 U	0.80 J	11.00 U	12.00 U	11.00 U
Toluene	16000000	11.00 U	2.00 J	3.00 J	10.00 U	10.00 U	10.00 U	11.00 U	5.00 J	2.00 J	11.00 U	11.00 U	4.00 J	11.00 UJ	11.00 U	11.00 UJ	6.00 J	11.00 U	4.00 J	12.00 U	11.00 U
Trichloroethene	150000	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	0.80 J	34.00 B	11.00 U	6.00 J	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
Vinyl Chloride	900	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
Xylene (total)	160000000	11.00 U	0.80 J	3.00 J	10.00 U	10.00 U	10.00 U	11.00 U	2.00 J	0.80 J	1.00 J	0.80 J	1.00 J	2.00 UJ	11.00 U	2.00 UJ	1.00 J	0.80 J	2.00 J	0.40 J	0.70 J
cis-1,3-Dichloropropene	9500	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U
trans-1,3-Dichloropropene	9500	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	12.00 U	11.00 U

Table IV. 1. Volatile Organic Analytical Data (Continued)

Sample Number	RBTL / RBGCV	100020	160010	160018	180012	180020	210006	210012	260002	260010	260020	280000	280006	280013	280020	281000	290000	350000	350013	350020	354000
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L
Compound																					
1,1,1-Trichloroethane	7000000	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
1,1,2,2-Tetrachloroethane	8500	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
1,1,2-Trichloroethane	30000	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
1,1-Dichloroethane	7800000	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
1,1-Dichloroethene	2800	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
1,2-Dichloroethane	7.00E+13	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
1,2-Dichloroethene (total)	700000	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
1,2-Dichloropropane	25000	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
2-Butanone	3900000	11.00 U	72.00	12.00 U	10.00 U	34.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	0.60 J	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
2-Hexanone	NE	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	6.00 J	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
4-Methyl-2-Pentanone	3900000	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 J	10.00 UJ	12.00 U	12.00 U	10.00 U	3.00 J	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
Acetone	7800000	11.00 U	7.00 J	36.00 J	10.00 U	11.00 U	12.00 U	43.00 J	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	13.00 J	34.00 J	11.00 U	12.00 U	11.00 U	10.00 U
Benzene	22000	0.80 J	1.00 J	12.00 U	1.00 J	11.00 U	12.00 U	11.00 U	10.00 U	1.00 J	0.70 J	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
Bromodichloromethane	10000	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
Bromoform	220000	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
Bromomethane	110000	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
Carbon Disulfide	7800000	1.00 J	4.00 J	12.00 U	10.00 U	3.00 J	12.00 U	11.00 U	10.00 U	1.00 J	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
Carbon Tetrachloride	4900	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
Chlorobenzene	1600000	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	0.50 J	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
Chloroethane	1600000	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
Chloroform	280000	11.00 U	0.70 J	12.00 U	10.00 U	1.00 J	12.00 U	11.00 U	10.00 U	11.00 U	0.60 J	10.00 UJ	12.00 U	12.00 U	10.00 U	0.30 J	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
Chloromethane	130000	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
Dibromochloromethane	7600	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
Ethylbenzene	7800000	11.00 U	3.00 J	12.00 U	3.00 J	11.00 U	12.00 U	11.00 U	0.60 J	1.00 J	2.00 J	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
Methylene Chloride	230000	17.00 J	17.00 J	23.00 J	21.00 J	13.00 J	16.00 J	21.00 J	8.00 J	7.00 J	26.00 J	10.00 UJ	12.00 U	12.00 U	10.00 U	14.00 J	16.00 J	11.00 U	12.00 U	11.00 U	3.00 J
Styrene	57000	0.50 J	12.00 U	12.00 U	0.70 J	11.00 U	12.00 U	11.00 U	10.00 U	0.50 J	0.80 J	10.00 UJ	0.50 J	0.50 J	10.00 U	0.70 J	11.00 U	0.90 J	12.00 U	11.00 U	10.00 U
Tetrachloroethene	33000	11.00 U	12.00 U	3.00 J	2.00 J	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	2.00 J	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	1.00 J	10.00 U
Toluene	16000000	11.00 U	3.00 J	2.00 J	3.00 J	2.00 J	1.00 J	11.00 U	10.00 U	1.00 J	2.00 J	10.00 UJ	12.00 U	12.00 U	10.00 U	1.00 J	11.00 U	11.00 U	12.00 U	1.00 J	10.00 U
Trichloroethene	150000	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
Vinyl Chloride	900	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
Xylene (total)	160000000	0.50 J	2.00 J	2.00 J	1.00 J	1.00 J	1.00 J	11.00 U	0.40 J	0.50 J	1.00 J	10.00 UJ	12.00 U	12.00 U	10.00 U	0.90 J	11.00 U	0.80 J	1.00 J	1.00 J	10.00 U
cis-1,3-Dichloropropene	9500	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U
trans-1,3-Dichloropropene	9500	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	12.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 UJ	12.00 U	12.00 U	10.00 U	10.00 UJ	11.00 U	11.00 U	12.00 U	11.00 U	10.00 U

Table IV. 1. Volatile Organic Analytical Data (Continued)

Sample Number	RBTL/RBGCV	200009	200020	220005	220010	250009	290006	290013	293000	294000	296000	300000	301000	310000	330006	340000	340006	341000	350006	370006	370012
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Compound																					
1,1,1-Trichloroethane	7000000	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
1,1,2,2-Tetrachloroethane	8500	10.00 U	11.00 UJ	11.00 U	11.00 U	11.00 U	11.00 U	11.00 UJ	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
1,1,2-Trichloroethane	30000	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
1,1-Dichloroethane	7600000	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
1,1-Dichloroethene	2600	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
1,2-Dichloroethane	7.00E+13	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
1,2-Dichloroethene (total)	700000	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
1,2-Dichloropropane	25000	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
2-Butanone	3900000	10.00 U	0.80 R	11.00 U	11.00 U	11.00 U	11.00 U	1.00 R	98.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
2-Hexanone	NE	10.00 U	11.00 UJ	11.00 U	11.00 U	11.00 U	11.00 U	11.00 UJ	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	13.00 U	11.00 U	12.00 J	12.00 U	11.00 U
4-Methyl-2-Pentanone	3900000	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 UJ	0.80 J	13.00 U	11.00 U	2.00 J	12.00 U	11.00 U
Acetone	7800000	49.00 R	28.00 R	61.00 R	20.00 R	11.00 U	34.00 R	10.00 R	91.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 U	41.00 R	96.00 R	14.00 R	250.00 J	27.00 R	11.00 U
Benzene	22000	2.00 J	1.00 J	0.80 J	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
Bromodichloromethane	10000	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
Bromoform	220000	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
Bromomethane	110000	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
Carbon Disulfide	7800000	3.00 J	3.00 J	11.00 U	11.00 U	11.00 U	0.80 J	1.00 J	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	2.00 J	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
Carbon Tetrachloride	4900	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
Chlorobenzene	1600000	10.00 U	11.00 UJ	11.00 U	11.00 U	11.00 U	11.00 U	11.00 UJ	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
Chloroethane	1600000	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
Chloroform	280000	0.70 J	0.50 UJ	11.00 U	11.00 U	11.00 U	11.00 U	0.50 J	10.00 U	10.00 U	10.00 U	0.40 J	0.50 J	11.00 U	0.50 UJ	0.30 J	13.00 U	0.40 J	12.00 U	0.50 J	0.40 J
Chloromethane	130000	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
Dibromochloromethane	7600	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
Ethylbenzene	7800000	4.00 J	2.00 J	1.00 J	11.00 U	1.00 J	11.00 U	3.00 J	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	2.00 J	1.00 J	2.00 J	0.80 J	2.00 J	2.00 J	11.00 U
Methylene Chloride	230000	56.00 B	45.00 B	8.00 J	10.00 J	5.00 J	27.00 B	16.00 B	1.00 U	10.00 U	1.00 J	11.00 J	11.00 B	12.00 B	11.00 U	10.00 J	19.00 B	18.00 B	11.00 J	8.00 J	5.00 J
Styrene	57000	0.70 J	11.00 UJ	0.30 J	11.00 U	0.40 J	11.00 U	0.80 J	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	13.00 U	11.00 U	0.80 J	1.00 J	11.00 U
Tetrachloroethene	33000	10.00 U	11.00 UJ	11.00 U	11.00 U	11.00 U	0.50 J	11.00 UJ	10.00 U	10.00 U	10.00 U	0.40 J	11.00 U	1.00 J	11.00 UJ	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
Toluene	16000000	4.00 J	2.00 J	0.80 J	0.80 J	0.60 J	1.00 J	3.00 J	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	0.50 J	5.00 J	1.00 J	1.00 J	0.80 J	2.00 J	1.00 J	11.00 U
Trichloroethene	150000	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
Vinyl Chloride	900	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
Xylene (total)	160000000	0.80 J	0.80 J	11.00 U	0.40 J	11.00 U	0.40 J	11.00 UJ	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	0.80 J	0.30 J	0.80 J	11.00 U	4.00 J	0.90 J	11.00 U
cis-1,3-Dichloropropene	9500	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U
trans-1,3-Dichloropropene	9500	10.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	11.00 U	11.00 UJ	11.00 U	13.00 U	11.00 U	12.00 U	12.00 U	11.00 U

Table IV. 1. Volatile Organic Analytical Data (Continued)

Sample Number	RBTL/RBGCV	190007	190020	191020	230005	230014	240004	240011	250016	270000	270006	270013	270020	273000	373000	376000	380006	380012	390006	390011	391006
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/L	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Compound																					
1,1,1-Trichloroethane	7000000	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
1,1,2,2-Tetrachloroethane	8500	11.00 U	10.00 U	11.00 UJ	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 UJ	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
1,1,2-Trichloroethane	30000	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
1,1-Dichloroethane	7800000	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
1,1-Dichloroethene	2800	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
1,2-Dichloroethane	7.0E+13	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
1,2-Dichloroethene (total)	700000	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
1,2-Dichloropropane	25000	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
2-Butanone	3900000	11.00 U	10.00 U	11.00 U	23.00 J	26.00 J	12.00 U	12.00 U	9.00 J	11.00 U	10.00 U	11.00 U	15.00 J	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	14.00 J
2-Hexanone	NE	11.00 U	10.00 U	11.00 UJ	10.00 J	6.00 J	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 UJ	17.00 J	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	2.00 J	12.00 U
4-Methyl-2-Pentanone	3900000	11.00 U	10.00 U	11.00 U	4.00 J	4.00 J	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	7.00 J	10.00 U	10.00 U	10.00 U	6.00 J	12.00 U	12.00 U	3.00 J	12.00 U
Acetone	7800000	37.00 J	66.00 J	2.00 J	67.00 J	200.00 J	12.00 U	37.00 J	10.00 U	41.00 J	46.00 J	27.00 J	11.00 U	10.00 U	10.00 U	10.00 U	20.00 J	12.00 U	28.00 J	11.00 U	49.00 J
Benzene	22000	11.00 U	2.00 J	11.00 U	3.00 J	1.00 J	12.00 U	12.00 U	10.00 U	11.00 U	1.00 J	1.00 J	1.00 J	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	0.80 J	3.00 J	12.00 U
Bromodichloromethane	10000	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
Bromoform	220000	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
Bromomethane	110000	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
Carbon Disulfide	7800000	11.00 U	2.00 J	2.00 J	11.00 U	5.00 J	12.00 U	12.00 U	10.00 U	11.00 U	1.00 J	2.00 J	3.00 J	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
Carbon Tetrachloride	4900	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
Chlorobenzene	1600000	11.00 U	10.00 U	11.00 UJ	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 UJ	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
Chloroethane	1600000	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
Chloroform	280000	0.40 J	0.90 J	0.50 J	0.40 J	0.70 J	12.00 U	0.40 J	10.00 U	0.40 J	0.80 J	0.50 U	0.70 J	10.00 U	10.00 U	10.00 U	0.40 J	12.00 U	0.40 J	0.40 J	0.40 J
Chloromethane	130000	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
Dibromochloromethane	7600	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
Ethylbenzene	7800000	1.00 J	4.00 J	11.00 UJ	0.70 J	6.00 J	12.00 U	1.00 J	10.00 U	3.00 J	2.00 J	1.00 U	11.00 U	10.00 U	10.00 U	10.00 U	0.70 J	12.00 U	2.00 J	11.00 U	1.00 J
Methylene Chloride	230000	7.00 J	36.00 J	12.00 J	7.00 J	6.00 J	8.00 J	10.00 J	6.00 J	10.00 J	39.00 J	23.00 UJ	23.00 J	10.00 U	10.00 U	10.00 U	6.00 J	4.00 J	6.00 J	6.00 J	6.00 J
Styrene	57000	0.40 J	1.00 J	11.00 UJ	0.40 J	3.00 J	0.40 U	12.00 U	10.00 U	0.60 J	0.60 J	11.00 UJ	0.60 J	10.00 U	10.00 U	10.00 U	0.30 J	12.00 U	0.80 J	0.80 J	12.00 U
Tetrachloroethene	33000	11.00 U	10.00 U	11.00 UJ	11.00 U	1.00 J	12.00 U	12.00 U	0.90 J	0.40 J	1.00 J	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	0.20 J	12.00 U	12.00 U	11.00 U	12.00 U
Toluene	16000000	1.00 J	4.00 J	1.00 J	2.00 J	5.00 J	0.60 J	0.90 J	0.90 J	2.00 J	3.00 J	2.00 U	2.00 J	10.00 U	10.00 U	10.00 U	1.00 J	1.00 J	12.00 U	2.00 J	0.90 J
Trichloroethene	150000	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
Vinyl Chloride	900	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
Xylene (total)	160000000	0.30 J	4.00 J	0.50 J	11.00 U	2.00 J	0.80 J	0.30 J	0.40 J	2.00 J	0.50 J	11.00 UJ	0.40 J	10.00 U	10.00 U	10.00 U	12.00 U	2.00 J	12.00 U	0.40 J	0.40 J
cis-1,3-Dichloropropene	9500	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U
trans-1,3-Dichloropropene	9500	11.00 U	10.00 U	11.00 U	11.00 U	11.00 U	12.00 U	12.00 U	10.00 U	11.00 U	10.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	12.00 U	12.00 U	11.00 U	12.00 U

Table IV. 1. Volatile Organic Analytical Data (Continued)

Sample Number	RBTL/RBGCV	010002	011002	020003	020006	030004	040007	040012	274000	276000	384000	400000	410010	420020
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/L	UG/L	UG/KG	UG/KG	UG/KG
Compounds														
1,1,1-Trichloroethane	7000000	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
1,1,2,2-Tetrachloroethane	8500	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
1,1,2-Trichloroethane	30000	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
1,1-Dichloroethane	7800000	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
1,1-Dichloroethene	2800	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
1,2-Dichloroethane	7.00E+13	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
1,2-Dichloroethene (total)	700000	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
1,2-Dichloropropane	25000	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
2-Butanone	3900000	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
2-Hexanone	NE	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	2.00 J
4-Methyl-2-Pentanone	3900000	11.00 U	11.00 U	0.80 J	11.00 U	5.00 J	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	4.00 U	6.00 J
Acetone	7800000	12.00 B	34.00 B	14.00 B	11.00 B	12.00 B	23.00 B	14.00 B	10.00 U	10.00 U	10.00 U	7.00 J	7.00 J	14.00 B
Benzene	22000	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
Bromodichloromethane	10000	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
Bromoform	220000	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
Bromomethane	110000	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
Carbon Disulfide	7800000	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
Carbon Tetrachloride	4900	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
Chlorobenzene	1600000	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
Chloroethane	1600000	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
Chloroform	280000	0.50 J	0.30 J	0.50 J	11.00 U	0.50 J	0.40 J	0.50 J	10.00 U	10.00 U	10.00 U	0.50 J	11.00 U	0.40 J
Chloromethane	130000	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
Dibromochloromethane	7600	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
Ethylbenzene	7800000	1.00 J	11.00 U	12.00 U	11.00 U	2.00 J	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
Methylene Chloride	230000	8.00 J	7.00 J	8.00 J	5.00 J	7.00 J	6.00 J	6.00 J	10.00 U	10.00 U	10.00 U	6.00 J	8.00 J	13.00 B
Styrene	57000	0.40 J	0.10 J	12.00 U	0.20 J	0.60 J	11.00 U	0.10 J	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
Tetrachloroethene	33000	11.00 U	11.00 U	12.00 U	11.00 U	0.50 J	11.00 U	11.00 U	3.00 J	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
Toluene	16000000	1.00 J	11.00 U	0.50 J	0.30 J	2.00 J	11.00 U	11.00 U	10.00 U	10.00 U	0.80 J	12.00 U	11.00 U	0.20 J
Trichloroethene	150000	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
Vinyl Chloride	900	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
Xylene (total)	160000000	11.00 U	11.00 U	12.00 U	11.00 U	1.00 J	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	0.09 J
cis-1,3-Dichloropropene	9500	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U
trans-1,3-Dichloropropene	9500	11.00 U	11.00 U	12.00 U	11.00 U	11.00 U	11.00 U	11.00 U	10.00 U	10.00 U	10.00 U	12.00 U	11.00 U	12.00 U

The data package summary for ICFK-3 stated: "One sample, MND14-3028-0000, was reanalyzed due to low internal standard areas. The results from the reanalyses were used since the internal standard results were more in compliance during the reanalysis". The effect on the data from the reanalysis was that the data were judged to be useable.

The data package summary for ICFK-4 stated: "Two samples, were reanalyzed due to low internal standard areas. The results from the reanalyses were used since the internal standard results were more in compliance during the reanalysis. Positive results for acetone and 2-butanone were rejected due to blank contamination since the ambient blank, MND14-3029-3000, had detections for these compounds at 91 and 98 ug/l, respectively". Other than the rejected data, all sample data were judged to be useable.

The summary for data package ICFK-5 stated: "Two samples, were reanalyzed due to low internal standard areas. The results from the original analyses were used since the internal standard results were more in compliance during this analysis and the reanalyses were performed 40 days after sampling, greatly exceeding the holding time criteria". These data were evaluated by the validators to be useable.

Data validators reviewed all of the volatile organic analytical data and used the following qualifiers:

U - Compound was not detected in the sample.
J - Reported value is estimated.
R - Analytical result is unusable.
UJ - Compound was not detected in the sample, but the quantitation is estimated.

In addition, the following subqualifiers may be applied:

B - Qualified due to method blank.
C - Qualified due to calibration.
H - Qualified due to holding time being exceeded.
K - Qualified due to surrogate recovery.
S - Qualified due to matrix spike recovery.
I - Qualified due to internal standard.
P - Qualified due to percent difference between the two columns.
(+) - Qualified due to positive bias.
(-) - Qualified due to negative bias.

4.1.2.2. Semi-Volatile Organics Compounds

The following paragraphs provide a synopsis of the data validation package summaries. For additional information, the data validation results are presented in Table IV.2. To save space the MND14-n0 (MND14-10, MND14-20, MND14-30) prefix is not included as part of the sample identification number in Table IV.2.

Table IV. 2. Semivolatile Organic Analytical Data

Sample Number	RBTL / RBGCV	050004	050010	060000	060005	070001	070012	071001	074000	080001	080009	090017	110006	120001	120020	124000	170007	170020	171020
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/KG	UG/KG	UG/KG
Compound																			
1,2,4-Trichlorobenzene	780000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
1,2-Dichlorobenzene	7000000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
1,3-Dichlorobenzene	7000000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
1,4-Dichlorobenzene	71000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
2,2'-oxybis(1-Chloropropane)	24000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
2,4,5-Trichlorophenol	7800000	920 UJ	950 U	1900 U	1800 U	1800 U	970 U	1900 U	25 U	940 U	1000 U	930 U	1000 U	1700 U	1900 U	25 U	940 UJ	950 U	1900 U
2,4,6-Trichlorophenol	150000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
2,4-Dichlorophenol	230000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
2,4-Dimethylphenol	1600000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
2,4-Dinitrophenol	160000	920 UJ	950 U	1900 U	1800 U	1800 U	970 U	1900 U	25 U	940 U	1000 U	930 U	1000 U	1700 U	1900 U	25 U	940 UJ	950 U	1900 U
2,4-Dinitrotoluene	160000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
2,6-Dinitrotoluene	2500	370 UJ	380 U	500 J	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
2-Chloronaphthalene	6300000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
2-Chlorophenol	390000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
2-Methylnaphthalene	NE	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
2-Methylphenol	3900000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
2-Nitroaniline	4700	920 UJ	950 U	1900 U	1800 U	1800 U	970 U	1900 U	25 U	940 U	1000 U	930 U	1000 U	1700 U	1900 U	25 U	940 UJ	950 U	1900 U
2-Nitrophenol	4800000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
3,3'-Dichlorobenzidine	3800	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
3-Nitroaniline	230000	920 UJ	950 U	1900 U	1800 U	1800 U	970 U	1900 U	25 U	940 U	1000 U	930 U	1000 U	1700 U	1900 U	25 U	940 UJ	950 U	1900 U
4,6-Dinitro-2-methylphenol	NE	920 UJ	950 U	1900 U	1800 U	1800 U	970 U	1900 U	25 U	940 U	1000 U	930 U	1000 U	1700 U	1900 U	25 U	940 UJ	950 U	1900 U
4-Bromophenyl-phenylether	4500000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
4-Chloro-3-methylphenol	NE	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
4-Chloroaniline	310000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
4-Chlorophenyl-phenylether	NE	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
4-Methylphenol	390000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
4-Nitroaniline	230000	920 J	950 U	1900 U	1800 U	1800 U	970 U	1900 U	25 U	940 U	1000 U	930 U	1000 U	1700 U	1900 U	25 U	940 UJ	950 U	1900 U
4-Nitrophenol	4800000	920 UJ	950 U	1900 U	1800 U	1800 U	970 U	1900 U	25 U	940 U	1000 U	930 U	1000 U	1700 U	1900 U	25 U	940 UJ	950 U	1900 U
Acenaphthylene	NE	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
Anthracene	23000000	41 J	380 U	530 J	760	350 J	32 J	460 J	10 U	370 U	470	370 U	420 U	18 J	740 U	10 U	370 UJ	380 U	780 U
Benzo(a)anthracene	880	81 J	380 U	1300	1500	1000	390 U	1300	10 U	370 U	1100	370 U	420 U	230 J	740 U	10 U	370 UJ	380 U	780 U
Benzo(a)pyrene	88	72 J	380 U	1300	1600	1100	390 U	1400	10 U	370 U	1100	370 U	420 U	300 J	740 U	10 U	370 UJ	380 U	780 U
Benzo(b)fluoranthene	880	66 J	380 U	1100	1200	960	390 U	1400	10 U	370 U	950	370 U	420 U	240 J	740 U	10 U	370 UJ	380 U	780 U
Benzo(g,h,i)perylene	88	370 UJ	380 U	640	940	750	390 U	1100	10 U	370 U	760	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
Benzo(k)fluoranthene	880	69 J	380 U	1100	1100	700 J	390 U	810	10 U	370 U	810	370 U	420 U	330 J	740 U	10 U	370 UJ	380 U	780 U
Butylbenzylphthalate	16000000	460 J	800	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	190 J	420 U	690 UJ	740 U	10 U	370 UJ	380 U	780 U
Carbazole	85000	370 UJ	380 U	270 J	360 J	220 J	390 U	240 J	10 U	370 U	240 J	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
Chrysene	NE	100 UJ	380 U	1400	1500	1100	390 U	1400	10 U	370 U	1100	370 U	420 U	270 J	740 U	10 U	370 UJ	380 U	780 U
Di-n-butylphthalate	7800000	370 UJ	60 J	740 UJ	720 U	710 U	30 J	760 U	10 U	370 U	410 U	63 J	26 J	690 U	740 U	10 U	370 UJ	380 U	780 U
Di-n-octylphthalate	1600000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 J	740 U	10 U	370 UJ	380 U	780 U
Dibenz(a,h)anthracene	88	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 J	740 U	10 U	370 UJ	380 U	780 U
Dibenzofuran	NE	370 UJ	380 U	140 J	220 J	80 J	390 U	100 J	10 U	370 U	200 J	370 U	420 U	690 J	740 U	10 U	370 UJ	380 U	780 U
Diethylphthalate	63000000	370 UJ	66 JB	72 J	69 J	78 J	72 J	79 J	10 U	68 J	76 J	78 J	78 J	100 J	740 U	10 U	370 UJ	63 J	780 U
Dimethylphthalate	780000000	370 UJ	380 U	740 U	720 U	710 U	390	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
Fluoranthene	3100000	210 J	34 J	2800	3300	2100	240 U	2400	10 U	370 U	2100	370 J	73 J	320 J	740 U	10 U	370 UJ	380 U	780 U
Fluorene	3100000	370 UJ	380 U	260 U	380 J	140 J	390 U	220 J	10 U	370 U	320 J	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
Hexachlorobenzene	1100	370 UJ	380 U	740 J	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
Hexachlorobutadiene	22000	370 UJ	380 U	740 J	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
Hexachlorocyclopentadiene	550000	370 UJ	380 U	740 J	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
Hexachloroethane	78000	370 UJ	380 U	740 J	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
Indeno(1,2,3-cd)pyrene	880	370 UJ	380 U	620	680	740	390 U	1000	10 U	370 U	760	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
Isophorone	67	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
N-Nitroso-di-n-propylamine	240	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
N-Nitrosodiphenylamine (1)	130000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
Naphthalene	3100000	370 UJ	380 U	85 J	190 J	48 J	390 U	68 J	10 U	370 U	89 J	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
Nitrobenzene	39000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
Pentachlorophenol	5300	920 UJ	950 U	1900 U	1800 U	1800 U	970 U	1900 U	25 U	940 U	1000 U	930 U	1000 U	1700 U	1900 U	25 U	940 UJ	950 U	1900 U
Phenanthrene	88	200 J	38 J	2200	3100	1700	160 J	2200	10 U	370 U	2400	370 U	420 U	130 J	740 U	10 U	370 UJ	380 U	780 U
Phenol	47000000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
Pyrene	2300000	220 J	380 U	3100	3600	2500	260 J	3100	10 U	370 U	2400	370 U	130 J	500 J	740 U	10 U	370 UJ	380 U	780 U
bis(2-Chloroethoxy)methane	NE	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
bis(2-Chloroethyl)ether	46000	370 UJ	380 U	740 U	720 U	710 U	390 U	760 U	10 U	370 U	410 U	370 U	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U
bis(2-Ethylhexyl)phthalate	120000	370 UJ	380 U	740 U	720 U	290 J	390 U	760 U	10 U	370 U	410 U	200	420 U	690 U	740 U	10 U	370 UJ	380 U	780 U

Legend:
J -> reported value is estimated
U -> compound was not detected in the sample
NE-> no regulatory threshold has been established
RBTL / RBGCV -> risk based threshold levels / risk based guidance cleanup values

Table IV. 2. Semivolatile Organic Analytical Data (Continued)

Sample Number	RBTL/RBGCV	200009	200020	220005	220010	250009	290006	290013	294000	300000	301000	310000	330006	340000	340006	341000	350006	370006	370012
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Compound																			
1,2,4-Trichlorobenzene	780000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 U
1,2-Dichlorobenzene	7000000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 U
1,3-Dichlorobenzene	7000000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 U
1,4-Dichlorobenzene	71000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 U
2,2'-oxybis(1-Chloropropane)	24000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 U
2,4,5-Trichlorophenol	7800000	900 U	920 U	940 U	920 U	960 UJ	900 UJ	920 UJ	25 U	990 UJ	910 UJ	990 UJ	910 U	940 U	1100 U	950 U	1000 U	970 U	920 UJ
2,4,6-Trichlorophenol	150000	360 U	370 U	370 U	370 U	360 UJ	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 UJ
2,4-Dichlorophenol	230000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 U
2,4-Dimethylphenol	1600000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 U
2,4-Dinitrophenol	160000	900 U	920 U	940 U	920 U	960 UJ	900 UJ	920 UJ	25 U	990 UJ	910 UJ	990 UJ	910 U	940 U	1100 U	950 U	1000 U	970 U	920 UJ
2,4-Dinitrotoluene	160000	360 U	370 U	370 U	370 U	360 UJ	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 UJ
2,6-Dinitrotoluene	2500	360 U	370 U	370 U	370 U	360 UJ	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 UJ
2-Chloronaphthalene	6300000	360 U	370 U	370 U	370 U	360 UJ	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 UJ
2-Chlorophenol	390000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 U
2-Methylnaphthalene	NE	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 U
2-Methylphenol	3900000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 U
2-Nitroaniline	4700	900 U	920 U	940 U	920 U	960 UJ	900 UJ	920 UJ	25 U	990 UJ	910 UJ	990 UJ	910 U	940 U	1100 U	950 U	1000 U	970 U	920 UJ
2-Nitrophenol	4800000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 U
3,3'-Dichlorobenzidine	3600	360 UJ	370 U	370 UJ	370 UJ	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 UJ	430 U	360 U	410 U	390 U	370 U
3-Nitroaniline	230000	900 U	920 U	940 U	920 U	960 UJ	900 UJ	920 UJ	25 U	990 UJ	910 UJ	990 UJ	910 U	940 U	1100 U	950 U	1000 U	970 U	920 UJ
4,6-Dinitro-2-methylphenol	NE	900 U	920 U	940 U	920 U	960 UJ	900 UJ	920 UJ	25 U	990 UJ	910 UJ	990 UJ	910 U	940 U	1100 U	950 U	1000 U	970 U	920 UJ
4-Bromophenyl-phenylether	4500000	360 U	370 U	370 U	370 U	360 UJ	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 UJ
4-Chloro-3-methylphenol	NE	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 U
4-Chloroaniline	310000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 U
4-Chlorophenyl-phenylether	NE	360 U	370 U	370 U	370 U	360 UJ	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 UJ
4-Methylphenol	390000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 U
4-Nitroaniline	230000	900 U	920 U	940 U	920 U	960 UJ	900 UJ	920 UJ	25 U	990 UJ	910 UJ	990 UJ	910 U	940 U	1100 U	950 U	1000 U	970 U	920 UJ
4-Nitrophenol	4800000	900 U	920 U	940 U	920 U	960 UJ	900 UJ	920 UJ	25 U	990 UJ	910 UJ	990 UJ	910 U	940 U	1100 U	950 U	1000 U	970 U	920 UJ
Acenaphthene	4700000	360 U	370 U	370 U	370 U	360 UJ	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 UJ
Acenaphthylene	NE	360 U	370 U	370 U	370 U	360 UJ	360 UJ	370 UJ	10 U	27 J	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 UJ
Anthracene	23000000	360 U	370 U	370 U	370 U	360 UJ	360 UJ	370 UJ	10 U	660 J	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 U	390 U	370 UJ
Benzo(a)anthracene	880	360 UJ	370 U	370 UJ	370 UJ	360 U	360 UJ	370 UJ	10 U	760 J	370 UJ	100 J	360 U	370 UJ	430 U	360 U	410 U	390 U	370 U
Benzo(a)pyrene	88	360 UJ	370 U	370 UJ	370 UJ	360 U	360 UJ	370 UJ	10 U	730 J	370 UJ	100 J	360 U	370 UJ	430 U	360 U	410 U	390 U	370 U
Benzo(b)fluoranthene	880	360 UJ	370 U	370 UJ	370 UJ	360 U	360 UJ	370 UJ	10 U	1000 J	370 UJ	200 J	360 U	370 UJ	430 U	360 U	410 U	390 U	370 U
Benzo(g,h,i)perylene	88	360 UJ	370 U	370 UJ	370 UJ	360 U	360 UJ	370 UJ	10 U	310 J	370 UJ	400 UJ	360 U	370 UJ	430 U	360 U	410 U	390 U	370 U
Benzo(k)fluoranthene	880	360 UJ	370 U	370 UJ	370 UJ	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 UJ	430 U	360 U	410 U	390 U	370 U
Carbazole	85000	360 U	370 U	370	370	360 UJ	360 UJ	370 UJ	10 U	61 J	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 UJ
Chrysene	NE	360 UJ	370 U	370 UJ	370 UJ	360 U	360 UJ	370 UJ	10 U	760 J	370 UJ	100 J	360 U	370 UJ	430 U	360 U	410 UJ	390 U	370 U
Di-n-butylphthalate	7800000	670 U	1200	1500	780	610 J	650 J	760 J	10 U	310 J	610 J	430 J	530 U	610	1000	760	600 J	940 B	310 J
Di-n-octylphthalate	1600000	360 UJ	370 U	370 UJ	370 UJ	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 UJ	430 U	360 U	410 UJ	390 U	370 U
Dibenz(a,h)anthracene	88	360 UJ	370 U	370 UJ	370 UJ	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 UJ	430 U	360 U	410 UJ	390 U	370 U
Dibenzofuran	NE	360 U	370 U	370 U	370 U	360 UJ	360 UJ	370 UJ	10 U	26 J	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 UJ
Diethylphthalate	63000000	360 U	370 U	370 U	370 U	360 UJ	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 UJ
Dimethylphthalate	780000000	360 U	370 U	370 U	370 U	360 UJ	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 UJ
Fluoranthene	3100000	360 U	370 U	370 U	370 U	970 J	360 UJ	370 UJ	10 U	2200 J	53 J	210 J	19 J	370 U	430 U	360 U	410 UJ	390 U	240 J
Fluorene	3100000	360 U	370 U	370 U	370 U	360 UJ	360 UJ	370 UJ	10 U	61 J	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 UJ
Hexachlorobenzene	1100	360 U	370 U	370 U	370 U	360 UJ	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 UJ
Hexachlorobutadiene	22000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 U
Hexachlorocyclopentadiene	550000	360 U	370 U	370 U	370 U	360 UJ	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 UJ
Hexachloroethane	78000	360 UJ	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 U
Indeno(1,2,3-cd)pyrene	880	360 U	370 U	370 UJ	370 UJ	360 U	360 UJ	370 UJ	10 U	310 J	370 UJ	400 UJ	360 U	370 UJ	430 U	360 U	410 UJ	390 U	370 U
Isophorone	67	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 U
N-Nitroso-di-n-propylamine	240	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 U
N-Nitrosodiphenylamine (1)	130000	360 U	370 U	370 U	370 U	360 UJ	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 UJ
Naphthalene	3100000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 U
Nitrobenzene	39000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 U
Pentachlorophenol	53000	900 U	920 U	940 U	920 U	960 UJ	900 UJ	920 UJ	25 U	990 UJ	910 UJ	990 UJ	910 U	180 J	1100 U	950 U	1000 UJ	970 U	920 UJ
Phenanthrene	88	360 U	370 U	370 U	370 U	670 J	360 UJ	370 UJ	10 U	1200 J	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 UJ
Phenol	47000000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 U
Pyrene	2300000	360 UJ	370 U	370 UJ	370 UJ	360 U	360 UJ	370 UJ	10 U	2000 J	46 J	200 J	21 J	370 J	430 U	360 U	410 UJ	390 U	370 U
bis(2-Chloroethoxy)methane	NE	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 U
bis(2-Chloroethyl)ether	46000	360 U	370 U	370 U	370 U	360 U	360 UJ	370 UJ	10 U	400 UJ	370 UJ	400 UJ	360 U	370 U	430 U	360 U	410 UJ	390 U	370 U
bis(2-Ethylhexyl)phthalate	120000	360 UJ	46 J	370 UJ	61 J	65 J	1600 J	1300 J	10 U	400 UJ	1600 J	1600 J	180 J	46 J	430 U	360 U	180 J	49 J	370 U

Table IV. 2. Semivolatile Organic Analytical Data (Continued)

Sample Number	RBTL / RBGCV	100020	160010	160018	160012	160020	210005	210012	260002RE	260010RE	260020RE	290000	290006	290013	290020	291000	290006	350000	350013	350020	354000
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L
Compound																					
1,2,4-Trichlorobenzene	780000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 UJ	350 U	360 UJ	390 U	370 R	10 U
1,2-Dichlorobenzene	7000000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
1,3-Dichlorobenzene	7000000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
1,4-Dichlorobenzene	71000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
2,2'-oxybis(1-Chloropropane)	24000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
2,4,5-Trichlorophenol	7800000	910 U	1000 UJ	1000 U	910 U	920 U	990 U	940 U	830 U	940 U	930 U	870 U	990 U	1000 U	910 R	870 U	880 U	960 UJ	980 U	940 R	25 U
2,4,6-Trichlorophenol	150000	360 U	410 U	410 U	360 U	370 U	400 U	370 UJ	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 UJ	350 U	360 UJ	390 U	370 R	10 U
2,4-Dichlorophenol	230000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 UJ	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
2,4-Dimethylphenol	1600000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
2,4-Dinitrophenol	160000	910 U	1000 UJ	1000 U	910 U	920 U	990 U	940 UJ	830 U	940 U	930 U	870 U	990 U	1000 U	910 R	870 U	880 U	960 UJ	980 U	940 R	25 U
2,4-Dinitrotoluene	160000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
2,6-Dinitrotoluene	2500	360 U	290 J	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
2-Chloronaphthalene	6300000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
2-Chlorophenol	390000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 UJ	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
2-Methylnaphthalene	NE	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
2-Methylphenol	3900000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 UJ	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
2-Nitroaniline	4700	910 U	1000 UJ	1000 U	910 U	920 U	990 U	940 U	830 U	940 U	930 U	870 U	990 U	1000 U	910 R	870 U	880 U	960 UJ	980 U	940 R	25 U
2-Nitrophenol	4800000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 UJ	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
3,3'-Dichlorobenzidine	3800	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
3-Nitroaniline	230000	910 U	1000 UJ	1000 U	910 U	920 U	990 U	940 U	830 U	940 U	930 U	870 U	990 U	1000 U	910 R	870 U	880 U	960 UJ	980 U	940 R	25 U
4,6-Dinitro-2-methylphenol	NE	910 U	1000 UJ	1000 U	910 U	920 U	990 U	940 UJ	830 U	940 U	930 U	870 U	990 U	1000 U	910 R	870 U	880 U	960 UJ	980 U	940 R	25 U
4-Bromophenyl-phenylether	4500000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
4-Chloro-3-methylphenol	NE	360 U	410 UJ	410 U	360 U	370 U	400 U	370 UJ	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
4-Chloroaniline	310000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
4-Chlorophenyl-phenylether	NE	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
4-Methylphenol	390000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 UJ	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
4-Nitroaniline	230000	910 U	1000 UJ	1000 U	910 U	920 U	990 U	940 U	830 U	940 U	930 U	870 U	990 U	1000 U	910 R	870 U	880 U	960 UJ	980 U	940 R	25 U
4-Nitrophenol	4800000	910 U	1000 UJ	1000 U	910 U	920 U	990 U	940 UJ	830 U	940 U	930 U	870 U	990 U	1000 U	910 R	870 U	880 U	960 UJ	980 U	940 R	25 U
Acenaphthene	4700000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
Acenaphthylene	NE	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
Anthracene	23000000	360 U	31 J	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
Benzo(a)anthracene	880	360 U	29 J	410 U	360 U	370 U	400 U	370 U	330 UJ	380 U	370 U	350 U	400 U	400 U	360 R	350 U	35 J	360 UJ	390 U	370 R	10 U
Benzo(a)pyrene	88	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 UJ	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
Benzo(b)fluoranthene	880	360 U	38 J	410 U	360 U	370 U	400 U	370 U	330 UJ	380 U	370 U	350 U	400 U	400 U	360 R	350 U	42 J	360 UJ	390 U	370 R	10 U
Benzo(g,h,i)perylene	88	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 UJ	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
Benzo(k)fluoranthene	880	360 U	38 J	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
Butylbenzylphthalate	16000000	180 J	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	32 J	53 J	53 J	360 R	50 J	340 J	360 UJ	40 J	370 R	10 U
Carbazole	85000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 UJ	350 U	360 UJ	390 U	370 R	10 U
Chrysene	NE	360 U	45 J	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 UJ	43 J	360 UJ	390 U	370 R	10 U
Di-n-butylphthalate	7800000	740	130 J	220 J	210 J	610 J	260 B	20 J	480 J	530 J	590 J	250 J	840	630	420 J	390	700 J	100 J	610	590 J	10 U
Di-n-octylphthalate	1600000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 UJ	380 U	370 U	350 U	400 U	400 U	360 R	350 UJ	350 UJ	360 UJ	390 U	370 R	10 U
Dibenz(a,h)anthracene	88	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 UJ	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
Dibenzofuran	NE	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
Diethylphthalate	63000000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	24 J	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
Dimethylphthalate	780000000	360 U	100 J	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
Fluoranthene	3100000	360 U	56 J	410 U	360 U	370 U	25 J	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	88 J	360 UJ	390 U	22 J	10 U
Fluorene	3100000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
Hexachlorobenzene	1100	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
Hexachlorobutadiene	22000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
Hexachlorocyclopentadiene	550000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
Hexachloroethane	78000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
Indeno(1,2,3-cd)pyrene	880	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 UJ	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
Isophorone	67	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
N-Nitroso-di-n-propylamine	240	360 U	61 J	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
N-Nitrosodiphenylamine (1)	130000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
Naphthalene	3100000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
Nitrobenzene	39000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
Pentachlorophenol	5300	910 U	1000 UJ	1000 U	910 U	920 U	990 U	940 UJ	830 U	940 U	930 U	870 U	990 U	1000 U	910 R	870 U	880 U	960 UJ	980 U	940 R	25 U
Phenanthrene	88	360 U	27 J	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	46 J	360 UJ	390 U	370 R	10 U
Phenol	47000000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 UJ	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
Pyrene	2300000	360 U	60 J	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	27 J	10 U
bis(2-Chloroethoxy)methane	NE	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 U	360 UJ	390 U	370 R	10 U
bis(2-Chloroethyl)ether	46000	360 U	410 UJ	410 U	360 U	370 U	400 U	370 U	330 U	380 U	370 U	350 U	400 U	400 U	360 R	350 U	350 UJ	360 UJ	390 U	370 R	10 U
bis(2-Ethylhexyl)phthalate	120000	370 B	410 UJ	410 U	360 U	370 U	400 U	53 J	330 U	380 U	370 U	46 J	56 J	58 J	26 J	63 J	630 J	360 UJ	48 J	370 R	10 U

Table IV. 2. Semivolatile Organic Analytical Data (Continued)

Sample Number	RBTL / RBGCV	090002	100011	101020	104000	110017	130003	130008	140001	140006	150001	150020	320000	320006	330000	360000	360006	360013	360020
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Compound																			
1,2,4-Trichlorobenzene	780000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
1,2-Dichlorobenzene	7000000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
1,3-Dichlorobenzene	7000000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
1,4-Dichlorobenzene	71000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
2,2'-oxybis(1-Chloropropane)	24000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
2,4,5-Trichlorophenol	7800000	920 U	910 U	930 U	25 U	920 U	910 UJ	910 U	880 U	930 U	910 U	910 U	920 U	920 U	880 R	950 U	960 U	970 U	910 U
2,4,6-Trichlorophenol	150000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
2,4-Dichlorophenol	230000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
2,4-Dimethylphenol	1600000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
2,4-Dinitrophenol	160000	920 U	910 U	930 U	25 U	920 U	910 UJ	910 U	880 U	930 U	910 U	910 U	920 U	920 U	880 R	950 U	960 U	970 U	910 U
2,4-Dinitrotoluene	160000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
2,6-Dinitrotoluene	2500	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
2-Chloronaphthalene	6300000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
2-Chlorophenol	390000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
2-Methylnaphthalene	NE	370 U	29 J	370 U	10 U	370 U	360 UJ	360 U	350 U	14 J	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
2-Methylphenol	3900000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
2-Nitroaniline	4700	920 U	910 U	930 U	25 U	920 U	910 UJ	910 U	880 U	930 U	910 U	910 U	920 U	920 U	880 R	950 U	960 U	970 U	910 U
2-Nitrophenol	4800000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
3,3'-Dichlorobenzidine	3800	370 U	360 UJ	370 U	10 U	370 U	360 UJ	360 U	350 UJ	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
3-Nitroaniline	230000	920 U	910 U	930 U	25 U	920 U	910 UJ	910 U	880 U	930 U	910 U	910 U	920 U	920 U	880 R	950 U	960 U	970 U	910 U
4,6-Dinitro-2-methylphenol	NE	920 U	910 U	930 U	25 U	920 U	910 UJ	910 U	880 U	930 U	910 U	910 U	920 U	920 U	880 R	950 U	960 U	970 U	910 U
4-Bromophenyl-phenylether	4800000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
4-Chloro-3-methylphenol	NE	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
4-Chloroaniline	310000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
4-Chlorophenyl-phenylether	NE	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
4-Methylphenol	390000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
4-Nitroaniline	230000	920 U	910 U	930 U	25 U	920 U	910 UJ	910 U	880 U	930 U	910 U	910 U	920 U	920 U	880 R	950 U	960 U	970 U	910 U
4-Nitrophenol	4800000	920 U	910 U	930 U	25 U	920 U	910 UJ	910 U	880 U	930 U	910 U	910 U	920 U	920 U	880 R	950 U	960 U	970 U	910 U
Acenaphthene	4700000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Acenaphthylene	NE	370 U	24 J	370 U	10 U	370 U	360 UJ	360 U	35 J	12 J	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Anthracene	23000000	370 U	24 J	370 U	10 U	370 U	360 UJ	360 U	37 J	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Benzo(a)anthracene	880	370 U	240 J	370 U	10 U	370 U	360 UJ	86 J	480 J	110 J	360 U	360 UJ	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Benzo(a)pyrene	88	370 U	270 J	370 U	10 U	370 U	360 UJ	360 U	470 J	110 J	360 U	360 UJ	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Benzo(b)fluoranthene	880	370 U	490 J	370 U	10 U	370 U	360 UJ	360 U	490 J	220 J	360 U	360 UJ	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Benzo(g,h,i)perylene	88	370 U	360 UJ	370 U	10 U	370 U	360 UJ	360 U	350 UJ	370 U	360 U	360 UJ	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Benzo(k)fluoranthene	880	370 U	360 UJ	370 U	10 U	370 U	360 UJ	120 J	330 J	190 J	360 U	360 UJ	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Butylbenzylphthalate	16000000	370 U	540 J	230 J	10 U	370 U	360 UJ	320 J	520 J	490	470 B	610 J	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Carbazole	86000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Chrysene	NE	370 U	370 J	370 U	10 U	370 U	360 UJ	130 J	600 J	140 J	360 U	360 UJ	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Di-n-butylphthalate	7800000	370 U	540 J	650 I	10 U	370 U	96 J	770	680	640 B	410 B	400 B	370 U	370 U	350 R	400	390	250 J	350 J
Di-n-octylphthalate	1600000	370 U	360 UJ	370 U	10 U	370 U	360 UJ	360 U	350 UJ	370 U	360 U	360 UJ	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Dibenz(a,h)anthracene	88	370 U	360 UJ	370 U	10 U	370 U	360 UJ	360 U	350 UJ	370 U	360 U	360 UJ	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Dibenzofuran	NE	370 U	22 J	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Diethylphthalate	63000000	69 J	360 U	370 U	10 U	70 J	360 UJ	360 U	350 U	370 U	360 U	32 J	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Dimethylphthalate	780000000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Fluoranthene	3100000	370 U	330 J	370 U	10 U	370 U	360 UJ	220 J	600	150 J	360 U	360 U	370 U	370 U	350 R	25 J	15 J	390 U	360 U
Fluorene	3100000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Hexachlorobenzene	1100	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Hexachlorobutadiene	22000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Hexachlorocyclopentadiene	550000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Hexachloroethane	78000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Indeno(1,2,3-cd)pyrene	880	370 U	360 UJ	370 U	10 U	370 U	360 UJ	360 U	350 UJ	370 U	360 U	360 UJ	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Isophorone	67	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
N-Nitroso-di-n-propylamine	240	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
N-Nitrosodiphenylamine (1)	130000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Naphthalene	3100000	370 U	25 J	370 U	10 U	370 U	360 UJ	360 U	350 U	16 J	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Nitrobenzene	39000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Pentachlorophenol	5300	920 U	910 U	930 U	25 U	920 U	910 UJ	910 U	880 U	930 U	910 U	910 U	920 U	920 U	880 R	950 U	960 U	970 U	910 U
Phenanthrene	88	370 U	210 J	370 U	10 U	370 U	360 UJ	120 J	270 J	110 J	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Phenol	47000000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
Pyrene	2300000	370 U	790 J	370 U	10 U	370 U	360 UJ	250 J	1500 J	250 J	360 U	360 UJ	370 U	370 U	350 R	25 J	380 U	390 U	360 U
bis(2-Chloroethoxy)methane	NE	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
bis(2-Chloroethyl)ether	46000	370 U	360 U	370 U	10 U	370 U	360 UJ	360 U	350 U	370 U	360 U	360 U	370 U	370 U	350 R	380 U	380 U	390 U	360 U
bis(2-Ethylhexyl)phthalate	120000	85 J	1500 J	500 B	10 U	370 U	130 J	850 B	1600 J	950 B	1600 B	2200 J	40 J	370 U	350 R	58 J	90 J	85 J	360 U

Table IV. 2. Semivolatile Organic Analytical Data (Continued)

Sample Number	RBTL/RBGCV	19007RA	190020RA	191020	230005	230014	240004	240011RA	250016	270006RA	270006	270013	270020	280006	280012	390005	390011	391006
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Compound																		
1,2,4-Trichlorobenzene	780000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
1,2-Dichlorobenzene	7000000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 UJ	380 UJ	390 UJ
1,3-Dichlorobenzene	7000000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 UJ	380 UJ	390 UJ
1,4-Dichlorobenzene	71000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 UJ	380 UJ	390 UJ
2,2'-oxybis(1-Chloropropane)	24000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 UJ	380 UJ	390 UJ
2,4,5-Trichlorophenol	7800000	890 U	860 U	910 U	970 U	950 U	1000 UJ	950 U	930 U	920 U	900 U	910 UJ	910 U	1000 U	1000 U	1000 U	960 U	960 UJ
2,4,6-Trichlorophenol	150000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 UJ	360 U	400 U	400 U	400 U	380 U	390 UJ
2,4-Dichlorophenol	230000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 UJ	360 U	400 U	400 U	400 U	380 U	390 UJ
2,4-Dimethylphenol	1600000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 UJ	360 U	400 U	400 U	400 U	380 U	390 UJ
2,4-Dinitrophenol	160000	890 U	860 U	910 U	970 U	950 U	1000 UJ	950 U	930 U	920 U	900 U	910 UJ	910 U	1000 U	1000 U	1000 U	960 U	960 UJ
2,4-Dinitrotoluene	160000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
2,6-Dinitrotoluene	2500	370 U	350 U	370 U	95 J	85 J	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	250 J	240 J	82 J
2-Chloronaphthalene	6300000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
2-Chlorophenol	390000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 UJ	360 U	400 U	400 U	400 UJ	380 U	390 UJ
2-Methylnaphthalene	NE	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 UJ	360 U	400 U	400 U	400 U	380 UJ	390 UJ
2-Methylphenol	3900000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 UJ	360 U	400 U	400 U	400 UJ	380 U	390 UJ
2-Nitroaniline	4700	890 U	860 U	910 U	970 U	950 U	1000 UJ	950 U	930 U	920 U	900 U	910 U	910 U	1000 U	1000 U	1000 U	960 UJ	960 UJ
2-Nitrophenol	4800000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 UJ	360 U	400 U	400 U	400 U	380 U	390 UJ
3,3'-Dichlorobenzidine	3800	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
3-Nitroaniline	230000	890 U	860 U	910 U	970 U	950 U	1000 UJ	950 U	930 U	920 U	900 U	910 U	910 U	1000 U	1000 U	1000 U	960 UJ	960 UJ
4,6-Dinitro-2-methylphenol	NE	890 U	860 U	910 U	970 U	950 U	1000 UJ	950 U	930 U	920 U	900 U	910 UJ	910 U	1000 U	1000 U	1000 U	960 U	960 UJ
4-Bromophenyl-phenylether	4500000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
4-Chloro-3-methylphenol	NE	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 UJ	360 U	400 U	400 U	400 U	380 U	390 UJ
4-Chloroaniline	310000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
4-Chlorophenyl-phenylether	NE	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
4-Methylphenol	390000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 UJ	360 U	400 U	400 U	400 UJ	380 U	390 UJ
4-Nitroaniline	230000	890 U	860 U	910 U	970 U	950 U	1000 UJ	950 U	930 U	920 U	900 U	910 U	910 U	1000 U	1000 U	1000 U	960 UJ	960 UJ
4-Nitrophenol	4800000	890 U	860 U	910 U	970 U	950 U	1000 UJ	950 U	930 U	920 U	900 U	910 UJ	910 U	1000 U	1000 U	1000 U	960 U	960 UJ
Acenaphthene	4700000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Acenaphthylene	NE	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Anthracene	23000000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Benzo(a)anthracene	880	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Benzo(a)pyrene	88	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Benzo(b)fluoranthene	880	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Benzo(g,h,i)perylene	88	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Benzo(k)fluoranthene	880	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Carbazole	85000	370 U	350 U	370 U	190 J	280 J	400 UJ	390 U	89 J	380 U	360 U	360 U	360 U	320 J	390 J	32 J	76 J	22 J
Chrysene	NE	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Di-n-butylphthalate	7800000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Di-n-octylphthalate	1600000	270 J	280 J	280 J	700 J	720 J	380 J	300 J	960 U	320 J	460 J	320 U	440 J	550 J	680 J	1500 J	370 J	43 J
Dibenz(a,h)anthracene	88	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Dibenzofuran	NE	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Diethylphthalate	63000000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Dimethylphthalate	780000000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Fluoranthene	3100000	370 U	350 U	370 U	34 J	37 J	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	95 J	90 J	29 J
Fluorene	3100000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Hexachlorobenzene	1100	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Hexachlorobutadiene	22000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Hexachlorocyclopentadiene	550000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Hexachloroethane	78000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Indeno(1,2,3-cd)pyrene	880	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 UJ	380 UJ	390 UJ
Isophorone	67	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
N-Nitroso-di-n-propylamine	240	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	17 J	380 UJ	390 UJ
N-Nitrosodiphenylamine (1)	130000	370 U	350 U	370 U	120 J	190 J	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 J	250 J	78 J	390 UJ
Naphthalene	3100000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Nitrobenzene	39000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Pentachlorophenol	53000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Phenanthrene	88	890 U	860 U	910 U	970 U	950 U	1000 UJ	950 U	930 U	920 U	900 U	910 UJ	910 U	180 J	1000 U	1000 U	960 U	960 UJ
Phenol	47000000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	53 J	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
Pyrene	2300000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 UJ	360 U	400 U	400 U	400 UJ	380 U	19 UJ
bis(2-Chloroethoxy)methane	46000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
bis(2-Chloroethyl)ether	1500	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 U	380 UJ	390 UJ
bis(2-Ethylhexyl)phthalate	120000	370 U	350 U	370 U	390 U	380 U	400 UJ	390 U	370 U	380 U	360 U	360 U	360 U	400 U	400 U	400 UJ	380 UJ	390 UJ
		370 U	350 U	52 J	27 J	22 J	400 UJ	160 J	31 J	380 U	87 J	360 U	140 J	400 U	71 J	26 J	140 J	11 J

Table IV. 2. Semivolatile Organic Analytical Data (Continued)

Sample Number	RTBL/RBGCV	010002	011002	020003	020006	030004	040007	040012	274000	384000	400000	410010	420020
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/L	UG/KG	UG/KG	UG/KG
Compounds													
1,2,4-Trichlorobenzene	780000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 UJ	10 U	10 U	400 U	380 U	400 UJ
1,2-Dichlorobenzene	7000000	380 U	380 UJ	380 UJ	370 UJ	360 UJ	370 UJ	350 UJ	10 U	10 U	400 U	380 UJ	400 UJ
1,3-Dichlorobenzene	7000000	380 U	380 UJ	380 UJ	370 UJ	360 UJ	370 UJ	350 UJ	10 U	10 U	400 U	380 UJ	400 UJ
1,4-Dichlorobenzene	71000	380 U	380 UJ	380 UJ	370 UJ	360 UJ	370 UJ	350 UJ	10 U	10 U	400 U	380 UJ	400 UJ
2,2'-oxybis(1-Chloropropane)	24000	380 U	380 UJ	380 UJ	370 UJ	360 UJ	370 UJ	350 UJ	10 U	10 U	400 U	380 UJ	400 UJ
2,4,5-Trichlorophenol	7800000	950 U	950 U	960 U	920 U	900 U	940 UJ	890 UJ	25 U	25 U	1000 U	960 UJ	990 UJ
2,4,6-Trichlorophenol	150000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 UJ	10 U	10 U	400 U	380 UJ	400 UJ
2,4-Dichlorophenol	230000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 UJ	10 U	10 U	400 U	380 UJ	400 UJ
2,4-Dimethylphenol	1600000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 UJ	10 U	10 U	400 U	380 UJ	400 UJ
2,4-Dinitrophenol	160000	950 U	950 U	960 U	920 U	900 U	940 UJ	890 UJ	25 U	25 U	1000 U	960 UJ	990 UJ
2,4-Dinitrotoluene	160000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	400 U	380 U	400 UJ
2,6-Dinitrotoluene	2500	380 U	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	400 U	380 U	400 UJ
2-Chloronaphthalene	6300000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	400 U	380 U	400 UJ
2-Chlorophenol	390000	380 U	380 UJ	380 UJ	370 UJ	360 UJ	370 UJ	350 UJ	10 U	10 U	400 U	380 UJ	400 UJ
2-Methylnaphthalene	NE	380 U	380 U	380 U	370 U	360 U	370 UJ	350 UJ	10 U	10 U	22 J	29 J	400 UJ
2-Methylphenol	3900000	380 U	380 UJ	380 UJ	370 UJ	360 UJ	370 UJ	350 UJ	10 U	10 U	400 U	380 UJ	400 UJ
2-Nitroaniline	4700	950 U	950 U	960 U	920 U	900 U	940 UJ	890 U	25 U	25 U	1000 U	960 UJ	990 UJ
2-Nitrophenol	4800000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 UJ	10 U	10 U	400 U	380 UJ	400 UJ
3,3'-Dichlorobenzidine	3800	380 U	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	400 U	380 UJ	400 U
3-Nitroaniline	230000	950 U	950 U	960 U	920 U	900 U	940 UJ	890 U	25 U	25 U	1000 U	960 U	990 UJ
4,6-Dinitro-2-methylphenol	NE	950 U	950 U	960 U	920 U	900 U	940 UJ	890 U	25 U	25 U	1000 U	960 UJ	990 UJ
4-Bromophenyl-phenylether	4500000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	400 U	380 U	400 U
4-Chloro-3-methylphenol	NE	380 U	380 U	380 U	370 U	360 U	370 UJ	350 UJ	10 U	10 U	400 U	380 UJ	400 UJ
4-Chloroaniline	310000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 UJ	10 U	10 U	400 U	380 U	400 UJ
4-Chlorophenyl-phenylether	NE	380 U	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	400 U	380 U	400 UJ
4-Methylphenol	390000	380 U	380 UJ	380 UJ	370 UJ	360 UJ	370 UJ	350 UJ	10 U	10 U	400 U	380 UJ	400 UJ
4-Nitroaniline	230000	950 U	950 U	960 U	920 U	900 U	940 UJ	890 U	25 U	25 U	1000 U	960 U	990 UJ
4-Nitrophenol	4800000	950 U	950 U	960 U	920 U	900 U	940 UJ	890 UJ	25 U	25 U	1000 U	960 UJ	990 UJ
Acenaphthene	4700000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	400 U	19 J	400 UJ
Acenaphthylene	NE	380 U	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	36 J	97 J	61 J
Anthracene	23000000	14 J	11 J	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	43 J	110 J	62 J
Benzo(a)anthracene	880	74 J	380 U	21 J	24 J	21 J	370 UJ	350 U	10 U	10 U	230 J	540 J	290 J
Benzo(a)pyrene	88	80 J	67 J	25 J	24 J	23 J	370 UJ	350 U	10 U	10 U	290 J	630 J	360 J
Benzo(b)fluoranthene	880	81 J	79 J	34 J	34 J	21 J	370 UJ	350 U	10 U	10 U	430 J	1000 J	480 J
Benzo(g,h,i)perylene	88	28 J	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	53 J	150 J	75 J
Benzo(k)fluoranthene	880	95 J	76 J	27 J	25 J	24 J	370 UJ	350 U	10 U	10 U	220 J	470 J	270 J
Butylbenzylphthalate	16000000	14 J	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	400 U	380 UJ	22 J
Chrysene	NE	90 J	81 J	33 J	30 J	30 J	370 UJ	350 U	10 U	10 U	310 J	640 J	360 J
Di-n-butylphthalate	7800000	590	630	790	400	560	24 J	1900	10 U	10 U	460	760	750
Di-n-octylphthalate	1600000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	400 UJ	24 J	400 U
Dibenz(a,h)anthracene	88	24 J	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	55 J	130 J	82 J
Dibenzofuran	NE	380 U	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	10 J	16 J	400 UJ
Diethylphthalate	63000000	43 J	28 J	15 J	370 U	12 J	370 UJ	350 U	1 J	10 U	11 J	380 U	400 UJ
Dimethylphthalate	780000000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	400 U	380 U	400 UJ
Fluoranthene	3100000	140 J	150 J	54 J	56 J	49 J	370 UJ	350 U	10 U	10 U	480	1000	890
Fluorene	3100000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	13 J	27 J	400 UJ
Hexachlorobenzene	1100	380 U	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	400 U	380 U	400 U
Hexachlorobutadiene	22000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 UJ	10 U	10 U	400 U	380 U	400 UJ
Hexachlorocyclopentadiene	550000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	400 U	380 U	400 UJ
Hexachloroethane	78000	380 U	380 UJ	380 UJ	370 UJ	360 UJ	370 UJ	350 UJ	10 U	10 U	400 U	380 UJ	400 UJ
Indeno(1,2,3-cd)pyrene	880	380 U	380 U	380 U	370 U	360 U	370 UJ	350 UJ	10 U	10 U	41 J	260 J	180 J
Isophorone	67	11 J	380 U	13 J	370 U	360 U	370 UJ	350 U	10 U	10 U	400 U	380 U	400 UJ
N-Nitroso-di-n-propylamine	240	380 U	380 UJ	380 UJ	370 UJ	360 UJ	370 UJ	350 UJ	10 U	10 U	400 U	380 UJ	400 UJ
N-Nitrosodiphenylamine (1)	130000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 U	10 U	10 U	400 U	380 UJ	400 U
Naphthalene	3100000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 UJ	10 U	10 U	400 U	380 U	400 UJ
Nitrobenzene	39000	380 U	380 U	380 U	370 U	360 U	370 UJ	350 UJ	10 U	10 U	400 U	380 U	400 UJ
Pentachlorophenol	53000	950 U	950 U	94 J	920 U	900 U	940 UJ	890 UJ	25 U	25 U	1000 U	960 UJ	990 UJ
Phenanthrene	88	58 J	67 J	22 J	25 J	25 J	370 UJ	350 U	10 U	10 U	210 J	460	260 J
Phenol	47000000	380 U	380 UJ	380 UJ	370 UJ	360 UJ	370 UJ	350 UJ	10 U	10 U	400 U	380 UJ	400 UJ
Pyrene	2300000	120 J	130 J	47 J	45 J	42 J	370 UJ	350 U	10 U	10 U	500	1100 J	550
bis(2-Chloroethoxy)methane	NE	380 U	380 U	380 U	370 U	360 U	370 UJ	350 UJ	10 U	10 U	400 U	380 U	400 UJ
bis(2-Chloroethyl)ether	46000	380 U	380 UJ	380 UJ	370 UJ	360 UJ	370 UJ	350 UJ	10 U	10 U	400 U	380 UJ	400 UJ
bis(2-Ethylhexyl)phthalate	120000	58 J	140 J	40 J	28 J	29 J	370 UJ	42 J	10 U	10 U	82 J	110 J	61 J

The summary for data package ICFK-1 stated: "Two samples, were reextracted well in excess of the holding time criteria, 30 days. These reextractions were rejected and the original analysis were used". The effect on the data was that the data were judged to be useable.

The summary for data package ICFK-2 stated: "Several samples, were reextracted well in excess of the holding time criteria. All of the reextractions were rejected and the original analysis were used. The negative results for sample MND14-3033-0000 were rejected since all the surrogate recoveries were 0%". The remaining data were judged to be useable.

The summary for data package ICFK-3 stated: "Several samples, were reextracted well in excess of the holding time criteria. All of the reextractions were rejected and the original analysis were used. Three samples were reextracted 23 days after sampling. These reextractions were used, but they were qualified with a potential negative bias. The samples were: MND14-3026-0002, MND14-3026-0010, and MND14-3026-0020. The negative results for sample MND14-3028-0020 and MND14-3035-0020 were rejected since all the surrogate recoveries were 0%". The remaining data are useable as judged by the validators.

The summary for data package ICFK-4 stated: "Several samples, were reextracted and reanalyzed well in excess of the holding time criteria. All of the reextractions were rejected and the original analysis were used". The data were judged to be useable.

The summary for data package ICFK-5 stated: "Several samples, were reextracted and reanalyzed well in excess of the holding time criteria. All of the reextractions were rejected and the original analysis were used. All the negative results for sample MND14-3038-0006 and MND14-3038-0012 were rejected since all the surrogate recoveries were 0%. All positive results were qualified with a possible negative bias".

The summary for data package ICFK-6 stated: "Each sample was reanalyzed to confirm matrix interferences. These interferences were confirmed, and the time to reanalysis exceeded the 40 day holding time criteria. The results of the original analysis was used". The data were judged to be useable.

Data validators reviewed all of the semi-volatile organic analytical data and used the following qualifiers:

U - Compound was not detected in the sample.
J - Reported value is estimated.
R - Analytical result is unusable.
UJ - Compound was not detected in the sample, but the quantitation is estimated.

In addition, the following subqualifiers may be applied:

B - Qualified due to method blank.
C - Qualified due to calibration.
H - Qualified due to holding time being exceeded.
K - Qualified due to surrogate recovery.
S - Qualified due to matrix spike recovery.
I - Qualified due to internal standard.
P - Qualified due to percent difference between the two columns.
(+) - Qualified due to positive bias.
(-) - Qualified due to negative bias.

4.1.2.3. Inorganic Compounds

The data package summaries for the inorganic data did not identify any major analytical problems. Therefore, no synopsis of the data package summaries is presented in this section. Data validation results are presented in Tables IV.3 and IV.4. To save space, the MND14-n0 (MND1410, MND14-20, MND14-30) prefix was not used in Tables IV.3 and IV.4.

Data validators reviewed all of the inorganic analytical data and used the following qualifiers:

U - Compound was not detected in the sample.
J - Reported value is estimated.
R - Analytical result is unusable.
UJ - Compound was not detected in the sample, but the quantitation is estimated.

In addition, the following subqualifiers may be applied:

B - Qualified due to method blank.
C - Qualified due to calibration.
H - Qualified due to holding time being exceeded.
K - Qualified due to surrogate recovery.
S - Qualified due to matrix spike recovery.
I - Qualified due to internal standard.
P - Qualified due to percent difference between the two columns.
(+) - Qualified due to positive bias.
(-) - Qualified due to negative bias.

4.1.2.4. Pesticide Compounds

The following paragraphs present a summary of the data validation package summaries. Additional information is presented in Table IV.5. To save space, the MND14-n0 (MND14-10, MND14-20, MND14-30) prefix was not used in Table IV.5.

Table IV. 3. Inorganic Analytical Data

Sample Number	RBTL/RBGCV	050004	050010	050000	050005	070001	070012	071001	074000	080001	080009	080017	110006	120001	120020	124000	140020	170007	171020
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/L	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/L	MG/KG	MG/KG	MG/KG
Compund																			
AG	390.00	1.00 J	0.84 U	0.89 U	0.85 U	0.63 U	0.99 J	0.84 U	3.00 U	0.57 U	3.00 U	0.61 U	0.62 U	0.61 U	0.62 U	3.00 U	0.49 U	0.67 U	0.63 U
AL	230000.00	7680.00 J	10400.00 J	12300.00 J	12600.00 J	17600.00 J	9030.00 J	18900.00 J	83.90 J	7290.00 J	74.50 J	5570.00 J	13600.00 J	8110.00 J	6530.00 J	58.70 J	12500.00 J	11700.00 J	14700.00 J
AS	23.00	3.00 J	2.50 J	4.70	3.60 J	4.40 J	2.90 J	6.60	2.00 U	5.40	2.70 J	4.60	3.10 J	3.80 J	4.30 J	2.20 J	2.80 J	3.40 J	4.60
BA	5500.00	32.20 J	33.90 J	49.90 J	57.10 J	78.80	30.80 J	62.00	30.50 J	33.80 J	0.19 J	29.30 J	38.80 J	25.80 J	56.80 J	33.00 J	68.90	320.00	40.20 J
BE	150.00	0.51 J	0.60 J	0.73 J	0.75 J	0.99 J	0.62 J	0.98	1.00 U	0.19 U	1.00 U	0.17 U	0.61 J	0.35 J	0.47 J	1.00 U	0.75 J	0.73 J	0.69 J
BI	NE	0.79 J	0.75 J	1.20 J	1.30 J	1.00 J	0.47 J	1.00 J	2.10 U	0.34 U	0.42 U	0.37 U	0.57 J	0.34 U	0.78 J	2.10 U	0.46 U	0.35 U	0.54 J
CA	NE	187000.00	119000.00	97100.00	116000.00	53800.00 J	193000.00	63200.00 J	39300.00 J	95000.00	1190.00 J	107000.00	98700.00	53800.00	107000.00	37100.00 J	107000.00	128000.00	41800.00
CD	39.00	0.61 U	0.84 U	0.89 U	0.85 U	0.63 U	0.68 U	0.84 U	3.00 U	0.57 U	3.00 U	0.61 U	0.62 U	0.61 U	0.62 U	3.00 U	0.49 U	0.67 U	0.63 U
CN	390.00	0.10 U	0.10 U	0.27 J	1.30 J	0.24 J	0.10 U	0.10 U	24.50 J	0.10 U	0.10 U	0.10 U	0.10 U	2.00 J	0.52 J	10.80 U	0.10 U	0.10 U	0.10 U
CO	39.00	5.50 J	9.20	8.90 J	8.40 J	10.80	6.80 J	11.10	4.00 U	5.60 J	0.06	4.70 J	10.40	5.70 J	5.50 J	4.00 U	9.80	9.20 J	14.10
CR	390.00	11.70 J	15.80 J	16.90 J	17.40 J	21.60 J	12.30 J	26.10 J	5.00 J	12.80 J	0.10 J	9.70 J	18.30 J	8.60 J	11.20 J	8.60 J	17.30 J	15.70 J	23.30 J
CU	2900.00	33.60	14.30	16.80	14.60	14.40	13.10	14.90	5.20 J	12.60	0.10 J	12.80	15.40	11.90	12.50	4.60 J	14.70	14.90	21.00
FE	NE	14200.00	20400.00	19600.00	18600.00 J	23800.00 J	15500.00 J	24700.00 J	27.30 J	13200.00	142.00 J	9820.00	23000.00	12300.00	12800.00	72.70 J	20500.00	19300.00	31100.00
HG	23.00	0.10 UJ	0.11 UJ	0.12 J	0.11 J	0.11 J	0.14 J	0.11 J	0.22 J	0.11 J	0.12 UJ	0.14 J	0.15 J	0.15 J	0.16 J	0.20 UJ	0.15 J	0.11 U	0.12 U
K	NE	1830.00 JJ	1990.00 J	2420.00 J	2610.00 J	3370.00 J	2270.00 J	3610.00 J	2060.00 J	1880.00	22.60 J	1690.00 J	2060.00	939.00 J	1960.00 J	1750.00 J	3630.00 J	3200.00 J	2970.00 J
LI	NE	14.40 J	23.50	21.90	21.00	26.40	16.80 J	26.90	2.10 U	12.20 J	0.14 J	12.70 J	26.10	12.70 J	16.40 J	2.10 U	26.70	23.10	36.40
MG	NE	10100.00 J	7390.00 J	19600.00 J	13100.00 J	7930.00 J	6160.00 J	12900.00 J	13800.00 J	36600.00 J	42.80 J	45800.00 J	7950.00 J	26000.00 J	36300.00 J	13300.00 J	13100.00 J	16300.00 J	12900.00 J
MN	7800.00	431.00 J	800.00 J	440.00 J	440.00 J	478.00 J	656.00 J	844.00 J	2.60 J	299.00 J	9.80 J	190.00 J	434.00 J	286.00 J	304.00 J	3.10 J	849.00 J	469.00 J	442.00 J
MO	NE	1.90 U	1.70 U	1.80 U	1.70 U	1.90 U	2.10 U	1.80 U	21.10 J	1.70 U	0.01 U	2.30 J	1.80 U	1.80 U	1.80 U	9.20 UJ	1.80 U	2.00 U	1.90 U
NA	NE	230.00 J	249.00 J	320.00 J	261.00 J	191.00 J	256.00 J	232.00 J	10400.00 J	209.00 J	2.40 J	249.00 J	578.00 J	247.00 J	298.00 J	21300.00	249.00 J	289.00 J	262.00 J
NI	1600.00	9.80 J	16.40 J	15.70	14.10 J	19.00 J	11.00 J	20.00 J	9.00 UJ	13.80	0.11 J	12.40 J	20.80	10.80 J	11.20 J	8.00 UJ	16.80 J	14.30 J	25.70 J
PB	53.00	36.60	8.30	9.30	8.80	8.90	6.10	12.60	1.00 U	8.00	11.70	6.10	6.30	7.80	5.80	2.00 J	5.50	6.80	5.90
SB	31.00	7.10 JJ	6.30 UJ	6.90 UJ	6.40 UJ	7.30 UJ	7.90 UJ	6.20 UJ	38.00 UJ	6.60 UJ	0.04 UJ	6.00 UJ	7.20 UJ	5.90 UJ	7.60 J	38.00 UJ	5.70 UJ	7.80 UJ	7.30 UJ
SE	390.00	0.41 U	0.36 U	0.39 U	0.37 U	0.42 U	0.46 U	0.36 U	2.00 U	0.36 U	0.35 U	0.34 U	0.41 U	0.34 U	0.35 U	2.00 U	0.33 U	0.44 U	0.42 U
SN	NE	2.00 U	1.80 U	2.00 U	1.80 U	2.10 U	2.30 U	1.80 U	10.00 U	1.80 U	0.01 U	1.70 U	2.10 U	1.70 U	1.70 U	10.00 U	1.60 U	2.20 U	2.10 U
TA	NE	167.00 U	256.00 J	274.00 J	264.00 J	313.00 J	186.00 UJ	489.00 J	624.00 U	158.00 UJ	1.00 UJ	141.00 UJ	170.00 U	140.00 UJ	237.00 J	624.00 UJ	238.00 J	190.00 J	402.00 J
TL	5.50	0.41 U	0.36 U	0.39 U	0.37 U	0.42 U	0.46 U	0.36 U	6.50 J	0.36 U	0.35 U	0.34 U	0.41 U	0.34 U	0.35 U	2.00 U	0.33 U	0.44 U	0.42 U
V	550.00	6.30 J	11.10	17.60	17.10	24.10	9.90 J	29.50	6.50 J	13.80	0.08 J	10.70 J	16.30	9.10 J	11.00 J	8.30 J	13.60	14.30	18.20
ZN	23000.00	105.00 J	47.50 J	47.70 J	43.10 J	53.80 J	31.10 J	59.40 J	5.10 J	34.00 J	0.47 J	30.80 J	48.50 J	54.20 J	32.30 J	8.60 J	40.90 J	39.70 J	54.60 J

ELEMENT LEGEND:

AG	*Silver*	*LI*	*Lithium*
AL	*Aluminum*	*MG*	*Magnesium*
AS	*Arsenic*	*MN*	*Manganese*
BA	*Barium*	*MO*	*Molybdenum*
BE	*Beryllium*	*NA*	*Sodium*
BI	*Bismuth*	*NI*	*Nickel*
CA	*Calcium*	*PB*	*Lead*
CD	*Cadium*	*SB*	*Antimony*
CN	*Cyanide*	*SE*	*Selenium*
CO	*Cobalt*	*SN*	*Tin*
CR	*Chromium*	*TA*	*Tantalum*
CU	*Copper*	*TL*	*Thallium*
FE	*Iron*	*V*	*Vanadium*
HG	*Mercury*	*ZN*	*Zinc*
K	*Potassium*		

Legend:

U –> compound was not detected
J –> reported value is estimated
NE–> no regulatory threshold level has been established because these are naturally occurring componds
RBTL/RBGCV–>risk assessment threshold levels/risk based guidance cleanup values

Table IV. 3. Inorganic Analytical Data (Continued)

Sample Number	RBTL/RBGCV	100020	180010	180018	180012	180020	210005	210012	260002	260010	260020	260000	260008	260013	260020	261000	260000	350000	350013	350020	354000
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/L
Compound																					
AG	390	0.68 U	0.71 U	0.71 U	0.49 U	0.69 U	0.68 U	0.66 U	0.59 U	0.61 U	0.65 U	1.80 J	0.69 U	0.70 U	0.64 U	1.30 J	0.63 U	0.67 U	0.63 U	0.62 U	3.00 U
AL	230000	4850.00	17300.00	16200.00	5240.00	6460.00	7690.00	14200.00	9760.00	7520.00	6190.00	1440.00	11800.00	11700.00	6350.00	1200.00	7280.00	14300.00	12400.00	3770.00	61.80 J
AS	23	4.90 J	4.90 J	4.00 J	3.80 J	4.10 J	4.20 J	2.80 J	5.90 J	5.00 J	3.90 J	4.10 J	8.40	9.80	2.50 J	4.10 J	6.10	3.90 J	4.30 J	4.00 J	2.00 U
BA	5500	38.00 J	25.20 J	26.80 J	40.80 J	47.90 J	38.60 J	28.00 J	49.40 J	38.90 J	31.40 J	15.80 J	79.40	77.80	27.90 J	14.40 J	34.90 J	37.00 J	33.30 J	32.00 J	33.10 J
BE	150	0.32 J	1.10 J	1.00 J	0.34 J	0.46 J	0.63 J	0.84 J	0.82 J	0.80 J	0.37 J	0.25 J	0.77 J	0.79 J	0.38 J	0.23 J	0.45 J	0.87 J	0.84 J	0.35	1.00 U
BI	NE	0.43 U	0.46 U	0.48 U	0.43 U	0.41 U	0.71 J	0.44 J	0.39 U	0.47 U	0.43 U	0.41 U	0.44 U	0.43 U	0.42 U	0.43 U	0.38 U	0.43 U	0.42 U	0.46 U	2.10 U
CA	NE	104000.00	62600.00 J	72000.00 J	123000.00	100000.00	132000.00	73400.00 J	65400.00	100000.00	109000.00	260000.00	20900.00 J	21300.00 J	170000.00	245000.00	104000.00	62400.00	93300.00	139000.00	37000.00 J
CD	39	0.68 U	0.71 U	0.71 U	0.49 U	0.69 U	0.68 U	0.66 U	0.59 U	0.61 U	0.65 U	0.61 U	0.69 U	0.70 U	0.64 U	0.61 U	0.63 U	0.67 U	0.63 U	0.62 U	3.00 UJ
CN	390	0.75 J	0.29 J	0.61 J	0.60 J	0.52 J	0.57 J	0.53 J	0.10 U	0.68 J	0.66 J	0.61 J	0.69 J	0.10 U	0.77 J	0.75 J	0.26 J	0.10 U	0.10 U	0.26 J	0.10 U
CO	39	4.90 J	13.90	14.00	4.10 J	6.20 J	6.40 J	10.30 J	7.00 J	6.80 J	4.70 J	1.90 J	8.00 J	8.10 J	4.10 J	1.60 J	5.60 J	12.00	10.60	3.90 J	4.00 U
CR	390	9.40 J	28.60	25.80	9.00 J	10.90 J	14.10 J	19.40	16.60 J	11.70 J	7.80 J	6.60 J	16.20	17.00	10.00 J	6.10 J	10.80 J	19.60	18.20	8.60 J	4.00 U
CU	2900	14.00	21.60	24.60	13.70	14.10	16.30	17.10	16.90	13.90	11.60	6.40 J	17.00	17.40	10.20 J	5.60 J	13.90	20.30	17.00	6.60	3.40 J
FE	NE	11400.00	32600.00	30900.00	9050.00	11700.00	12600.00	23000.00	15900.00	13200.00	10000.00	9250.00	17600.00	16700.00	11200.00	7930.00	12900.00	25700.00	21700.00	7910.00	22.30 J
HG	23	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U	0.11 U	0.12 U	0.11 U	0.11 U	0.11 U	0.13 U	0.13 U	0.11 U	0.10 U	0.11	0.12 U	0.13 U	0.11 U	0.20 U
K	NE	1330.00 J	5040.00	4560.00	1410.00 J	1990.00 J	2200.00 J	4370.00	1950.00 J	2000.00 J	1620.00 J	648.00 J	921.00 J	928.00 J	1790.00 J	549.00 J	1660.00 J	3170.00 J	3180.00 J	1400.00 J	1740.00 J
LI	NE	12.20 J	37.00	37.60	9.10 J	13.90 J	13.30 J	32.70	12.40 J	11.80 J	18.70	1.40 J	8.90 J	7.00 J	11.30 J	1.10 J	11.00 J	29.60	22.20	8.40 J	2.10 U
MG	NE	35600.00 J	11800.00 J	10800.00 J	46000.00	42400.00	35300.00	16200.00 J	24600.00	33600.00	42100.00	43700.00	11400.00 J	8930.00 J	16700.00 J	40800.00	37000.00	9480.00 J	12600.00 J	74600.00	13400.00
MN	7600	278.00 J	698.00 J	663.00 J	304.00 J	260.00 J	439.00 J	595.00 J	722.00 J	249.00 J	223.00 J	413.00 J	460.00 J	464.00 J	340.00 J	349.00 J	355.00 J	631.00 J	742.00 J	360.00 J	2.00 UJ
MO	NE	1.60 U	2.20 U	2.20 U	1.60 U	1.60 U	2.10 U	2.00 U	1.80 U	1.90 U	1.70 U	1.90 U	2.10 U	2.20 U	1.90 U	1.90 U	1.60 U	1.60 U	1.90 U	3.90 J	9.20 U
NA	NE	154.00 J	526.00 J	631.00 J	672.00 J	202.00 J	220.00 J	230.00 J	173.00 J	195.00 J	163.00 J	154.00 J	138.00 J	66.00 J	218.00 J	134.00 J	161.00 J	215.00 J	233.00 J	201.00 J	21600.00
NI	1600	11.60	25.90	26.60	10.20	12.70	12.20	22.10	15.80	13.00	10.60	3.00 J	14.60	15.60	7.00 J	3.10 J	12.20	23.30	18.00	6.60 J	8.00 U
PB	53	5.10	7.90	10.60	4.20	5.10	7.40	3.90	7.80	5.70	4.90	1.60 J	13.80	13.10	4.90	1.60 J	8.20	8.70	9.30	4.60	1.00 UJ
SB	31	6.70 UJ	8.20 UJ	8.30 UJ	5.70 UJ	6.60 UJ	8.00 UJ	7.70 UJ	6.90 UJ	7.10 UJ	6.60 UJ	7.10 UJ	8.10 UJ	8.20 UJ	7.40 UJ	7.10 UJ	6.20 UJ	6.70 UJ	7.30 UJ	7.30 UJ	35.00 U
SE	390	0.38 U	0.47 U	0.48 U	0.32 U	0.39 U	0.45 U	0.44 U	0.40 U	0.40 U	0.37 U	0.41 U	0.46 U	0.47 U	0.42 U	0.41 U	0.35 U	0.38 U	0.42 U	0.42 U	2.00 U
SN	NE	1.90 U	2.40 U	2.40 U	1.60 U	2.00 U	2.30 U	2.20 U	2.00 U	2.00 U	1.80 U	2.00 U	2.30 U	2.30 U	2.10 U	2.00 U	1.80 U	1.90 U	2.10 U	2.10 U	10.00 U
TA	NE	158.00 UJ	336.00 J	293.00 J	134.00 UJ	161.00 UJ	187.00 UJ	182.00 UJ	163.00 UJ	166.00 UJ	152.00 UJ	167.00 UJ	214.00 J	218.00 J	150.00 J	166.00 UJ	146.00 UJ	157.00 UJ	172.00 UJ	171.00 UJ	824.00 U
TL	5.5	0.38 U	0.47 U	0.48 U	0.32 U	0.39 U	0.45 U	0.44 U	0.40 U	0.40 U	0.37 U	0.41 U	0.46 U	0.47 U	0.42 U	0.41 U	0.35 U	0.38 U	0.42 U	0.42 U	2.00 U
V	550	9.00 J	25.60	23.80	10.60 J	12.80 J	13.00 J	17.60	20.40	13.20	10.10 J	3.90 J	27.80	27.40	5.70 J	2.10 J	13.70	18.70	18.20	7.80 J	6.50 J
ZN	23000	31.50 I	51.20 J	56.30 J	20.60 J	29.60 J	35.60 J	45.40 J	49.20 J	34.20 J	27.20 J	6.40 J	48.10 J	60.60 J	19.50 J	4.60 J	37.40 J	49.30 J	52.20 J	21.90 J	5.10 J

ELEMENT LEGEND:

AG	*Silver*	*LI*	*Lithium*
AL	*Aluminum*	*MG*	*Magnesium*
AS	*Arsenic*	*MN*	*Manganese*
BA	*Barium*	*MO*	*Molybdenum*
BE	*Beryllium*	*NA*	*Sodium*
BI	*Bismuth*	*NI*	*Nickel*
CA	*Calcium*	*PB*	*Lead*
CD	*Cadium*	*SB*	*Antimony*
CN	*Cyanide*	*SE*	*Selenium*
CO	*Cobalt*	*SN*	*Tin*
CR	*Chromium*	*TA*	*Tantalum*
CU	*Copper*	*TL*	*Thallium*
FE	*Iron*	*V*	*Vanadium*
HG	*Mercury*	*ZN*	*Zinc*
K	*Potassium*		

Legend:

U -> compound was not detected
J -> reported value is estimated
NE -> no regulatory threshold level has been established because these are naturally occurring compounds
RBTL/RBGCV -> risk assessment threshold levels/risk based guidance cleanup values

Table IV. 3. Inorganic Analytical Data (continued)

Sample Number	RBTL/RBGCV	200009	200020	220005	220010	250009	290006	290013	294000	300000	301000	310000	330006	340000	340006	341000	350006	370005	370012
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	UG/L	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Compound																			
AG	390	0.61 UJ	0.64 UJ	0.63 UJ	0.63 UJ	0.61 UJ	0.64 UJ	0.46 UJ	3.00 U	0.67 UJ	0.48 U	0.54 UJ	1.00 UJ	0.52 UJ	0.57 UJ	0.64 UJ	0.71 UJ	0.61 UJ	0.60 UJ
AL	230000	3570.00	4720.00	12000.00	6080.00	11800.00	3370.00	7750.00	47.90 J	4720.00	6250.00	9640.00	9610.00	14600.00	17300.00	11000.00	13900.00	11300.00	9250.00
AS	23	3.90 J	4.40 J	3.20 J	2.80 J	3.00 J	32.20 J	2.90 J	2.00 U	3.00 J	2.30 J	3.80 J	5.00 J	2.00 J	4.80 J	2.70 J	4.30 J	4.20 J	3.00 J
BA	5500	32.50 J	42.90 J	20.20 J	17.30 J	26.30 J	42.50 J	30.60 J	41.10 J	39.70 J	30.00 J	36.80 J	32.00 J	18.90 J	23.70 J	16.00 J	39.40 J	21.80 J	18.80 J
BE	150	0.26 J	0.40 J	0.72 J	0.46 J	0.70 J	0.21 U	0.47 J	1.00 U	0.22 U	0.54 J	0.60 J	1.00 J	0.62 J	0.99	0.65 J	0.96 J	0.67 J	0.58 J
BI	NE	0.44 U	0.33 U	0.40 U	0.43 U	0.44 U	0.44 U	0.46 U	2.10 U	0.39 U	0.45 U	0.42 U	0.40 U	0.37 U	0.46 U	0.44 U	0.52 U	0.46 U	0.41 U
CA	NE	119000.00 J	104000.00 J	51200.00 J	196000.00 J	34600.00 J	102000.00 J	172000.00 J	58200.00	130000.00 J	62100.00 J	58000.00 J	109000.00 J	39500.00 J	56000.00 J	32900.00 J	84200.00 J	74400.00 J	95600.00 J
CD	39	0.61 UJ	0.64 UJ	0.63 UJ	0.63 UJ	0.61 UJ	0.64 UJ	0.46 UJ	3.00 U	0.67 UJ	0.48 UJ	0.54 UJ	1.00 UJ	0.52 UJ	0.57 UJ	0.64 UJ	0.71 UJ	0.61 UJ	0.60 UJ
CN	390	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	53.00	0.29 J	0.76 J	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
CO	39	3.70 J	8.00 J	11.20 J	7.60 J	11.10 J	5.60 J	6.20 J	4.00 U	4.10 J	6.60 J	6.20 J	9.00 J	10.50 J	15.40 J	12.10 J	12.90 J	14.50 J	9.80 J
CR	390	6.90 J	10.20 J	18.50 J	12.30 J	21.40	7.90 J	10.70 J	5.50 J	10.20 J	14.20	16.10	18.00	24.10	27.80	19.00	22.20	21.10	13.50 J
CU	2900	10.30	11.30	18.80	10.70	15.80	9.20 J	11.90	4.60 J	10.30	12.70	14.10	16.00	20.60	23.80	17.90	18.00	19.30	14.30
FE	NE	8040.00	9760.00	21200.00	14700.00	22600.00	13200.00	15300.00	22.50 J	7890.00	13900.00	16100.00	21400.00	21400.00	30600.00	21600.00	26000.00	22100.00	17000.00
HG	23	0.09 U	0.10 U	0.11 U	0.11 U	0.12 U	0.11 U	0.11 U	0.20	0.12 U	0.11 U	0.13 U	0.40 U	0.11 U	0.12 U	0.11 U	0.13 U	0.11 U	0.11 U
K	NE	1090.00 J	1440.00 J	3660.00 J	2570.00 J	2480.00 J	916.00 J	2400.00 J	2430.00 J	918.00 J	1900.00 J	1840.00 J	2570.00	3610.00 J	4620.00 J	2100.00 J	2960.00 J	2710.00 J	2340.00 J
LI	NE	8.40 J	10.80 J	22.30 J	15.80 J	27.70	6.80 J	17.80	2.10 U	7.70 J	17.60	19.30	18.00 J	30.00	37.10	26.20	25.90	24.80	19.40 J
MG	NE	44200.00	43800.00	5510.00 J	5820.00 J	7720.00 J	46300.00	12600.00 J	20100.00	38100.00 J	15600.00 J	15200.00 J	14400.00	7170.00 J	11100.00 J	6320.00 J	6560.00 J	6470.00 J	11000.00 J
MN	7800	192.00 J	223.00 J	544.00 J	1260.00 J	787.00 J	207.00 J	736.00 J	2.00 U	263.00 J	352.00 J	375.00 J	619.00 J	471.00 J	597.00 J	518.00 J	646.00 J	965.00 J	612.00 J
MO	NE	1.60 U	2.00 U	1.90 U	1.60 U	1.90 U	2.30 J	1.40 U	9.20 U	2.00 U	1.60 U	1.70 U	2.00 U	1.60 U	1.70 U	2.00 U	2.20 U	1.90 U	1.60 U
NA	NE	143.00 J	207.00 J	178.00 J	260.00 J	184.00 J	158.00 J	187.00 J	11700.00	264.00 J	207.00 J	167.00 J	234.00 J	174.00 J	262.00 J	144.00 J	214.00 J	182.00 J	177.00 J
NI	1600	9.90	11.70	19.10	13.20	24.60	12.90	11.80	6.00 U	6.20 J	14.30	17.10	17.00	1.40 U	1.60 U	23.40	24.00	22.40	16.10
PB	53	6.10	6.60	10.60	9.10	6.30	6.40	7.70	27.00 U	7.60	6.80	6.60	10.00	4.70 U	9.70	6.60 U	10.90	10.10	6.20
SB	31	6.00 UJ	7.50 UJ	7.30 UJ	6.20 UJ	7.10 UJ	7.50 UJ	6.30 UJ	36.00 U	7.90 UJ	5.60 UJ	6.30 UJ	7.00 UJ	6.10 UJ	6.70 UJ	7.50 UJ	8.30 UJ	7.10 UJ	7.00 UJ
SE	390	0.34 UJ	0.43 UJ	0.68 UJ	0.35 UJ	0.40 UJ	0.59 J	0.30 UJ	2.00 U	0.80 J	0.32 UJ	0.74 J	0.40 U	0.54 J	0.93 J	1.00 J	1.10 J	0.41 UJ	0.52 J
SN	NE	1.70 U	2.10 U	2.10 U	1.80 U	2.00 U	2.10 U	1.50 U	10.00 U	2.20 U	1.80 U	1.80 U	2.00 U	1.70 U	1.90 U	2.10 U	2.40 U	2.00 U	2.00 U
TA	NE	141.00 UJ	176.00 UJ	262.00 J	156.00 J	477.00 J	176.00 UJ	124.00 UJ	624.00 U	216.00 J	241.00 J	252.00 J	218.00 J	444.00 J	456.00 J	221.00 J	397.00 J	269.00 J	164.00 UJ
TL	5.5	0.34 U	0.43 U	0.42 U	0.35 U	0.40 U	0.43 U	0.30 U	2.00 U	0.45 U	0.32 U	0.36 U	0.40 U	0.35 U	0.38 U	0.43 U	0.47 U	0.41 U	0.40 U
V	550	7.40 J	9.70 J	17.20	10.30	18.30	7.20 J	10.10	2.60 J	10.40 J	12.10	16.60	16.00	20.40	28.30	16.70	20.00	14.50	13.00
ZN	23000	23.00 J	26.60 J	36.30 J	53.70 J	47.50 J	31.40 J	32.50 J	6.20 J	26.60 J	40.60 J	40.60 J	33.00 J	46.90 J	54.60 J	43.30 J	45.40 J	41.60 J	33.00 J

ELEMENT LEGEND:

AG	*Silver*	*LI*	*Lithium*
AL	*Aluminum*	*MG*	*Magnesium*
AS	*Arsenic*	*MN*	*Manganese*
BA	*Barium*	*MO*	*Molybdenum*
BE	*Beryllium*	*NA*	*Sodium*
BI	*Bismuth*	*NI*	*Nickel*
CA	*Calcium*	*PB*	*Lead*
CD	*Cadium*	*SB*	*Antimony*
CN	*Cyanide*	*SE*	*Selenium*
CO	*Cobalt*	*SN*	*Tin*
CR	*Chromium*	*TA*	*Tantalum*
CU	*Copper*	*TL*	*Thallium*
FE	*Iron*	*V*	*Vanadium*
HG	*Mercury*	*ZN*	*Zinc*
K	*Potassium*		

Legend:

U -> compound was not detected
J -> reported value is estimated
NE -> no regulatory threshold level has been established because these are naturally occurring componds
RBTL/RBGCV -> risk assessment threshold levels/risk based guidance cleanup values

Table IV. 3. Inorganic Analytical Data (Continued)

SAMPLE NO	RBTL / RBGCV	090002	100011	101020	104000	110017	130003	130006	140001	140006	150001	150020	320000	320006	330000	360000	360006	360013	360020
UNITS		MG/KG	MG/KG	MG/KG	UG/L	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
COMPOUND																			
AG	390	0.64 J	0.57 U	0.65 U	2.00 U	0.67 J	0.65 U	0.61 U	0.59 U	0.64 U	0.60 U	0.62 U	0.47 U	0.63 U	0.66 U	0.64 U	0.56 U	0.67 U	0.59 U
AL	230000	6730.00	5620.00	6900.00	67.40 J	6360.00	11700.00	13900.00	12700.00	9410.00	13300.00	6800.00	5470.00	7440.00	8100.00	16100.00	11900.00	11200.00	15400.00
AS	23	5.40	4.60	5.40	2.00 U	3.70	4.70	4.40	4.80	3.80	4.10	5.00	5.80	4.40 J	3.80 J	8.20	6.30	3.60 J	4.10 J
BA	5500	26.70 J	32.60 J	54.60 J	30.90 J	41.20 J	36.30 J	29.90 J	40.10 J	22.80 J	27.10 J	50.40 J	253.00	30.70 J	36.10 J	96.60	61.10	26.60 J	38.70 J
BE	150	0.47 J	0.34 J	0.46 J	1.00 U	0.38 J	0.77 J	0.66 J	0.64 J	0.56 J	0.63 J	0.46 J	0.37 J	0.62 J	0.68 J	0.79 J	0.66 J	0.71 J	0.92 J
BI	NE	0.43 UJ	0.70 J	0.46 J	2.10 U	0.43 UJ	0.63 J	0.94 J	0.71 J	0.61 J	0.60 J	0.76 J	0.46 UJ	0.68 J	0.46 UJ	0.64 J	0.47 UJ	0.46 UJ	0.56 J
CA	NE	144000.00	112000.00	116000.00	39300.00	170000.00	116000.00	105000.00	78800.00	103000.00	49900.00 J	112000.00	116000.00	93500.00	92800.00	3300.00 J	78000.00 J	154000.00	115000.00
CD	39	0.67 U	0.57 U	0.65 U	3.00 U	0.64 U	0.65 U	0.61 U	0.59 U	0.64 U	0.60 U	0.62 U	0.47 U	0.63 U	0.66 U	0.64 U	0.56 U	0.67 U	0.59 U
CN	390	0.10 U	0.10 U	0.26 J	0.10 U	0.62 J	0.10 U	0.10 U	0.10 U	0.10 U	1.90 J	0.10 U	1.00 J	0.62 J	0.62 J	0.26 J	0.10 U	0.27 J	0.26 J
CO	39	6.80 J	4.20 J	8.50 J	4.00 U	5.20 J	8.10 J	10.20 J	8.70 J	8.70 J	11.40	5.20 J	4.60 J	8.10 J	8.70 J	9.60 J	6.70 J	10.90	11.00
CR	390	10.50 J	9.20 J	11.30	4.00 U	9.40 J	16.60	17.50	17.70	13.40	21.30	10.20 J	9.70	12.50	10.60	21.60	18.20	15.70	20.70
CU	2900	12.30	13.80	13.30	4.30 J	10.60	16.60	17.80	18.00	18.70	20.60	13.20	12.70	14.60	11.80	17.60	13.10	11.90	14.60
FE	NE	11400.00	11700.00	12500.00	127.00	11400.00	18800.00	24100.00	22200.00	18400.00	23600.00	12300.00	10000.00	12900.00	13500.00	21300.00	14300.00	19200.00	22400.00
HG	23	0.14	0.06 U	0.09 U	0.20 U	0.10	0.10 U	0.09 U	0.10 U	0.09 U	0.11	0.08 U	0.10 U	0.10 U	0.09 U	0.11 U	0.11 U	0.10 U	0.10 U
K	NE	2020.00 J	1720.00 J	2260.00 J	2040.00 J	2140.00 J	3660.00 J	4370.00	3670.00 J	3040.00 J	3170.00 J	2280.00 J	1570.00 J	2310.00 J	1840.00 J	1310.00 J	1700.00 J	3100.00 J	4770.00
LI	NE	9.70 J	10.60 J	14.60 J	2.10 U	12.90 J	19.70 J	26.60	22.10	18.70	27.60	14.70 J	10.10 J	16.10 J	11.60 J	10.70 J	10.60 J	21.40	26.60
MG	NE	37600.00	44900.00	41900.00	13900.00	28400.00 J	27400.00 J	14900.00 J	20000.00 J	33800.00	13300.00 J	33900.00	42100.00	37000.00	26200.00 J	2940.00 J	27600.00 J	12700.00 J	18400.00 J
MN	7800	362.00	208.00	272.00	2.90 J	332.00	472.00	592.00	449.00	298.00	602.00	298.00	260.00	320.00	365.00	562.00	658.00	1000.00	879.00
MO	NE	2.30 J	1.60 U	2.00 U	9.20 U	2.00 U	2.00 U	1.90 U	1.80 U	1.80 U	1.90 U	1.80 U	1.40 U	1.90 U	1.70 U	2.00 U	1.70 U	1.80 U	1.80 U
NA	NE	176.00 J	197.00 J	226.00 J	10600.00	231.00 J	367.00 J	419.00 J	698.00 J	279.00 J	543.00 J	252.00 J	229.00 J	277.00 J	234.00 J	87.30 J	187.00 J	328.00 J	343.00 J
NI	1600	10.40	11.60	13.70	8.00 U	10.80	15.30	20.40	18.30	13.60	22.60	12.90	10.60	14.10	10.90	18.30	12.90	17.60	18.60
PB	53	6.60 J	5.60 J	6.40 J	1.00 U	6.20 J	8.10 J	10.70 J	9.10 J	7.40 J	4.60	8.60	6.00 J	5.20 J	7.20 J	13.60 J	10.60 J	7.40 J	7.90 J
SB	31	6.70 U	6.70 U	37.60 U	38.00 U	37.10 U	37.70 U	7.10 U	6.90 U	6.20 U	7.00 U	6.00 U	27.50 U	7.30 U	6.60 U	7.40 U	6.50 U	33.60 U	34.80 U
SE	390	0.38 U	0.36 U	0.43 U	2.00 U	0.42 U	0.43 U	0.41 U	0.40 U	0.38 U	0.40 U	0.36 U	0.31 U	0.42 U	0.38 U	0.42 U	0.37 U	0.38 U	0.39 U
SN	NE	1.60 U	1.60 U	2.20 U	10.00 U	2.10 U	2.20 U	2.00 U	2.00 U	1.60 U	2.00 U	1.70 U	1.60 U	2.10 U	1.60 U	2.10 U	1.60 U	1.90 U	2.00 U
TA	NE	187.00 U	168.00 U	889.00 U	824.00 U	178.00 U	886.00 U	168.00 U	163.00 U	147.00 U	200.00 J	142.00 U	847.00 U	173.00 U	158.00 U	241.00 J	153.00 U	788.00 U	811.00 U
TL	5.5	0.38 U	0.36 U	0.43 U	2.00 U	0.42 U	0.43 U	0.41 U	0.40 U	0.38 U	0.40 U	0.36 U	0.31 U	0.42 U	0.38 U	0.67 J	0.37 U	0.38 U	0.39 U
V	550	12.40 J	11.40 J	14.10	8.00 J	8.40 J	18.20	21.20	20.80 J	18.70 J	20.60	11.80 J	12.40	13.80	12.90	37.10	23.60	18.70	22.60
ZN	23000	27.80	32.50	32.50	8.60 J	28.20	42.40	51.90	43.90	38.80	48.70	32.30	27.40	32.40	34.40	83.10	38.70	49.80	40.40

ELEMENT LEGEND:

AG	Silver	LI	Lithium
AL	Aluminum	MG	Magnesium
AS	Arsenic	MN	Manganese
BA	Barium	MO	Molybdenum
BE	Beryllium	NA	Sodium
BI	Bismuth	NI	Nickel
CA	Calcium	PB	Lead
CD	Cadium	SB	Antimony
CN	Cyanide	SE	Selenium
CO	Cobalt	SN	Tin
CR	Chromium	TA	Tantalum
CU	Copper	TL	Thallium
FE	Iron	V	Vanadium
HG	Mercury	ZN	Zinc

Legend:

U -> compound was not detected
J -> reported value is estimated
NE -> no regulatory threshold level has been established because these are naturally occurring compounds
RBTL/RBGCV -> risk assessment threshold levels/risk based guidance cleanup values

Table IV. 3. Inorganic Analytical Data (Continued)

Sample Number	RBTL/RBGCV	190007	190020	191020	230005	230014	240004	240011	250016	270000	270008	270013	270020	350006	350012	350008	350011	351006
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Compound																		
AG	390	0.63 UJ	0.59 UJ	0.65 UJ	0.65 UJ	0.62 UJ	0.67 UJ	0.70 UJ	0.58 UJ	0.52 UJ	0.48 UJ	0.63 UJ	0.64 UJ	0.69 UJ	0.59 UJ	0.63 UJ	0.69 UJ	0.64 UJ
AL	230000	5850.00	4530.00	5610.00	15600.00	16600.00	15500.00	19900.00	18600.00	13100.00	6580.00	6030.00	6580.00	14700.00	21200.00	13900.00	18600.00	17700.00
AS	23	5.20	4.80	6.10	3.70	4.50	2.60	2.90	3.90	7.40	4.50	4.50	5.00	3.60	3.70	3.40	4.10	6.10
BA	5500	33.70 J	41.30	43.00 J	50.00	32.00 J	26.10 J	33.60 J	51.80	64.10	45.70	51.40	45.60	52.20	44.20	26.20 J	27.60 J	31.60 J
BE	150	0.42 J	0.37 J	0.36 J	0.99 J	1.10	0.89 J	1.20	1.00	0.69 J	0.45 J	0.41 J	0.42 J	1.00 J	1.20	0.89 J	1.00 J	1.00 J
BI	NE	0.44 U	0.43 U	0.44 U	0.41 U	0.41 U	0.46 U	0.45 U	1.10 J	0.36 U	0.39 U	0.42 U	0.44 U	0.46 U	0.44 U	0.49 U	0.47 U	0.59 J
CA	NE	125000.00 J	92200.00 J	96600.00 J	95600.00 J	67700.00 J	58700.00 J	57900.00 J	113000.00 J	75200.00 J	114000.00 J	104000.00 J	102000.00 J	95300.00 J	74500.00 J	49400.00 J	55600.00 J	26400.00 J
CD	39	0.63 U	0.59 U	0.65 U	0.65 U	0.62 U	0.67 U	0.70 U	0.58 U	0.52 U	0.48 U	0.63 U	0.64 UJ	0.69 U	0.59 U	0.63 U	0.69 U	0.64 U
CN	390	0.26 J	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.26 J	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
CO	39	4.30 J	4.30 J	5.20 J	11.10	12.30	11.40	14.30	11.80	7.40 J	4.90 J	4.90 J	4.50 J	11.20 J	11.90	14.30	14.80	14.00
CR	390	11.30 J	9.10 J	10.30 J	21.00	26.40	20.00	29.00	24.60	19.90	11.40 J	11.20 J	10.90 J	23.40	29.20	24.40	24.10	29.70
CU	2900	12.50	12.10	11.90	14.20	19.60	15.70	23.00	16.50	15.40	11.90	12.20	11.00	16.70	20.60	21.70	22.10	22.40
FE	NE	10300.00	9240.00	11200.00	23000.00	22500.00	18200.00	26600.00	23100.00	17100.00	10700.00	10600.00	10400.00	21500.00	23600.00	26900.00	27000.00	30200.00
HG	23	0.09 U	0.09 U	0.06	0.11 U	0.06 U	0.11 U	0.10 U	0.11 U	0.11 U	0.08 U	0.06 U	0.10 U	0.12 U	0.09 U	0.11 U	0.10 U	0.10 U
K	NE	1820.00	1440.00	1930.00	3160.00	6510.00	5710.00	6700.00	7110.00	2350.00	2210.00	1990.00	2300.00	4400.00	7460.00	3400.00	4560.00	4830.00
LI	NE	9.40 J	10.00 J	11.20 J	24.20	29.20	23.20	33.80	31.20	15.50 J	12.40 J	11.70 J	11.70 J	20.30 J	32.30	30.40	30.00	34.20
MG	NE	48600.00 J	37700.00 J	40600.00 U	9910.00 J	7680.00 J	7260.00 J	13200.00 J	12300.00 J	22400.00 J	39600.00 J	41900.00 J	43000.00 J	7060.00 J	8930.00 J	7420.00 J	7760.00 J	8500.00 J
MN	7800	205.00	211.00	223.00	798.00	623.00	529.00	678.00	874.00	369.00	231.00	247.00	250.00	969.00	707.00	757.00	808.00	624.00
MO	NE	1.90 UJ	1.80 UJ	2.40 J	2.00 UJ	1.90 UJ	2.10 UJ	2.20 UJ	1.80 UJ	1.60 UJ	1.40 UJ	1.90 UJ	2.00 UJ	2.10 UJ	1.80 UJ	1.90 UJ	2.10 UJ	2.00 UJ
NA	NE	232.00 J	153.00 J	153.00 J	169.00 J	214.00 J	169.00 J	235.00 J	319.00 J	375.00 J	286.00 J	326.00 J	177.00 J	542.00 J	434.00 J	175.00 J	204.00 J	193.00 J
NI	1600	10.50	11.10	12.20	21.50	23.70	16.70	26.70	21.20	16.20	12.10	11.40	11.30	19.30	23.90	26.60	25.50	30.00
PB	53	6.10 J	4.90 J	7.20 J	7.10 J	4.70 J	4.40 J	6.30 J	6.90 J	9.60 J	5.90 J	6.10 J	5.90 J	7.10 J	6.20 J	6.80 J	3.80 J	5.40 J
SB	31	7.40 UJ	6.90 UJ	7.60 UJ	7.50 UJ	7.20 UJ	7.90 UJ	8.20 UJ	6.70 UJ	6.10 UJ	5.40 UJ	7.30 UJ	7.40 UJ	6.10 UJ	6.90 UJ	7.30 UJ	6.00 UJ	7.50 UJ
SE	390	0.42 U	0.50 J	0.67 J	0.43 U	0.41 U	0.56 J	1.10 J	0.58 J	0.35 U	0.31 U	0.42 U	0.42 U	0.46 U	0.39 U	0.42 U	0.46 U	0.43 U
SN	NE	2.10 UJ	2.00 UJ	2.20 UJ	2.20 UJ	2.10 UJ	2.20 UJ	2.30 UJ	1.90 UJ	1.70 UJ	1.50 UJ	2.10 UJ	2.10 UJ	2.30 UJ	2.00 UJ	2.10 UJ	2.30 UJ	2.10 UJ
TA	NE	173.00 UJ	181.00 J	213.00 J	233.00 J	405.00 J	310.00 J	553.00 J	358.00 J	326.00 J	201.00 J	215.00 J	176.00 UJ	385.00 J	403.00 J	453.00 J	375.00 J	512.00 J
TL	5.5	0.42 U	0.39 U	0.44 U	0.61 J	0.86 J	0.46 U	0.47 U	0.39 U	0.69 J	0.63 J	0.67 J	0.76 J	0.46 U	0.86	1.40 J	1.60 J	1.20 J
V	550	12.20	10.20	12.10	20.60	27.60	22.60	27.30	25.20	27.70	14.30	13.10	14.80	23.70	31.20	20.40	21.60	27.90
ZN	23000	33.30 J	25.70 J	26.00 J	46.40 J	46.10 J	33.60 J	54.30 J	48.50 J	44.10 J	27.50 J	28.10 J	27.90 J	41.20 J	46.80 J	51.70 J	48.60 J	58.60 J

ELEMENT LEGEND:

AG	*Silver*	*LI*	Lithium
AL	*Aluminum*	*MG*	Magnesium
AS	*Arsenic*	*MN*	Manganese
BA	*Barium*	*MO*	Molybdenum
BE	*Beryllium*	*NA*	Sodium
BI	*Bismuth*	*NI*	Nickel
CA	*Calcium*	*PB*	Lead
CD	*Cadium*	*SB*	Antimony
CN	*Cyanide*	*SE*	Selenium
CO	*Cobalt*	*SN*	Tin
CR	*Chromium*	*TA*	Tantalum
CU	*Copper*	*TL*	Thallium
FE	*Iron*	*V*	Vanadium
HG	*Mercury*	*ZN*	Zinc
K	*Potassium*		

Legend:

U –> compound was not detected
J –> reported value is estimated
NE–> no regulatory threshold level has been established because these are naturally occurring componds
RBTL/RBGCV–> risk assessment threshold levels/risk based guidance cleanup values

Table IV. 3. Inorganic Analytical Data (Continued)

Sample Number	RBTL/RBGCV	010002	011002	020003	020006	030004	040007	040012	274000	384000	400000	410010	420020
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Compound													
AG	390	0.59 UJ	0.47 UJ	0.60 UJ	0.56 UJ	0.56 UJ	0.56 UJ	0.61 UJ	3.00 UJ	3.00 UJ	0.55 UJ	0.58 UJ	0.60 UJ
AL	230000	5310.00	8550.00	7980.00	2500.00	10100.00	6680.00	6660.00	35.00 U	35.00 U	11100.00	13700.00	13900.00
AS	23	3.10	3.50	5.60	4.30	2.20	5.30	1.70 J	2.00 U	2.00 U	5.90	6.70	7.10
BA	5500	24.30 J	30.20 J	42.50	22.80 J	38.90	49.50	23.60 J	2.00 U	2.00 U	67.10	77.50	76.80
BE	150	0.31 J	0.49 J	0.44 J	0.19 UJ	0.60 J	0.47 J	0.44 J	1.00 UJ	1.00 UJ	0.66 J	0.85 J	0.84 J
BI	NE	0.39 U	0.43 U	0.41 U	0.41 U	0.38 U	0.45 U	0.43 U	2.10 U	2.10 U	1.80 J	0.50 J	0.42 U
CA	NE	23800.00	27700.00	99100.00	24000.00	91400.00	67300.00	87400.00	43.40 J	93.60 J	48100.00	44100.00	41600.00
CD	39	0.59 UJ	0.47 UJ	0.60 UJ	0.56 UJ	0.56 UJ	0.56 UJ	0.61 UJ	3.00 UJ	3.00 UJ	0.55 UJ	0.58 UJ	0.60 UJ
CN	390	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.30 J
CO	39	4.30 J	4.90 J	5.50 J	2.40 J	5.80 J	4.90 J	5.60 J	4.00 UJ	4.00 UJ	8.40 J	9.50 J	10.40 J
CR	390	8.80	13.30	12.60	5.60	14.20	12.10	10.30	4.00 U	4.00 U	47.70	32.30	30.00
CU	2900	9.10	10.50	14.00	6.90	10.00	10.60	7.30	3.00 U	3.00 U	27.60	33.30	33.60
FE	NE	10300.00	13200.00	13300.00	6050.00	16000.00	10600.00	11900.00	13.70 UJ	35.20 J	16400.00	21100.00	21700.00
HG	23	0.10 U	0.10 J	0.49 J	0.10 U	0.09 U	0.11	0.07 U	0.20 U	0.20 U	0.26 J	0.32 J	0.33 J
K	NE	1250.00 J	2340.00 J	1240.00 J	655.00 J	3010.00 J	934.00 J	1730.00 J	110.00 U	110.00 U	1800.00 J	2370.00 J	2360.00 J
LI	NE	10.70 J	14.80 J	9.30 J	4.10 J	18.00 J	8.20 J	14.00 J	2.10 U	2.10 U	15.60 J	19.00 J	19.80 J
MG	NE	33500.00 J	27700.00 J	27400.00 J	35400.00 J	12200.00 J	27800.00 UJ	9280.00 J	25.00 UJ	25.00 UJ	20400.00 J	13400.00 J	12500.00 J
MN	7800	250.00 J	299.00 J	349.00 J	185.00 J	249.00 J	330.00 J	278.00 J	2.00 UJ	2.00 UJ	436.00 J	476.00 J	467.00 J
MO	NE	1.80 UJ	1.40 UJ	1.90 UJ	1.70 UJ	1.70 JUJ	1.70 UJ	1.90 UJ	9.20 UJ	24.00 J	1.70 UJ	1.80 UJ	1.80 UJ
NA	NE	130.00 J	144.00 J	142.00 J	136.00 J	659.00 J	166.00 J	106.00 J	128.00 UJ	128.00 UJ	105.00 J	117.00 J	115.00 J
NI	1600	8.80	11.20	13.10	6.70 J	13.80	11.30	11.10	8.00 U	8.00 U	20.10	25.50	25.70
PB	53	8.60 J	12.40 J	11.90 J	4.90 J	6.20 J	7.50 J	3.50 J	1.00 J	1.00 UJ	34.50 J	43.90 J	48.70 J
SB	31	6.90 UJ	5.50 UJ	7.10 UJ	6.50 UJ	6.50 UJ	6.50 UJ	7.10 UJ	35.00 UJ	35.00 UJ	6.40 UJ	6.80 UJ	7.00 UJ
SE	390	0.39 U	0.31 U	0.40 U	0.37 U	0.37 U	0.37 U	0.40 U	2.00 U	2.00 U	0.54 J	0.75 J	0.68 J
SN	NE	2.00 U	1.60 U	2.00 U	1.90 U	1.90 U	1.90 U	2.00 U	10.00 U	10.00 U	2.10 J	1.90 U	2.00 U
TA	NE	162.00 UJ	226.00 J	166.00 UJ	154.00 UJ	201.00 J	231.00 J	221.00 J	824.00 UJ	824.00 UJ	223.00 J	273.00 J	354.00 J
TL	5.5	0.58 J	0.65 J	0.73 J	0.37 UJ	0.69 J	0.57 J	0.54 J	2.00 UJ	2.60 J	0.38 J	0.94 J	0.94 J
V	550	8.40 J	12.20	16.50	5.90 J	12.10	15.70	7.10 J	2.00 U	2.00 U	21.40	26.10	26.20
ZN	23000	30.60 J	31.60 J	47.30 J	22.10 J	29.30 J	32.50 J	26.40 J	3.00 UJ	3.00 UJ	91.00 J	113.00 J	121.00 J

ELEMENT LEGEND:

AG	*Silver*	*LI*	*Lithium*
AL	*Aluminum*	*MG*	*Magnesium*
AS	*Arsenic*	*MN*	*Manganese*
BA	*Barium*	*MO*	*Molybdenum*
BE	*Beryllium*	*NA*	*Sodium*
BI	*Bismuth*	*NI*	*Nickel*
CA	*Calcium*	*PB*	*Lead*
CD	*Cadium*	*SB*	*Antimony*
CN	*Cyanide*	*SE*	*Selenium*
CO	*Cobalt*	*SN*	*Tin*
CR	*Chromium*	*TA*	*Tantalum*
CU	*Copper*	*TL*	*Thallium*
FE	*Iron*	*V*	*Vanadium*
HG	*Mercury*	*ZN*	*Zinc*
K	*Potassium*		

Legend:

U –> compound was not detected
J –> reported value is estimated
NE–> no regulatory threshold level has been established because these are naturally occurring compounds
RBTL / RBGCV –> risk assessment threshold levels/risk based guidance cleanup values

Table IV. 4. Nitrate/Nitrite, Sulfate, Chloride, Fluoride, & Ammonia Analytical Data

Sample Number	Chloride	Fluoride	Nitrogen Ammonia (Dist)	Nitrogen, Nitrate/Nitrite	Sulfate
UNITS	UG/L	UG/L	UG/L & UG/KG	UG/L & UG/KG	UG/L
050004	3.90	0.60	2.00 U	0.10 U	4.90
050010	4.00	0.40	2.00 U	1.40	5.80
060000	1.90	0.50	2.00 U	0.10 U	0.10 U
060005	1.20	1.00	2.00 U	0.10 U	5.80
070001	1.20	0.40 U	2.00 U	0.10 U	2.20
070012	2.30	0.50	2.00 U	0.10 U	4.00
071001	1.10	0.40	2.00 U	0.10 U	2.70
074000	22.00	0.40 U	2.00 U	0.10 U	29.00
080001	0.40 U	0.40 U	2.00 U	0.10 U	5.40
080009	8.30	0.40 U	2.00 U	0.10 U	29.00
090017	4.30	0.40 U	2.00 U	0.10 U	4.50
110006	23.00	0.50	9.40	0.10 U	7.60
120001	4.30	0.50	2.00 U	0.10 U	100.00
120020	13.00	0.50	8.30	0.10 U	8.10
124000	31.00	0.40 U	2.00 U	1.40	37.00
170007	9.60	0.50	2.00 U	0.10 U	7.60
170020	6.60	0.40 U	2.00 U	0.10 U	20.00
171020	6.20	0.40 U	2.00 U	0.10 U	18.00
090002	1.20	0.40 U	2.00 U	0.10 U	3.10
100011	1.20	0.40 U	2.00 U	0.10 U	13.00
101020	2.70	0.50	2.00 U	0.10 U	6.20
104000	21.00	0.40 U	2.00 U	1.30	29.00
110017	12.00	0.40 U	2.00 U	0.10 U	30.00
130003	5.00	0.50	2.00 U	0.10 U	73.00
130008	10.00	0.50	2.00 U	0.10 U	130.00
140001	5.90	0.60	2.00 U	0.10 U	22.00
140006	22.00	0.50	2.00 U	0.10 U	160.00
150001	26.00	0.90	2.00 U	0.10 U	53.00
150020	14.00	0.40 U	2.00 U	0.10 U	38.00
320000	2.70	0.30	2.00 U	0.10 U	38.00
320006	11.00	0.30	2.00 U	0.10 U	7.20
330000	1.20	0.50	2.00 U	0.10 U	11.00
360000	2.00	0.40 U	2.00 U	0.10 U	29.00
360006	3.80	0.50	13.00	1.70	27.00
360013	3.70	0.40 U	2.00 U	0.10 U	0.10 U
360020	7.00	0.40 U	2.00 U	0.10 U	17.00
100020	3.80	1.00	2.00 U	0.10 U	8.50
160010	18.00	0.40 U	14.00	0.10 U	5.40
160018	24.00	1.00	2.00 U	0.10 U	16.00
180012	33.00	0.40 U	2.00 U	0.10 U	35.00
180020	11.00	0.40 U	2.00 U	0.10 U	3.00
210005	3.00	1.00	15.00	0.10 U	0.10 U
210012	6.00	1.00	2.00 U	0.10 U	31.00
260002	5.00	1.00	2.00 U	0.10 U	8.00
260010	3.00	1.00	2.00 U	0.10 U	3.00
260020	11.00	1.00	2.00 U	0.10 U	9.00
280000	1.00	0.40 U	2.00 U	0.10 U	2.00
280006	6.00	0.40 U	34.00	0.10 U	0.10 U
280013	4.00	0.40 U	21.00	0.10 U	9.00
280020	0.40 U	0.40 U	2.00 U	0.10 U	15.00
281000	3.00	0.40 U	2.00 U	0.10 U	0.10 U
290000	2.00	0.40 U	2.00 U	0.10 U	0.10 U
350000	3.00	1.00	22.00	0.10 U	0.10 U
350013	4.00	0.40 U	2.00 U	0.10 U	3.00
354000	31.00	1.00	NA	0.10 U	39.00

U –> compound was not detected NA –> means not available

Table IV. 4. Nitrate/Nitrite, Sulfate, Chloride, Fluoride, & Ammonia Analytical Data (Continued)

Sample Number	Chloride	Fluoride	Nitrogen Ammonia (Dist)	Nitrogen, Nitrate/Nitrite	Sulfate
UNITS	UG/L	UG/L	UG/L & UG/KG	UG/L & UG/KG	UG/L
200020	9.00	0.40 U	2.00 U	0.10 U	13.00
220010	4.00	0.60	2.00 U	0.10 U	8.00
220005	3.00	0.90	2.00 U	0.10 U	14.00
250009	4.00	1.00	2.00 U	0.10 U	2.00
290006	5.00	0.40 U	2.00 U	0.10 U	10.00
290013	6.00	0.40 U	2.00 U	1.00	27.00
294000	26.00	0.40 U	2.00 U	1.00	33.00
300000	14.00	0.40 U	2.00 U	0.10 U	66.00
301000	16.00	0.40 U	2.00 U	0.10 U	29.00
310000	5.00	1.00	2.00 U	0.10 U	42.00
330006	8.00	1.00	2.00 U	0.10 U	32.00
340000	0.40 U	1.00	2.00 U	0.10 U	4200.00
340006	12.00	0.40 U	2.00 U	0.10 U	40.00
341000	6.00	0.80	2.00 U	0.10 U	41.00
350006	7.00	1.00	2.00 U	0.10 U	0.10 U
370006	2.00	0.60	2.00 U	0.10 U	9.00
370012	4.00	0.70	2.00 U	0.10 U	5.00
190007	7.00	1.00	65.00	0.10 U	6.00
190020	9.00	1.00	4800.00	0.10 U	8.00
191020	8.00	1.00	12.00	0.10 U	4.00
230005	7.00	1.00	53.00	0.10 U	17.00
230014	5.00	1.00	30.00	0.10 U	6.00
240004	2.00	1.00	5700.00	0.10 U	0.10 U
240011	2.00	1.00	5500.00	0.10 U	5.00
250016	7.00	0.40 U	5100.00	0.10 U	8.00
270000	19.00	0.40 U	27.00	0.10 U	11.00
270006	26.00	0.40 U	2.00 U	0.10 U	20.00
270013	7.00	0.40 U	2.00 U	0.10 U	4.00
270020	8.00	1.00	2.00 U	0.10 U	11.00
380006	7.00	1.00	13.00	0.10 U	150.00
380012	9.00	1.00	2.00 U	0.10 U	27.00
390006	27.00	1.00	2.00 U	0.10 U	6.00
390011	4.00	0.40 U	2.00 U	0.10 U	0.10 U
391006	3.00	1.00	2.00 U	0.10 U	0.10 U
010002	0.40 U	1.00	2.00 U	0.10 U	3800.00
011002	2.00	0.00	2.00 U	0.10 U	0.10 U
020003	0.40 U	0.40 U	17.00	0.10 U	4300.00
020006	0.40 U	0.40 U	2.00 U	0.10 U	6.00
030004	3.00	0.40 U	2.00 U	0.10 U	8.00
040007	3.00	0.40 U	2.00 U	0.10 U	0.10 U
040012	2.00	1.00	2.00 U	0.10 U	160.00
274000	0.40 U	0.40 U	2.00 U	0.10 U	0.10 U
384000	0.40 U	0.40 U	2.00 U	0.10 U	0.10 U
400000	3.00	0.40 U	16.00	4.00	0.10 U
410010	3.00	1.00	21.00	3.00	0.10 U
420020	6.00	0.40 U	19.00	3.00	0.10 U

LEGEND:
U –> compound was not detected NA –> means not available

Table IV. 5. Pesticide/PCB Analytical Data

Sample Number	RBTL / RBGCV	050004	050010	060000	060005	070001	070012	071001	074000	080001	080009	090017	110006	120001	120020	124000	170007	170020	171020
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Compound																			
4,4'-DDD	1900	7.30 RC	7.60 RC	7.40 RC	7.20 RC	7.10 RC	7.80 RC	7.60 RC	0.10 RC	7.50 RC	8.10 RC	1.00 RC	8.30 RC	6.90 RC	0.74 RC	0.10 RC	0.40 RC	7.60 RC	7.80 RC
4,4'-DDE	1900	7.30 RC	7.60 RC	7.40 RC	7.20 RC	7.10 RC	7.80 RC	7.60 RC	0.10 RC	7.50 RC	8.10 RC	7.40 RC	8.30 RC	6.90 RC	0.74 RC	0.10 RC	0.75 RC	7.60 RC	7.80 RC
4,4'-DDT	5000.00	7.30 RC	7.60 RC	7.40 RC	7.20 RC	7.10 RC	7.80 RC	7.60 RC	0.10 RC	7.50 RC	8.10 RC	7.40 RC	8.30 RC	6.90 RC	0.74 RC	0.10 RC	0.75 RC	7.60 RC	7.80 RC
Aldrin	100.00	3.70 RC	3.80 RC	3.70 RC	3.60 RC	3.50 RC	3.90 RC	3.80 RC	0.05 RC	3.70 RC	4.10 RC	3.70 RC	4.20 RC	3.40 RC	0.37 RC	0.05 RC	0.37 RC	3.80 RC	3.90 RC
Arodor-1016	220.00	73.00 RC	76.00 RC	74.00 RC	72.00 RC	71.00 RC	78.00 RC	76.00 RC	1.00 RC	75.00 RC	81.00 RC	74.00 RC	83.00 RC	69.00 RC	7.40 RC	1.00 RC	7.50 RC	76.00 RC	78.00 RC
Arodor-1221	220.00	150.00 RC	150.00 RC	150.00 RC	140.00 RC	140.00 RC	160.00 RC	150.00 RC	2.00 RC	150.00 RC	160.00 RC	150.00 RC	170.00 RC	140.00 RC	15.00 RC	2.00 RC	15.00 RC	150.00 RC	160.00 RC
Arodor-1232	220.00	73.00 RC	76.00 RC	74.00 RC	72.00 RC	71.00 RC	78.00 RC	76.00 RC	1.00 RC	75.00 RC	81.00 RC	74.00 RC	83.00 RC	69.00 RC	7.40 RC	1.00 RC	7.50 RC	76.00 RC	78.00 RC
Arodor-1242	220.00	73.00 RC	76.00 RC	74.00 RC	72.00 RC	71.00 RC	78.00 RC	76.00 RC	1.00 RC	75.00 RC	81.00 RC	74.00 RC	83.00 RC	69.00 RC	7.40 RC	1.00 RC	7.50 RC	76.00 RC	910.00 RC
Arodor-1248	83	73.00 RC	76.00 RC	74.00 RC	72.00 RC	71.00 RC	78.00 RC	76.00 RC	1.00 RC	75.00 RC	81.00 RC	74.00 RC	83.00 RC	69.00 RC	7.40 RC	1.00 RC	7.50 RC	76.00 RC	78.00 RC
Arodor-1254	83	73.00 RC	76.00 RC	74.00 RC	72.00 RC	71.00 RC	78.00 RC	76.00 RC	1.00 RC	75.00 RC	81.00 RC	74.00 RC	83.00 RC	69.00 RC	7.40 RC	1.00 RC	7.50 RC	76.00 RC	78.00 RC
Arodor-1260	83	73.00 RC	76.00 RC	74.00 RC	72.00 RC	71.00 RC	78.00 RC	76.00 RC	1.00 RC	75.00 RC	81.00 RC	74.00 RC	83.00 RC	69.00 RC	7.40 RC	1.00 RC	7.50 RC	76.00 RC	78.00 RC
Dieldrin	40	7.30 RC	7.60 RC	7.40 RC	7.20 RC	7.10 RC	7.80 RC	7.60 RC	0.10 RC	7.50 RC	8.10 RC	7.40 RC	8.30 RC	6.90 RC	0.74 RC	0.10 RC	0.75 RC	7.60 RC	7.80 RC
Endosulfan I	3900.00	3.70 RC	3.80 RC	3.70 RC	3.60 RC	3.50 RC	3.90 RC	3.80 RC	0.05 RC	3.70 RC	4.10 RC	3.70 RC	4.20 RC	3.40 RC	0.37 RC	0.05 RC	0.37 RC	3.80 RC	3.90 RC
Endosulfan II	3900.00	7.30 RC	7.60 RC	7.40 RC	7.20 RC	7.10 RC	7.80 RC	7.60 RC	0.10 RC	7.50 RC	8.10 RC	7.40 RC	8.30 RC	6.90 RC	0.74 RC	0.10 RC	0.75 RC	7.60 RC	7.80 RC
Endosulfan sulfate	3900.00	7.30 RC	7.60 RC	7.40 RC	7.20 RC	7.10 RC	7.80 RC	7.60 RC	0.10 RC	7.50 RC	8.10 RC	7.40 RC	8.30 RC	6.90 RC	0.74 RC	0.10 RC	0.75 RC	7.60 RC	7.80 RC
Endrin	23000.00	7.30 RC	7.60 RC	7.40 RC	7.20 RC	7.10 RC	7.80 RC	7.60 RC	0.10 RC	7.50 RC	8.10 RC	7.40 RC	8.30 RC	6.90 RC	0.74 RC	0.10 RC	0.75 RC	7.60 RC	7.80 RC
Endrin aldehyde	23000.00	7.30 RC	7.60 RC	7.40 RC	7.20 RC	7.10 RC	7.80 RC	7.60 RC	0.10 RC	7.50 RC	8.10 RC	7.40 RC	8.30 RC	6.90 RC	0.74 RC	0.10 RC	0.75 RC	7.60 RC	7.80 RC
Endrin ketone	23000.00	7.30 RC	7.60 RC	7.40 RC	7.20 RC	7.10 RC	7.80 RC	7.60 RC	0.10 RC	7.50 RC	8.10 RC	7.40 RC	8.30 RC	6.90 RC	0.74 RC	0.10 RC	0.75 RC	7.60 RC	7.80 RC
Heptachlor	380.00	3.70 RC	3.80 RC	3.70 RC	3.60 RC	3.50 RC	3.90 RC	3.80 RC	0.05 RC	3.70 RC	4.10 RC	3.70 RC	4.20 RC	3.40 RC	0.37 RC	0.05 RC	0.37 RC	3.80 RC	3.90 RC
Heptachlor epoxide	190.00	3.70 RC	3.80 RC	3.70 RC	3.60 RC	3.50 RC	3.90 RC	3.80 RC	0.05 RC	3.70 RC	4.10 RC	3.70 RC	4.20 RC	3.40 RC	0.37 RC	0.05 RC	0.37 RC	3.80 RC	3.90 RC
Methoxychlor	390000.00	37.00 RC	38.00 RC	37.00 RC	36.00 RC	35.00 RC	39.00 RC	38.00 RC	0.50 RC	37.00 RC	41.00 RC	37.00 RC	42.00 RC	34.00 RC	3.70 RC	0.50 RC	3.70 RC	38.00 RC	39.00 RC
Toxaphene	1500.00	370.00 RC	380.00 RC	370.00 RC	360.00 RC	350.00 RC	390.00 RC	380.00 RC	5.00 RC	370.00 RC	410.00 RC	370.00 RC	420.00 RC	340.00 RC	37.00 RC	5.00 RC	37.00 RC	380.00 RC	390.00 RC
alpha-BHC	270.00	3.70 RC	3.80 RC	3.70 RC	3.60 RC	3.50 RC	3.90 RC	3.80 RC	0.05 RC	3.70 RC	4.10 RC	3.70 RC	4.20 RC	3.40 RC	0.05 RC	0.05 RC	0.21 RC	3.80 RC	3.90 RC
alpha-Chlordane	1300.00	3.70 RC	3.80 RC	3.70 RC	3.60 RC	3.50 RC	3.90 RC	3.80 RC	0.05 RC	3.70 RC	4.10 RC	3.70 RC	4.20 RC	3.40 RC	0.37 RC	0.05 RC	0.37 RC	3.80 RC	3.90 RC
beta-BHC	350	3.70 RC	3.80 RC	3.70 RC	3.60 RC	3.50 RC	3.90 RC	3.80 RC	0.05 RC	3.70 RC	4.10 RC	3.70 RC	4.20 RC	3.40 RC	0.37 RC	0.05 RC	0.37 RC	3.80 RC	3.90 RC
delta-BHC	950.00	3.70 RC	3.80 RC	3.70 RC	3.60 RC	3.50 RC	3.90 RC	3.80 RC	0.05 RC	3.70 RC	4.10 RC	3.70 RC	4.20 RC	3.40 RC	0.37 RC	0.05 RC	0.37 RC	3.80 RC	3.90 RC
gamma-BHC (Lindar	1300.00	3.70 RC	3.80 RC	3.70 RC	3.60 RC	3.50 RC	3.90 RC	3.80 RC	0.05 RC	3.70 RC	4.10 RC	3.70 RC	4.20 RC	3.40 RC	0.37 RC	0.05 RC	0.37 RC	3.80 RC	3.90 RC
gamma-Chlordane	1300.00	3.70 RC	3.80 RC	3.70 RC	3.60 RC	3.50 RC	3.90 RC	3.80 RC	0.05 RC	3.70 RC	4.10 RC	3.70 RC	4.20 RC	3.40 RC	0.37 RC	0.05 RC	0.37 RC	3.80 RC	3.90 RC

Legend:
R -> analytical result is unusable.
C -> qualified due to calibration.
U -> compound was not detected
RBTL / RBGCV -> risk assessment based threshold levels/risk based guidance cleanup values

Table IV. 5. Pesticide/PCB Analytical Data (Continued)

Sample Number	RBTL / RBGCV	090002	100011	101020	104000	110017	130003	130006	140001	140006	150001	150020	320000	320006	330000	360000	360006	360013	360020
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/UG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Compound																			
4,4'-DDD	1900	3.60 UJ	3.60 UJ	3.70 UJ	0.10 UJ	7.30 UJ	3.60 UJ	3.60 UJ	3.50 UJ	3.70 UJ	3.60 UJ	3.60 UJ	3.70 UJ	11.00	3.50 UJ	3.80 UJ	3.80 UJ	1.00 J	3.60
4,4'-DDE	1900	3.60 UJ	3.60 UJ	3.70 UJ	0.10 UJ	7.30 UJ	3.60 UJ	3.60 UJ	3.50 UJ	3.70 UJ	3.60 UJ	3.60 UJ	3.70 UJ	3.70 UJ	3.50 UJ	3.80 UJ	3.80 UJ	3.90 UJ	3.60 UJ
4,4'-DDT	5000	3.60 UJ	3.60 UJ	3.70 UJ	0.10 UJ	7.30 UJ	3.60 UJ	3.60 UJ	3.50 UJ	3.70 UJ	3.60 UJ	3.60 UJ	3.70 UJ	3.70 UJ	3.50 UJ	3.80 UJ	3.80 UJ	3.90 UJ	3.60 UJ
Aldrin	100	1.80 UJ	1.80 UJ	1.90 UJ	0.05 UJ	3.70 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.90 UJ	1.90 UJ	1.90 UJ	1.80 UJ
Arodor-1016	220	36.00 UJ	36.00 UJ	37.00 UJ	1.00 UJ	73.00 UJ	36.00 UJ	36.00 UJ	35.00 UJ	37.00 UJ	36.00 UJ	36.00 UJ	37.00 UJ	37.00 UJ	35.00 UJ	38.00 UJ	38.00 UJ	39.00 UJ	36.00 UJ
Arodor-1221	220	72.00 UJ	72.00 UJ	74.00 UJ	2.00 UJ	150.00 UJ	72.00 UJ	72.00 UJ	70.00 UJ	74.00 UJ	72.00 UJ	72.00 UJ	73.00 UJ	74.00 UJ	70.00 UJ	76.00 UJ	77.00 UJ	78.00 UJ	72.00 UJ
Arodor-1232	220	36.00 UJ	36.00 UJ	37.00 UJ	1.00 UJ	73.00 UJ	36.00 UJ	36.00 UJ	35.00 UJ	37.00 UJ	36.00 UJ	36.00 UJ	37.00 UJ	37.00 UJ	35.00 UJ	38.00 UJ	38.00 UJ	39.00 UJ	36.00 UJ
Arodor-1242	220	36.00 UJ	36.00 UJ	37.00 UJ	1.00 UJ	73.00 UJ	36.00 UJ	36.00 UJ	35.00 UJ	37.00 UJ	36.00 UJ	36.00 UJ	37.00 UJ	37.00 UJ	35.00 UJ	38.00 UJ	38.00 UJ	39.00 UJ	36.00 UJ
Arodor-1248	88	36.00 UJ	36.00 UJ	37.00 UJ	1.00 UJ	73.00 UJ	36.00 UJ	36.00 UJ	35.00 UJ	37.00 UJ	36.00 UJ	36.00 UJ	37.00 UJ	37.00 UJ	35.00 UJ	38.00 UJ	38.00 UJ	39.00 UJ	36.00 UJ
Arodor-1254	88	36.00 UJ	36.00 UJ	37.00 UJ	1.00 UJ	73.00 UJ	36.00 UJ	36.00 UJ	35.00 UJ	37.00 UJ	36.00 UJ	36.00 UJ	37.00 UJ	37.00 UJ	35.00 UJ	38.00 UJ	38.00 UJ	39.00 UJ	36.00 UJ
Arodor-1260	88	36.00 UJ	36.00 UJ	37.00 UJ	1.00 UJ	73.00 UJ	36.00 UJ	36.00 UJ	35.00 UJ	37.00 UJ	36.00 UJ	36.00 UJ	37.00 UJ	37.00 UJ	35.00 UJ	38.00 UJ	38.00 UJ	39.00 UJ	36.00 UJ
Dieldrin	40	3.60 UJ	3.60 UJ	3.70 UJ	0.10 UJ	7.30 UJ	3.60 UJ	3.60 UJ	3.50 UJ	3.70 UJ	3.60 UJ	3.60 UJ	3.70 UJ	3.70 UJ	3.50 UJ	3.80 UJ	0.55 J	0.60 J	3.60 UJ
Endosulfan I	3900	1.80 UJ	1.80 UJ	1.90 UJ	0.05 UJ	3.70 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.90 UJ	1.90 UJ	1.90 UJ	1.80 UJ
Endosulfan II	3900	3.60 UJ	2.50 J	3.70 UJ	0.10 UJ	7.30 UJ	3.60 UJ	3.60 UJ	3.50 UJ	3.70 UJ	3.60 UJ	3.60 UJ	3.70 UJ	3.70 UJ	3.50 UJ	3.80 UJ	3.80 UJ	3.90 UJ	3.60 UJ
Endosulfan sulfate	3900	3.60 UJ	3.60 UJ	3.70 UJ	0.10 UJ	7.30 UJ	3.60 UJ	3.60 UJ	3.50 UJ	3.70 UJ	3.60 UJ	3.60 UJ	3.70 UJ	3.70 UJ	3.50 UJ	3.80 UJ	3.80 UJ	3.90 UJ	3.60 UJ
Endrin	23000	3.60 UJ	3.60 UJ	3.70 UJ	0.10 UJ	7.30 UJ	3.60 UJ	3.60 UJ	3.50 UJ	3.70 UJ	3.60 UJ	3.60 UJ	3.70 UJ	3.70 UJ	3.50 UJ	3.80 UJ	3.80 UJ	3.90 UJ	3.60 UJ
Endrin aldehyde	23000	3.60 UJ	3.60 UJ	3.70 UJ	0.10 UJ	7.30 UJ	3.60 UJ	3.60 UJ	3.50 UJ	3.70 UJ	3.60 UJ	3.60 UJ	3.70 UJ	3.70 UJ	3.50 UJ	3.80 UJ	3.80 UJ	3.90 UJ	3.60 UJ
Endrin ketone	23000	3.60 UJ	3.60 UJ	3.70 UJ	0.10 UJ	7.30 UJ	3.60 UJ	3.60 UJ	3.50 UJ	3.70 UJ	3.60 UJ	3.60 UJ	3.70 UJ	3.70 UJ	3.50 UJ	3.80 UJ	3.80 UJ	3.90 UJ	3.60 UJ
Heptachlor	380	1.80 UJ	1.80 UJ	1.90 UJ	0.05 UJ	3.70 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.90 UJ	0.92 UJ	1.30 UJ	1.80 UJ
Heptachlor epoxide	190	1.80 UJ	1.80 UJ	1.90 UJ	0.05 UJ	3.70 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.90 UJ	1.90 UJ	1.90 UJ	1.80 UJ
Methoxychlor	390000	18.00 UJ	18.00 UJ	19.00 UJ	0.50 UJ	37.00 UJ	18.00 UJ	18.00 UJ	18.00 UJ	19.00 UJ	18.00 UJ	18.00 UJ	18.00 UJ	19.00 UJ	18.00 UJ	19.00 UJ	19.00 UJ	19.00 UJ	18.00 UJ
Toxaphene	1500	180.00 UJ	180.00 UJ	190.00 UJ	5.00 UJ	370.00 UJ	180.00 UJ	180.00 UJ	180.00 UJ	190.00 UJ	180.00 UJ	180.00 UJ	180.00 UJ	190.00 UJ	180.00 UJ	190.00 UJ	190.00 UJ	190.00 UJ	180.00 UJ
alpha-BHC	270	1.80 UJ	0.29 UJ	1.90 UJ	0.05 UJ	3.70 UJ	1.80 UJ	0.20 J	1.80 UJ	1.90 UJ	1.80 UJ	1.80 UJ	2.20 J	2.40 J	1.80 UJ	1.40 J	0.49 J	0.59 J	1.80 J
alpha-Chlordane	1300	1.80 UJ	1.80 UJ	1.90 UJ	0.05 UJ	3.70 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.90 UJ	1.90 UJ	1.90 UJ	1.80 UJ
beta-BHC	350	1.80 UJ	1.80 UJ	1.90 UJ	0.05 UJ	3.70 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.90 UJ	1.90 UJ	1.90 UJ	1.80 UJ
delta-BHC	950	1.80 UJ	1.50 J	1.90 UJ	0.05 UJ	3.70 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.90 UJ	1.90 UJ	1.90 UJ	1.80 UJ
gamma-BHC (Lindane)	1300	1.80 UJ	1.80 UJ	1.90 UJ	0.05 UJ	3.70 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.90 UJ	1.90 UJ	1.90 UJ	1.80 UJ
gamma-Chlordane	1300	1.80 UJ	1.80 UJ	1.90 UJ	0.05 UJ	3.70 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	1.90 UJ	1.90 UJ	1.90 UJ	1.80 UJ

Table IV. 5. Pesticide/PCB Analytical Data (Continued)

Sample Number	RBTL/RBGCV	100020	160010	160018	180012	180020	210005	210012	260002	260010	260020	280000	280006	280013	280020	281000	290000	350000	350013	350020	354000
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L
Compound																					
4,4'-DDD	1900	3.70 UJ	4.10 UJ	4.10 U	3.70 UJ	3.70 UJ	4.00 UJ	3.80 UJ	3.60 UJ	3.80 UJ	3.70 UJ	3.50 UJ	4.00 UJ	4.00 UJ	3.60 UJ	3.50 U	3.50 UJ	3.80 UJ	3.90 U	3.80 UJ	0.11 U
4,4'-DDE	1900	3.70 UJ	4.10 UJ	4.10 U	3.70 UJ	3.70 UJ	4.00 UJ	3.80 UJ	3.60 UJ	3.80 UJ	3.70 UJ	3.50 UJ	4.00 UJ	4.00 UJ	3.60 UJ	3.50 U	3.50 UJ	3.80 UJ	3.90 U	3.80 UJ	0.11 U
4,4'-DDT	5000	3.70 UJ	1.50 J	3.10 J	3.70 UJ	3.70 UJ	4.00 UJ	3.60 J	2.30 J	2.60 J	3.70 UJ	3.50 UJ	4.00 UJ	4.00 UJ	1.70 J	3.50 UJ	0.90 J	3.80 UJ	3.90 UJ	3.80 UJ	0.06 UJ
Aldrin	100	1.80 UJ	2.10 UJ	2.00 U	1.80 UJ	1.80 UJ	2.00 UJ	1.90 UJ	1.80 UJ	1.90 UJ	1.90 UJ	1.70 UJ	0.61 J	2.00 UJ	1.80 UJ	1.70 U	1.80 UJ	1.90 UJ	2.00 U	1.90 UJ	0.06 U
Aroclor-1016	220	37.00 UJ	41.00 UJ	41.00 U	37.00 UJ	37.00 UJ	40.00 UJ	38.00 UJ	36.00 UJ	38.00 UJ	37.00 UJ	35.00 UJ	40.00 UJ	40.00 UJ	36.00 UJ	35.00 U	35.00 UJ	38.00 UJ	39.00 U	38.00 UJ	1.10 U
Aroclor-1221	220	73.00 UJ	82.00 UJ	81.00 U	73.00 UJ	73.00 UJ	80.00 UJ	76.00 UJ	72.00 UJ	76.00 UJ	75.00 UJ	69.00 UJ	79.00 UJ	80.00 UJ	72.00 UJ	69.00 U	70.00 UJ	77.00 UJ	78.00 U	76.00 UJ	2.30 U
Aroclor-1232	220	37.00 UJ	41.00 UJ	41.00 U	37.00 UJ	37.00 UJ	40.00 UJ	38.00 UJ	36.00 UJ	38.00 UJ	37.00 UJ	35.00 UJ	40.00 UJ	40.00 UJ	36.00 UJ	35.00 U	35.00 UJ	38.00 UJ	39.00 U	38.00 UJ	1.10 U
Aroclor-1242	220	37.00 UJ	41.00 UJ	41.00 U	37.00 UJ	37.00 UJ	40.00 UJ	38.00 UJ	36.00 UJ	38.00 UJ	37.00 UJ	35.00 UJ	40.00 UJ	40.00 UJ	36.00 UJ	35.00 U	35.00 UJ	38.00 UJ	39.00 U	38.00 UJ	1.10 U
Aroclor-1248	83	37.00 UJ	41.00 UJ	41.00 U	37.00 UJ	37.00 UJ	40.00 UJ	38.00 UJ	36.00 UJ	38.00 UJ	37.00 UJ	35.00 UJ	40.00 UJ	40.00 UJ	36.00 UJ	35.00 U	35.00 UJ	38.00 UJ	39.00 U	38.00 UJ	1.10 U
Aroclor-1254	83	37.00 UJ	41.00 UJ	41.00 U	37.00 UJ	37.00 UJ	40.00 UJ	38.00 UJ	36.00 UJ	38.00 UJ	37.00 UJ	35.00 UJ	40.00 UJ	40.00 UJ	36.00 UJ	35.00 U	35.00 UJ	38.00 UJ	39.00 U	38.00 UJ	1.10 U
Aroclor-1260	83	37.00 UJ	41.00 UJ	41.00 U	37.00 UJ	37.00 UJ	40.00 UJ	38.00 UJ	36.00 UJ	38.00 UJ	37.00 UJ	35.00 UJ	40.00 UJ	40.00 UJ	36.00 UJ	35.00 U	35.00 UJ	38.00 UJ	39.00 U	38.00 UJ	1.10 U
Dieldrin	40	3.70 UJ	4.10 UJ	4.10 U	3.70 UJ	3.70 UJ	4.00 UJ	3.80 UJ	3.60 UJ	3.80 UJ	3.70 UJ	3.50 UJ	4.90 UJ	5.20 UJ	3.60 UJ	3.50 U	3.50 UJ	3.80 UJ	3.90 U	3.80 UJ	0.08 U
Endosulfan I	3900	1.80 UJ	2.10 UJ	2.00 UJ	1.80 UJ	1.80 UJ	2.00 UJ	1.90 UJ	1.80 UJ	1.40 J	1.90 UJ	1.70 UJ	2.00 UJ	2.00 UJ	1.80 UJ	1.70 UJ	1.80 UJ	1.90 UJ	2.00 UJ	1.90 UJ	0.11 UJ
Endosulfan II	3900	3.70 UJ	4.10 UJ	4.10 U	3.70 UJ	3.70 UJ	4.00 UJ	3.80 UJ	3.60 UJ	3.80 UJ	3.70 UJ	3.50 UJ	4.00 UJ	4.00 UJ	3.60 UJ	3.50 U	3.50 UJ	3.80 UJ	3.90 U	3.80 UJ	0.06 U
Endosulfan sulfate	3900	3.70 UJ	4.10 UJ	4.10 U	3.70 UJ	3.70 UJ	4.00 UJ	3.80 UJ	3.60 UJ	3.80 UJ	3.70 UJ	3.50 UJ	4.00 UJ	4.00 UJ	3.60 UJ	3.50 U	3.50 UJ	3.80 UJ	3.90 U	3.80 UJ	0.11 U
Endrin	23000	3.70 UJ	0.12 J	0.29 J	3.70 UJ	3.70 UJ	4.00 UJ	3.80 UJ	0.78 J	0.16 J	3.70 UJ	3.50 UJ	4.00 UJ	0.25 J	3.60 UJ	3.50 U	3.50 UJ	3.80 UJ	3.90 U	3.80 UJ	0.11 U
Endrin aldehyde	23000	3.70 UJ	4.10 UJ	4.10 U	3.70 UJ	3.70 UJ	4.00 UJ	3.80 UJ	3.60 UJ	3.80 UJ	3.70 UJ	3.50 UJ	4.00 UJ	4.00 UJ	3.60 UJ	3.50 U	3.50 UJ	3.80 UJ	3.90 U	3.80 UJ	0.11 U
Endrin ketone	23000	3.70 UJ	4.10 UJ	4.10 U	3.70 UJ	3.70 UJ	4.00 UJ	3.80 UJ	3.60 UJ	3.80 UJ	3.70 UJ	3.50 UJ	4.00 UJ	4.00 UJ	3.60 UJ	3.50 U	3.50 UJ	3.80 UJ	3.90 U	3.80 UJ	0.11 U
Heptachlor	380	1.80 UJ	2.10 UJ	2.00 UJ	1.80 UJ	1.80 UJ	2.00 UJ	1.90 UJ	1.80 UJ	1.90 UJ	1.90 UJ	1.70 UJ	2.00 UJ	2.00 UJ	1.80 UJ	1.70 UJ	1.80 UJ	1.90 UJ	2.00 UJ	1.90 UJ	0.11 UJ
Heptachlor epoxide	190	1.80 UJ	8.00 J	11.00 J	1.80 UJ	1.80 UJ	2.00 UJ	7.00 J	6.00 J	1.90 UJ	1.90 UJ	0.48 J	2.00 UJ	2.00 UJ	1.80 UJ	1.70 U	1.80 UJ	1.90 UJ	2.00 U	1.90 UJ	0.06 U
Methoxychlor	390000	18.00 UJ	21.00 UJ	20.00 UJ	18.00 UJ	18.00 UJ	20.00 UJ	19.00 UJ	18.00 UJ	19.00 UJ	19.00 UJ	17.00 UJ	20.00 UJ	20.00 UJ	18.00 UJ	17.00 UJ	18.00 UJ	19.00 UJ	20.00 UJ	19.00 UJ	0.60 UJ
Toxaphene	1500	180.00 UJ	210.00 UJ	200.00 U	180.00 UJ	180.00 UJ	200.00 UJ	190.00 UJ	180.00 UJ	190.00 UJ	190.00 UJ	170.00 UJ	200.00 UJ	200.00 UJ	180.00 UJ	170.00 U	180.00 UJ	190.00 UJ	200.00 U	190.00 UJ	6.00 U
alpha-BHC	270	1.80 UJ	1.60 J	2.10 J	2.20 J	2.00 J	2.00 UJ	1.90 J	1.80 UJ	0.88 J	1.90 UJ	1.70 UJ	2.00 UJ	3.20 J	1.80 UJ	1.70 U	0.99 J	2.50 J	2.60 J	2.30 J	1.90 U
alpha-Chlordane	1300	1.80 UJ	2.10 UJ	2.00 U	1.80 UJ	1.80 UJ	2.00 UJ	1.90 UJ	1.80 UJ	1.90 UJ	1.90 UJ	1.70 UJ	2.00 UJ	2.00 UJ	1.80 UJ	1.70 U	1.80 UJ	1.90 UJ	2.00 U	1.90 UJ	2.30 U
beta-BHC	350	1.80 UJ	2.10 UJ	2.00 UJ	1.80 UJ	1.80 UJ	2.00 UJ	1.90 UJ	1.80 UJ	1.90 UJ	1.90 UJ	1.70 UJ	2.00 UJ	2.00 UJ	1.80 UJ	1.70 UJ	1.80 UJ	1.90 UJ	2.00 UJ	1.90 UJ	1.90 U
delta-BHC	950	1.80 UJ	2.10 UJ	2.00 U	1.80 UJ	1.80 UJ	2.00 UJ	1.90 UJ	1.80 UJ	1.90 UJ	1.90 UJ	1.70 UJ	2.00 UJ	2.00 UJ	0.01 J	1.70 U	1.80 UJ	1.90 UJ	2.00 U	1.90 UJ	0.06 U
gamma-BHC(Lindane)	1300	1.80 UJ	2.10 UJ	2.00 U	1.80 UJ	1.80 UJ	2.00 UJ	1.90 UJ	1.80 UJ	1.90 UJ	1.90 UJ	1.70 UJ	2.00 UJ	2.00 UJ	1.80 UJ	1.70 U	1.80 UJ	1.90 UJ	2.00 U	1.90 UJ	0.06 U
gamma-Chlordane	1300	1.80 UJ	2.10 UJ	2.00 U	1.80 UJ	1.80 UJ	2.00 UJ	1.90 UJ	1.80 UJ	1.90 UJ	1.90 UJ	1.70 UJ	2.00 UJ	2.00 UJ	1.80 UJ	1.70 U	1.80 UJ	1.90 UJ	2.00 U	1.90 UJ	0.06 U

Table IV. 5. Pesticide/PCB Analytical Data (Continued)

Sample Number	RBTL/RBGCV	190007	190020	191020	230005	230014	240084	240011	250016	270000	270006	270013	270020	380006	380012	390006	390011	391006
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Compound																		
4,4'-DDD	1900	3.70 U	3.50 UJ	3.70 U	3.90 UJ	3.80 UJ	4.00 U	3.90 U	3.70 UJ	3.80 U	3.60 UJ	3.60 UJ	3.60 UJ	4.00 UJ	4.00 UJ	4.00 UJ	3.80 UJ	3.90 UJ
4,4'-DDE	1900	3.70 U	3.50 UJ	3.70 U	3.90 UJ	3.80 UJ	4.00 U	3.90 U	3.70 UJ	3.80 U	3.60 UJ	3.60 UJ	3.60 UJ	4.00 UJ	4.00 UJ	4.00 UJ	3.80 UJ	3.90 UJ
4,4'-DDT	5000	3.70 UJ	3.50 UJ	3.70 UJ	3.20 J	3.80 UJ	4.00 UJ	3.90 UJ	3.20 J	3.80 UJ	0.67 J	3.60 UJ	3.60 UJ	4.00 UJ	4.00 UJ	4.00 UJ	3.80 UJ	3.20 J
Aldrin	100	1.90 U	1.80 UJ	1.80 U	1.90 UJ	1.90 UJ	2.00 U	2.00 U	1.90 UJ	1.90 U	1.80 UJ	1.80 UJ	1.80 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.90 UJ	2.00 UJ
Aroclor-1016	220	30.00 U	28.00 UJ	29.00 U	31.00 UJ	30.00 UJ	32.00 U	31.00 U	30.00 UJ	31.00 U	29.00 UJ	29.00 UJ	29.00 UJ	32.00 UJ	32.00 UJ	32.00 UJ	31.00 UJ	31.00 UJ
Aroclor-1221	220	37.00 U	35.00 UJ	37.00 U	39.00 UJ	38.00 UJ	40.00 U	39.00 U	37.00 UJ	38.00 U	36.00 UJ	36.00 UJ	36.00 UJ	40.00 UJ	40.00 UJ	40.00 UJ	38.00 UJ	39.00 UJ
Aroclor-1232	220	22.00 U	21.00 UJ	22.00 U	23.00 UJ	23.00 UJ	24.00 U	24.00 U	22.00 UJ	23.00 U	22.00 UJ	22.00 UJ	22.00 UJ	24.00 UJ	24.00 UJ	24.00 UJ	23.00 UJ	24.00 UJ
Aroclor-1242	220	10.00 U	9.90 UJ	10.00 U	11.00 UJ	11.00 UJ	11.00 U	11.00 U	10.00 UJ	11.00 U	10.00 UJ	10.00 UJ	10.00 UJ	11.00 UJ	11.00 UJ	11.00 UJ	11.00 UJ	11.00 UJ
Aroclor-1248	83	44.00 U	43.00 UJ	44.00 U	47.00 UJ	45.00 UJ	48.00 U	47.00 U	44.00 UJ	46.00 U	43.00 UJ	43.00 UJ	43.00 UJ	48.00 UJ	48.00 UJ	48.00 UJ	46.00 UJ	47.00 UJ
Aroclor-1254	83	10.00 U	9.90 UJ	10.00 U	11.00 UJ	11.00 UJ	11.00 U	11.00 U	10.00 UJ	11.00 U	10.00 UJ	10.00 UJ	10.00 UJ	11.00 UJ	11.00 UJ	11.00 UJ	11.00 UJ	11.00 UJ
Aroclor-1260	83	10.00 U	9.90 UJ	10.00 U	11.00 UJ	11.00 UJ	11.00 U	11.00 U	10.00 UJ	11.00 U	10.00 UJ	10.00 UJ	10.00 UJ	11.00 UJ	11.00 UJ	11.00 UJ	11.00 UJ	11.00 UJ
Dieldrin	40	1.40 U	1.30 UJ	1.40 U	1.50 UJ	0.82 J	1.50 U	1.50 U	1.40 UJ	6.40	1.40 UJ	1.40 UJ	1.40 UJ	1.00 J	1.50 UJ	1.50 UJ	1.50 UJ	1.50 UJ
Endosulfan I	3900	1.90 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.90 UJ	2.00 UJ	2.00 UJ	1.90 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.80 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.90 UJ	2.00 UJ
Endosulfan II	3900	3.70 U	3.50 UJ	3.70 U	3.90 UJ	3.80 UJ	4.00 U	3.90 U	3.70 UJ	3.80 U	3.60 UJ	3.60 UJ	3.60 UJ	4.00 UJ	4.00 UJ	4.00 UJ	3.80 UJ	3.90 UJ
Endosulfan sulfate	3900	3.70 U	3.50 UJ	3.70 U	3.90 UJ	3.80 UJ	4.00 U	3.90 U	3.70 UJ	3.80 U	3.60 UJ	3.60 UJ	3.60 UJ	4.00 UJ	4.00 UJ	4.00 UJ	3.80 UJ	3.90 UJ
Endrin	23000	2.70 UJ	2.60 UJ	2.60 UJ	2.80 UJ	0.82 J	2.90 UJ	2.80 UJ	2.70 UJ	2.80 UJ	2.60 UJ	2.60 UJ	2.60 UJ	1.20 J	0.22 J	2.90 UJ	2.80 UJ	2.80 UJ
Endrin aldehyde	23000	3.70 U	3.50 UJ	3.70 U	3.90 UJ	3.80 UJ	4.00 U	3.90 U	3.70 UJ	3.80 U	3.60 UJ	3.60 UJ	3.60 UJ	4.00 UJ	4.00 UJ	4.00 UJ	3.80 UJ	3.90 UJ
Endrin ketone	23000	3.70 U	3.50 UJ	3.70 U	3.90 UJ	3.80 UJ	4.00 U	3.90 U	3.70 UJ	3.80 U	3.60 UJ	3.60 UJ	3.60 UJ	4.00 UJ	4.00 UJ	4.00 UJ	3.80 UJ	3.90 UJ
Heptachlor	380	1.90 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.90 UJ	2.00 UJ	2.00 UJ	1.90 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.80 UJ	0.72 J	2.00 UJ	2.00 UJ	1.90 UJ	2.00 UJ
Heptachlor epoxide	190	1.90 U	1.80 UJ	1.80 U	1.90 UJ	1.90 UJ	1.90 J	2.00 U	1.90 UJ	1.90 U	1.80 UJ	1.80 UJ	1.80 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.90 UJ	2.00 UJ
Methoxychlor	390000	19.00 UJ	18.00 UJ	18.00 UJ	19.00 UJ	3.60 J	20.00 UJ	20.00 UJ	19.00 UJ	19.00 UJ	1.60 J	18.00 UJ	2.30 J	20.00 UJ	8.90 J	6.60 J	0.52 J	20.00 UJ
Toxaphene	1500	30.00 U	28.00 UJ	29.00 U	31.00 UJ	30.00 UJ	32.00 U	31.00 U	30.00 UJ	31.00 U	29.00 UJ	29.00 UJ	29.00 UJ	32.00 UJ	32.00 UJ	32.00 UJ	31.00 UJ	31.00 UJ
alpha-BHC	270	1.90 U	1.80 UJ	1.80 U	1.90 UJ	1.90 UJ	2.00 U	2.00 U	1.90 UJ	0.41 J	1.80 UJ	1.80 UJ	1.80 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.90 UJ	2.00 UJ
alpha-Chlordane	1300	1.90 U	1.80 UJ	1.80 U	1.90 UJ	1.90 UJ	2.00 U	2.00 U	1.90 UJ	4.80	1.80 UJ	1.80 UJ	1.80 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.90 UJ	2.00 UJ
beta-BHC	350	1.90 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.90 UJ	2.00 UJ	2.00 UJ	1.90 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.80 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.90 UJ	2.00 UJ
delta-BHC	950	1.90 U	1.80 UJ	1.80 U	1.90 UJ	1.90 UJ	2.00 U	2.00 U	1.90 UJ	1.90 U	1.80 UJ	1.80 UJ	1.80 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.90 UJ	2.00 UJ
gamma-BHC(Lindane)	1300	1.90 U	1.80 UJ	1.80 U	1.90 UJ	1.90 UJ	2.00 U	2.00 U	1.90 UJ	1.90 U	1.80 UJ	1.80 UJ	1.80 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.90 UJ	2.00 UJ
gamma-Chlordane	1300	1.90 U	1.80 UJ	1.80 U	1.90 UJ	1.90 UJ	2.00 U	2.00 U	1.90 UJ	1.90 U	1.80 UJ	1.80 UJ	1.80 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.90 UJ	2.00 UJ

Table IV. 5. Pesticide/PCB Analytical Data (Continued)

Sample Number	RBTL/RBGCV	200009	200020	220005	220010	250009	330006	340006	341000	290006	290013	294000	300000	301000	310000	340000R	350006	370006	370012
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Compound																			
4,4'-DDD	1900	3.60 UJ	4.00 U	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	3.60 UJ	3.70 UJ	0.10 UJ	4.00 UJ	3.70 UJ	4.00 UJ	3.70 UJ	2.00 J	4.00 UJ	4.00 UJ
4,4'-DDE	1900	3.60 UJ	4.00 U	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	3.60 UJ	3.70 UJ	0.10 UJ	4.00 UJ	3.70 UJ	4.00 UJ	3.70 UJ	4.00 UJ	4.00 UJ	4.00 UJ
4,4'-DDT	5000	3.00 J	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	3.00 J	4.00 UJ	4.00 UJ	2.20 J	1.60 J	0.02 J	2.30 J	0.15 J	3.00 J	3.00 J	4.00 UJ	5.00 J	6.00 J
Aldrin	100	1.80 UJ	2.00 U	2.00 UJ	2.00 UJ	2.00 UJ	4.00 J	2.00 UJ	2.00 UJ	1.80 UJ	1.90 UJ	0.05 UJ	2.00 UJ	1.80 UJ	2.00 UJ	1.90 UJ	2.00 UJ	2.00 UJ	2.00 UJ
Aroclor-1016	220	29.00 UJ	29.00 U	30.00 UJ	29.00 UJ	31.00 UJ	29.00 UJ	34.00 UJ	30.00 UJ	29.00 UJ	30.00 UJ	0.80 UJ	32.00 UJ	29.00 UJ	32.00 UJ	30.00 UJ	33.00 UJ	31.00 UJ	29.00 UJ
Aroclor-1221	220	36.00 UJ	37.00 U	37.00 UJ	37.00 UJ	38.00 UJ	36.00 UJ	43.00 UJ	38.00 UJ	36.00 UJ	37.00 UJ	1.00 UJ	40.00 UJ	37.00 UJ	40.00 UJ	37.00 UJ	41.00 UJ	39.00 UJ	37.00 UJ
Aroclor-1232	220	22.00 UJ	22.00 U	22.00 UJ	22.00 UJ	23.00 UJ	22.00 UJ	26.00 UJ	23.00 UJ	22.00 UJ	22.00 UJ	0.60 UJ	24.00 UJ	22.00 UJ	24.00 UJ	22.00 UJ	24.00 UJ	23.00 UJ	22.00 UJ
Aroclor-1242	220	10.00 UJ	10.00 U	10.00 UJ	10.00 UJ	11.00 UJ	10.00 UJ	12.00 UJ	11.00 UJ	10.00 UJ	10.00 UJ	0.28 UJ	11.00 UJ	10.00 UJ	11.00 UJ	10.00 UJ	11.00 UJ	11.00 UJ	10.00 UJ
Aroclor-1248	83	43.00 UJ	44.00 U	45.00 UJ	44.00 UJ	46.00 UJ	43.00 UJ	51.00 UJ	45.00 UJ	43.00 UJ	44.00 UJ	1.20 UJ	48.00 UJ	44.00 UJ	48.00 UJ	45.00 UJ	49.00 UJ	47.00 UJ	44.00 UJ
Aroclor-1254	83	10.00 UJ	10.00 U	10.00 UJ	10.00 UJ	11.00 UJ	10.00 UJ	12.00 UJ	11.00 UJ	10.00 UJ	10.00 UJ	0.28 UJ	11.00 UJ	10.00 UJ	11.00 UJ	10.00 UJ	11.00 UJ	11.00 UJ	10.00 UJ
Aroclor-1260	83	10.00 UJ	10.00 U	10.00 UJ	10.00 UJ	11.00 UJ	10.00 UJ	12.00 UJ	11.00 UJ	10.00 UJ	10.00 UJ	0.28 UJ	11.00 UJ	10.00 UJ	11.00 UJ	10.00 UJ	11.00 UJ	11.00 UJ	10.00 UJ
Dieldrin	40	1.40 UJ	1.00 U	1.00 UJ	1.00 UJ	2.00 UJ	1.00 UJ	2.00 UJ	1.00 UJ	1.40 UJ	1.40 UJ	0.04 UJ	0.95 UJ	1.40 UJ	1.50 UJ	1.40 UJ	2.00 UJ	2.00 UJ	1.00 UJ
Endosulfan I	3900	1.80 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.80 UJ	1.90 UJ	0.05 UJ	2.00 UJ	1.80 UJ	2.00 UJ	1.90 UJ	2.00 UJ	2.00 UJ	2.00 UJ
Endosulfan II	3900	3.60 UJ	4.00 U	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	3.60 UJ	3.70 UJ	0.10 UJ	4.00 UJ	3.70 UJ	4.00 UJ	3.70 UJ	4.00 UJ	4.00 UJ	4.00 UJ
Endosulfan sulfate	3900	3.60 UJ	4.00 U	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	3.60 UJ	3.70 UJ	0.10 UJ	4.00 UJ	3.70 UJ	4.00 UJ	3.70 UJ	4.00 UJ	4.00 UJ	4.00 UJ
Endrin	23000	2.60 UJ	3.00 UJ	3.00 UJ	1.00 J	3.00 UJ	1.00 J	3.00 UJ	2.00 J	2.60 UJ	2.70 UJ	0.07 UJ	2.90 UJ	0.31 J	2.90 UJ	2.00 UJ	2.00 UJ	3.00 UJ	3.00 UJ
Endrin aldehyde	23000	3.60 UJ	4.00 U	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	3.60 UJ	3.70 UJ	0.10 UJ	4.00 UJ	3.70 UJ	4.00 UJ	3.70 UJ	4.00 UJ	4.00 UJ	4.00 UJ
Endrin ketone	23000	3.60 UJ	4.00 U	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	4.00 UJ	3.60 UJ	3.70 UJ	0.10 UJ	4.00 UJ	3.70 UJ	4.00 UJ	3.70 UJ	4.00 UJ	4.00 UJ	4.00 UJ
Heptachlor	380	1.80 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.80 UJ	1.90 UJ	0.05 UJ	2.00 UJ	1.80 UJ	2.00 UJ	1.90 UJ	2.00 UJ	2.00 UJ	2.00 UJ
Heptachlor epoxide	190	5.00 UJ	2.00 U	2.00 UJ	2.00 UJ	2.00 UJ	1.00 J	2.00 UJ	2.00 UJ	1.80 UJ	1.90 UJ	0.05 UJ	1.20 J	0.33 J	2.00 UJ	1.90 UJ	2.00 UJ	2.00 UJ	2.00 UJ
Methoxychlor	390000	18.00 UJ	18.00 UJ	19.00 UJ	18.00 UJ	19.00 UJ	18.00 UJ	21.00 UJ	19.00 UJ	18.00 UJ	19.00 UJ	0.50 UJ	20.00 UJ	18.00 UJ	20.00 UJ	19.00 UJ	20.00 UJ	19.00 UJ	18.00 UJ
Toxaphene	1500	29.00 UJ	29.00 U	30.00 UJ	29.00 UJ	31.00 UJ	29.00 UJ	34.00 UJ	30.00 UJ	29.00 UJ	30.00 UJ	0.80 UJ	32.00 UJ	29.00 UJ	32.00 UJ	30.00 UJ	33.00 UJ	31.00 UJ	29.00 UJ
alpha-BHC	270	2.00 UJ	2.00 J	1.00 J	2.00 J	2.00 UJ	2.00 UJ	2.00 J	1.00 J	0.76 J	1.20 J	0.05 UJ	0.67 J	1.80 UJ	2.00 UJ	2.00 UJ	1.00 J	2.00 UJ	2.00 UJ
alpha-Chlordane	1300	1.80 UJ	2.00 U	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.80 UJ	1.90 UJ	0.05 UJ	2.00 UJ	1.80 UJ	2.00 UJ	1.90 UJ	2.00 UJ	2.00 UJ	2.00 UJ
beta-BHC	350	1.80 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.80 UJ	1.90 UJ	0.05 UJ	2.00 UJ	1.80 UJ	2.00 UJ	1.90 UJ	2.00 UJ	2.00 UJ	2.00 UJ
delta-BHC	950	1.80 UJ	2.00 U	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.80 UJ	1.90 UJ	0.05 UJ	2.00 UJ	1.80 UJ	2.00 UJ	1.90 UJ	2.00 UJ	2.00 UJ	2.00 UJ
gamma-BHC(Lindane)	1300	1.80 UJ	2.00 U	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.80 UJ	1.90 UJ	0.05 UJ	2.00 UJ	1.80 UJ	2.00 UJ	1.90 UJ	2.00 UJ	2.00 UJ	2.00 UJ
gamma-Chlordane	1300	1.80 UJ	2.00 U	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.80 UJ	1.90 UJ	0.05 UJ	2.00 UJ	1.80 UJ	2.00 UJ	1.90 UJ	2.00 UJ	2.00 UJ	2.00 UJ

Table IV. 5. Pesticide/PCB Analytical Data (Continued)

Sample Number	RBTL/RBGCV	010002	011002	020003	020006	030004	040007	040012	274000	384000	400000	410010	420020
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/L	UG/KG	UG/KG	UG/KG
Compound													
4,4'-DDD	1900	3.80 UJ	3.80 UJ	3.80 UJ	3.70 UJ	3.60 UJ	3.70 UJ	3.50 UJ	0.20 UJ	0.20 UJ	4.00 UJ	3.80 UJ	4.00 UJ
4,4'-DDE	1900	3.80 UJ	3.80 UJ	3.80 UJ	3.70 UJ	3.60 UJ	3.70 UJ	3.50 UJ	0.20 UJ	0.20 UJ	4.00 UJ	3.80 UJ	4.00 UJ
4,4'-DDT	5000	3.80 UJ	3.80 UJ	3.80 UJ	3.80 J	3.60 UJ	3.70 UJ	3.50 UJ	0.17 J	0.13 J	4.00 UJ	3.80 UJ	4.00 UJ
Aldrin	100	1.90 UJ	1.90 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	0.10 UJ	0.10 UJ	2.00 UJ	1.90 UJ	2.00 UJ
Aroclor-1016	220	31.00 UJ	30.00 UJ	31.00 UJ	29.00 UJ	29.00 UJ	30.00 UJ	28.00 UJ	1.60 UJ	1.60 UJ	32.00 UJ	31.00 UJ	32.00 UJ
Aroclor-1221	220	38.00 UJ	38.00 UJ	38.00 UJ	37.00 UJ	36.00 UJ	37.00 UJ	35.00 UJ	2.00 UJ	2.00 UJ	40.00 UJ	38.00 UJ	40.00 UJ
Aroclor-1232	220	23.00 UJ	23.00 UJ	23.00 UJ	22.00 UJ	22.00 UJ	22.00 UJ	21.00 UJ	1.20 UJ	1.20 UJ	24.00 UJ	23.00 UJ	24.00 UJ
Aroclor-1242	220	11.00 UJ	11.00 UJ	11.00 UJ	10.00 UJ	10.00 UJ	10.00 UJ	9.90 UJ	0.56 UJ	0.56 UJ	11.00 UJ	11.00 UJ	11.00 UJ
Aroclor-1248	83	46.00 UJ	45.00 UJ	46.00 UJ	44.00 UJ	41.00 J	45.00 UJ	43.00 UJ	2.40 UJ	2.40 UJ	230.00 UJ	440.00 J	410.00 J
Aroclor-1254	83	67.00 J	11.00 UJ	11.00 UJ	10.00 UJ	10.00 UJ	10.00 UJ	9.90 UJ	0.56 UJ	0.56 UJ	11.00 UJ	11.00 UJ	11.00 UJ
Aroclor-1260	83	11.00 UJ	11.00 UJ	11.00 UJ	10.00 UJ	10.00 UJ	10.00 UJ	9.90 UJ	0.56 UJ	0.56 UJ	11.00 UJ	11.00 UJ	11.00 UJ
Dieldrin	40	1.50 UJ	1.40 UJ	1.50 UJ	1.40 UJ	1.40 UJ	1.40 UJ	1.30 UJ	0.08 UJ	0.08 UJ	1.50 UJ	1.50 UJ	1.50 UJ
Endosulfan I	3900	1.90 UJ	1.90 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	0.10 UJ	0.10 UJ	2.00 UJ	1.90 UJ	2.00 UJ
Endosulfan II	3900	3.80 UJ	3.80 UJ	3.80 UJ	3.70 UJ	3.60 UJ	0.95 J	3.50 UJ	0.20 UJ	0.20 UJ	4.00 UJ	3.80 UJ	4.00 UJ
Endosulfan sulfate	3900	3.80 UJ	3.80 UJ	3.80 UJ	3.70 UJ	3.60 UJ	3.70 UJ	3.50 UJ	0.20 UJ	0.20 UJ	4.00 UJ	3.80 UJ	4.00 UJ
Endrin	23000	2.80 UJ	2.70 UJ	2.80 UJ	2.60 UJ	2.60 UJ	2.70 UJ	0.46 J	0.14 UJ	0.04 J	2.90 UJ	2.80 UJ	2.90 UJ
Endrin aldehyde	23000	3.80 UJ	3.80 UJ	3.80 UJ	3.70 UJ	3.60 UJ	3.70 UJ	3.50 UJ	0.20 UJ	0.20 UJ	4.00 UJ	3.80 UJ	4.00 UJ
Endrin ketone	23000	3.80 UJ	3.80 UJ	0.22 J	3.70 UJ	3.60 UJ	3.70 UJ	3.50 UJ	0.20 UJ	0.20 UJ	4.00 UJ	3.80 UJ	4.00 UJ
Heptachlor	380	1.90 UJ	1.90 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	0.10 UJ	0.10 UJ	2.00 UJ	1.90 UJ	2.00 UJ
Heptachlor epoxide	190	1.90 UJ	1.90 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	0.10 UJ	0.10 UJ	2.00 UJ	1.90 UJ	2.00 UJ
Methoxychlor	390000	19.00 UJ	2.90 J	7.67 J	10.60 J	18.00 UJ	4.20 J	11.20 J	1.00 UJ	1.00 UJ	20.00 UJ	19.00 UJ	20.00 UJ
Toxaphene	1500	31.00 UJ	30.00 UJ	31.00 UJ	29.00 UJ	29.00 UJ	30.00 UJ	28.00 UJ	1.60 UJ	1.60 UJ	32.00 UJ	31.00 UJ	32.00 UJ
alpha-BHC	270	1.90 UJ	1.90 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	0.10 UJ	0.10 UJ	2.00 UJ	1.90 UJ	2.00 UJ
alpha-Chlordane	1300	1.90 UJ	0.28 J	1.90 UJ	1.80 UJ	1.80 UJ	0.26 UJ	1.80 UJ	0.10 UJ	0.10 UJ	2.00 UJ	1.90 UJ	2.00 UJ
beta-BHC	350	1.90 UJ	1.90 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	0.10 UJ	0.10 UJ	2.00 UJ	1.90 UJ	2.00 UJ
delta-BHC	950	1.90 UJ	1.90 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	0.10 UJ	0.10 UJ	2.00 UJ	1.90 UJ	2.00 UJ
gamma-BHC(Lindane)	1300	1.90 UJ	1.90 UJ	1.90 UJ	1.80 UJ	1.80 UJ	1.90 UJ	1.80 UJ	0.10 UJ	0.10 UJ	2.00 UJ	1.90 UJ	2.00 UJ
gamma-Chlordane	1300	1.90 UJ	0.25 J	1.90 UJ	1.80 UJ	1.80 UJ	0.25 J	1.80 UJ	0.10 UJ	0.10 UJ	2.00 UJ	1.90 UJ	2.00 UJ

The summary for data package ICFK-1 stated: "The initial calibration on the chromatography column RTX-5 was rejected since there were four compounds with Relative Standard Deviations (RSDs) greater than the 20% criteria. The initial calibration on the chromatography column RTX-1701 was rejected since there were three compounds with RSDs greater than the 20% criteria. Therefore, all of the pesticide/PCB sample results from this data package were rejected and qualified as "R-C" as unusable due to calibration".

The summary for data package ICFK-2 stated: "The initial calibration on the chromatography column RTX-5 associated with samples MND14-3009-0002 and MND14-3011-0017 was rejected since there were four compounds with RSDs greater than the 20% criteria. Therefore, the pesticide/PCB sample quantitations for these samples were performed on the chromatography column RTX-1701. This did not affect any sample results since none of the target compounds were detected on either column".

The summary for data package ICFK-3 stated: "The initial calibration on the chromatography column RTX-5 was rejected since there were three compounds with RSDs greater than the 20% criteria. Therefore, the pesticide/PCB sample quantitations for these samples were performed on the chromatography column RTX-1701. The following changes were made to the reported results to account for the differences in quantitation between the two columns:

Sample	Compound	Result
MND14-3016-0010	Heptachlor epoxide	8.1 ug/kg
MND14-3016-0018	Heptachlor epoxide	11 ug/kg
MND14-3021-0012	Heptachlor epoxide	7.2 ug/kg
MND14-3026-0002	Heptachlor epoxide	6.0 ug/kg
MND14-3028-0006	Dieldrin	5.9 ug/kg
MND14-3035-4000	4,4' -DDT	0.062 ug/kg
MND14-3035-4000	alpha-BHC	0.004 ug/kg".

The summary for data package ICFK-4 states: "The laboratory misidentified 2 samples on the Title page and did not include the third. Lab sample number 97 008956.5 should be Mound sample number MND14-3022-0010. Lab sample number 97 008956.0 should be Mound sample number MND14-3022-0005. Mound sample number MND14-3020-0020, Lab sample number 97 008950.3 was not include in the listing.

Due to an analysis sequence error (no standard following the analysis), sample MND14-3020-0009 and MND14-3034-0000 were reanalyzed. The results from the reanalysis were used. This did not affect the data.

The resolution check mixture on chromatography column RTX-5 indicated there was 0% resolution between dieldrin and 4,4'-DDE. The resolution check mixture on chromatography column RTX-1701 associated with samples MND14-3029-4000, MND14-3029-0013, MND14-3029-0006, MND14-3031-0000, MND14-3030-0000, MND14-3030-1000, MND14-3034-0000, and MND14-3020-0009 indicated there was 45% resolution between endosulfan sulfate and methoxychlor. All quantitation for endosulfan sulfate and methoxychlor was performed only on chromatography column RTX-1701. The following changes were made to the reported results to account for the differences in quantitation between the two columns:

Sample	Compound	Result
MND14-3029-4000	4,4'- DDT	0.23 ug/kg
MND14-3038-0006	4,4'- DDT	2.8 ug/kg
MND14-3033-0006	4,4'- DDT	3.1 ug/kg
MND14-3037-0006	4,4'- DDT	4.7 ug/kg
MND14-3037-0012	4,4'- DDT	6.2 ug/kg".

The summary for data package ICFK-5 states: "The resolution check mixture on chromatography column RTX-5 associated with samples MND14-3038-0006, MND14-3038-0012, MND14-3023-0005, MND14-3023-0014, MND14-3039-0006, MND14-3039-0011, MND14-3025-0016, and MND14-3039-1006 had 0% resolution between dieldrin and 4,4'-DDT. All quantitation for dieldrin and 4,4'-DDT was performed only on chromatography column RTX-1701. The following changes were made to the reported results to account for the differences in quantitation between the two columns:

Sample	Compound	Result
MND14-3023-0014	Dieldrin	0.85 ug/kg
MND14-3038-0006	Dieldrin	1.4 ug/kg"

The summary for data package ICFK-6 stated: "The resolution check mixture on chromatography column RTX-5 indicated there was 0% resolution between dieldrin and 4,4'-DDE. The resolution check mixture on chromatography column RTX-1701 used in association with the water blanks indicated there was 45% resolution between endosulfan sulfate and methoxychlor. All quantitation for dieldrin and 4,4'-DDT was performed only on chromatography column RTX-1701. The quantitation for endosulfan sulfate and methoxychlor was performed only on column RTX-5. This did not affect any of the reported sampling results."

Data validators reviewed all of the pesticide and PCB analytical data and used the following qualifiers:

U - Compound was not detected in the sample.
J - Reported value is estimated.
R - Analytical result is unusable.
UJ - Compound was not detected in the sample, but the quantitation is estimated.

In addition, the following subqualifiers may be applied:

B - Qualified due to method blank.
C - Qualified due to calibration.
H - Qualified due to holding time being exceeded.
K - Qualified due to surrogate recovery.
S - Qualified due to matrix spike recovery.
I - Qualified due to internal standard.
P - Qualified due to percent difference between the two columns.
(+) - Qualified due to positive bias.
(-) - Qualified due to negative bias.

4.1.2.5. Radiological Compounds

The data validation package summaries did not identify any major analytical problems. Therefore, no synopsis of the data package summaries are provided in this section. Blank contamination of Americium-241 and tritium were found at levels greater than 40 and 500 pCi/gram, respectively. However, all of the sample results were less than 1 and 17 pCi/gram for Americium-241 and tritium and therefore, blank contamination was not considered to be a problem. The data validation results are presented in Table IV.6. To save space, the MND14-n0 (MND14-10, MND14-20, MND14-30) prefix was not included in Table IV.6.

Data validators reviewed all of the radiological analytical data and used the following qualifiers:

U - Compound was not detected in the sample.
J - Reported value is estimated.
R - Analytical result is unusable.
UJ - Compound was not detected in the sample, but the quantitation is estimated.

In addition, the following subqualifiers may be applied:

B - Qualified due to method blank.
C - Qualified due to calibration.
H - Qualified due to holding time being exceeded.
K - Qualified due to surrogate recovery.
S - Qualified due to matrix spike recovery.
I - Qualified due to internal standard.

Table IV.6 Radiological Analytical Data

Sample Number	Boring Location	Sample Depth	Units	Am-241	Q	Pu-238	Q	Pu 239/240	Q	Th-228	Q	Th-230	Q	Th-232	Q	Tritium	Q	U-234	Q	U-235	Q	U-238	Q
010002	19-3A	1-3'	pCi/g	0.30		5.04		0.20	U	0.84		0.59		0.50		14.00	U	0.54		0.07	UJ	0.48	
011002	19-3A	1-3'	pCi/g	0.26	U	132.05		1.92		0.84		0.88		0.71		14	U	0.68		0.07	U	0.52	
020003	19-3B	3-4'	pCi/g	0.31		100.92		0.54	J	1.10		0.99		0.98		14	U	0.52		0.05	J	0.71	
020006	19-3B	6-7'	pCi/g	0.30	U	16.55		0.30		3.66		0.95		0.15		14	U	0.53		0.10		0.53	
030004	19-3C	4-6'	pCi/g	0.31	U	3.25		0.11	U	3.52		0.61		0.23		14	U	0.39		0.07	U	0.37	
040007	19-3D	7-9'	pCi/g	0.31	U	0.23	U	0.11	U	1.16		1.40		0.72		14	U	0.75		0.07	U	0.74	
040012	19-3D	12-14'	pCi/g	0.33	U	0.23	U	0.11	U	0.98		0.84		0.68		14	U	0.55		0.10		0.61	
050004	19-3E	4-8'	pCi/g	0.27	U	0.45	U	0.21	U	0.47	U	0.44		0.38		14.00	U	0.49		0.07	UJ	0.42	
050010	19-3E	10-11.5'	pCi/g	0.40	U	0.45	U	0.21	U	0.48		0.43		0.24		14.00	U	0.61		0.10	J	0.70	
060000	19-3F	0-2'	pCi/g	0.39	U	7.54		0.11	U	1.76		1.25		0.97		14	U	0.67		0.07	U	0.59	
060005	19-3F	5-7'	pCi/g	0.37	U	1.48		0.11	U	1.23		1.25		0.80		14	U	0.58		0.08		0.55	
070001	19-3G	1-2'	pCi/g	0.40	U	6.10		0.12	J	1.53		0.97		1.10		14	U	0.52		0.07	U	0.72	
070012	19-3G	12-12.5'	pCi/g	0.36	U	0.23	U	0.11	UJ	1.44		1.21		1.31		14	U	0.67		0.07	U	0.87	
071001	19-3G	1-2'	pCi/g	0.34	U	10.95		0.11	UJ	1.18		1.06		0.95		14	U	0.52		0.07	U	0.71	
074000	19-3G	BLANK	pCi/L	99.64	U	0.93	U	0.44	U	2.78		1.50		0.35		700		0.33		0.29	U	0.24	U
080001	19-3H	1-3'	pCi/g	0.37	U	1.10		0.11	U	0.84		1.25		0.51		14	U	0.78	J	0.12	J	0.65	
080009	19-3H	9-11'	pCi/g	0.26	U	0.23	U	0.11	U	1.55		0.97		0.98		14	U	0.77	J	0.09	J	0.82	
090002	19-3I	2-4'	pCi/g	0.33	U	0.22	U	0.11	U	0.44		0.90		0.34		14	U	0.58		0.07	U	0.58	
090017	19-3I	17-19'	pCi/g	0.28	U	0.40	U	0.19	U	0.42	U	1.24		0.53		14.00	U	0.69		0.07	UJ	0.66	
100011	19-3J	11-13'	pCi/g	0.32	U	0.23	U	0.11	U	0.64		0.80		0.36		14	U	0.73		0.03	J	0.71	
100020	19-3J	20-22'	pCi/g	0.23	U	0.23	U	0.11	U	1.08		1.00		0.47		14	U	0.63	J	0.09	J	0.77	
101020	19-3J	20-22'	pCi/g	0.35	U	0.23	U	0.11	U	0.78		0.92		0.35		14	U	0.69		0.06	J	0.66	
104000	19-3J	BLANK	pCi/L	50.30	U	0.93	U	0.44	UJ	0.96	U	0.51		0.24	U	530	U	0.41		0.29	U	0.24	U
110006	19-3K	6-8'	pCi/g	0.36	U	0.45	U	0.21	U	0.89		0.95		1.27		14.00	U	1.18		0.11	JJ	1.21	
110017	19-3K	17-19'	pCi/g	0.31	U	0.45		0.11	U	0.74		0.83		0.50		14	U	0.71		0.08		0.67	
120001	19-3L	1-3'	pCi/g	0.38	U	3.01	J	0.21	U	2.58		1.32		1.90		17.40		0.85		0.10	J	0.85	
120020	19-3L	20-22'	pCi/g	0.29	U	0.22	U	0.11	U	4.17		0.88		0.44		14	U	0.68		0.07	U	0.77	
124000	19-3L	BLANK	pCi/L	81.85	U	0.93	U	0.44	U	0.96	U	0.34		0.24	U	530.00	U	0.36		0.29	UJ	0.26	
130003	19-3M	3-6'	pCi/g	0.37	U	6.82		0.11	U	0.69		0.84		0.58		14	U	0.72		0.07	U	0.74	
130008	19-3M	8-9'	pCi/g	0.39	U	0.33		0.11	U	1.35		1.48		1.46		14	U	0.93		0.12		1.12	
140006	19-3N	7-9'	pCi/g	0.32	U	2.50		0.11	U	0.87		1.00		0.58		14	U	0.65		0.06		0.72	
140001	19-3N	0.5-2.5'	pCi/g	0.35	U	20.18		0.20		4.23		0.82		0.57		14	U	1.12		0.18	J	1.09	
150001	19-3O	1-3'	pCi/g	0.43		31.96		0.23		1.05		1.09		0.70		14	U	0.91		0.19	J	0.73	
150020	19-3O	20-22'	pCi/g	0.33	U	0.23	U	0.11	U	0.73		0.70		0.44		14	U	0.63		0.16	J	0.87	
160018	19-3P	18-20'	pCi/g	0.40	U	0.46	U	0.22	U	0.46	U	0.49		0.37		14.00	U	0.71		0.08	J	0.80	
160010	19-3P	10-12'	pCi/g	0.36	U	0.23	U	0.11	U	1.51		1.31		1.18		14	U	0.71	J	0.07	J	0.90	
170007	19-3Q	7-9'	pCi/g	0.38	U	0.23	U	0.11	UJ	1.07		1.02		1.02		14	U	0.65		0.07	U	0.68	
170020	19-3Q	20-22'	pCi/g	0.34	U	0.23	U	0.11	UJ	1.40		1.26		1.18		14	U	0.70		0.13	J	0.74	
171020	19-3Q	20-22'	pCi/g	0.37	U	0.23	U	0.11	UJ	1.20		0.79		0.96		14	U	0.59		0.07	J	0.74	
180012	19-3R	10-12'	pCi/g	0.22	U	0.37	U	0.18	U	0.39		0.69		0.37		14.00	U	0.49		0.07	UJ	0.82	
180020	19-3R	20-22'	pCi/g	0.30	U	0.23	U	0.11	U	1.06		1.00		0.51		14	U	0.72	J	0.07	U	0.69	
190007	19-3S	7-9'	pCi/g	0.37	U	0.23	U	0.11	UJ	0.66		1.06		0.46		18.70		0.70		0.08	J	0.68	
190020	19-3S	20-22'	pCi/g	0.32	U	0.23	U	0.11	UJ	0.50		0.92		0.40		14	U	0.81		0.07	J	0.70	
191020	19-3S	20-22'	pCi/g	0.24	U	0.23	U	0.11	UJ	0.39		1.17		0.25		17.30		0.82		0.08	J	0.76	
200020	19-3T	20-22'	pCi/g	0.22	U	0.41	U	0.20	U	0.43	U	0.86		0.46		14.00	U	0.76		0.10	J	0.77	
200009	19-3T	9-11.5'	pCi/g	0.29	U	0.23	U	0.11	U	0.64		1.01		0.36		14	U	0.89	J	0.12	J	0.77	
210005	19-3U	5-7'	pCi/g	0.34		46.22		0.20		1.11		1.08		0.92		14	U	1.16	J	0.22	J	0.75	
210012	19-3U	12-14'	pCi/g	0.33	U	4.97		0.11	U	1.36		0.68		0.92		14	U	1.19	J	0.06	J	0.88	
220005	19-3V	5-7'	pCi/g	0.31	U	0.39	U	0.19	U	1.09		1.15		1.46		14.00	U	0.77		0.07	UJ	0.65	
220010	19-3V	10-11.5'	pCi/g	0.32	U	0.45	U	0.21	U	0.47	U	0.91		0.58		14.00	U	0.61		0.06	UJ	0.64	
230005	19-3W	5-7'	pCi/g	0.39	U	1.11		0.11	U	0.71		0.55		0.54		14	U	0.44		0.07	U	0.53	
230014	19-3W	15.15.5'	pCi/g	0.35	U	0.22	U	0.11	U	0.65		0.79		0.85		14	U	0.78		0.07		0.91	
240004	19-3X	4-6'	pCi/g	0.37	U	0.23	U	0.11	UJ	1.39		1.07		1.22		14	U	1.19		0.07	U	0.74	
240011	19-3X	11-12.5'	pCi/g	0.36	U	17.67		0.12	J	1.20		0.95		0.97		14	U	0.77		0.07	U	0.91	
250009	19-3Y	9-11.5'	pCi/g	0.28	U	0.74		0.11	U	1.24		1.10		1.09		14	U	0.82		0.08		0.85	
250016	19-3Y	16-17.5'	pCi/g	0.28	U	0.23	U	0.11	UJ	1.04		0.78		0.93		14	U	0.65		0.09	J	0.84	
260002	19-4A	1-3'	pCi/g	0.66		68.84		0.91		1.23		1.01		0.47		14	U	0.60	J	0.07	U	0.59	
260010	19-4A	9-11'	pCi/g	0.30	U	0.23	U	0.11	U	0.86		1.23		0.39		14	U	0.69	J	0.07	J	0.70	
260020	19-4A	20-22'	pCi/g	0.34	U	0.23	U	0.11	U	0.81		0.70		0.44		14	U	0.60	J	0.08	J	0.88	
270000	19-2A	0-2'	pCi/g	0.30	U	0.44	U	0.21	U	1.76		2.59		2.39		14.00	U	0.61		0.07	UJ	0.64	
270006	19-2A	6-8'	pCi/g	0.31	U	0.23	U	0.11	UJ	0.80		0.97		0.36		14	U	0.81		0.07	U	0.74	
270013	19-2A	13-15'	pCi/g	0.39	U	0.23	U	0.11	UJ	0.43		1.06		0.36		14	U	0.70		0.07	U	0.78	
270020	19-2A	20-22'	pCi/g	0.29	U	0.23	U	0.11	UJ	0.66		0.83		0.35		14	U	0.73		0.07	U	0.87	
274000	19-2A	BLANK	pCi/L	79.54	U	0.93	U	0.44	UJ	0.96	U	0.30		0.24	U	556.7		0.29	U	0.29	U	0.24	U
280006	19-2B	6-8'	pCi/g	0.27	U	0.44	U	0.21	U	0.51		0.73		0.21		15.30		0.56		0.07	UJ	0.70	
280013	19-2B	13-15'	pCi/g	0.30	U	0.45	U	0.22	U	0.45		0.61		0.39		14.00	U	0.78		0.15	J	0.82	
280020	19-2B	20-22'	pCi/g	0.28	U	1.68		0.22	U	0.52		0.88		0.42		14.00	U	0.87		0.07	UJ	0.81	
280000	19-2B	0-2'	pCi/g	0.19	U	0.68		0.11	U	0.40		0.07		0.07		14	U	0.26		0.07	U	0.11	
281000	19-2B	0-2'	pCi/g	0.22	U	0.23	U	0.11	U	0.24	U	0.56		0.35		14	U	0.23		0.07	U	0.25	
294000	19-2C	BLANK	pCi/L	48.74	U	0.93	U	0.93	U	0.96	U	0.29	U	0.24	U	530	U	0.29	U	0.29	U	0.24	U
290000	19-2C	0-2'	pCi/g	0.32	U	10.67		0.11	UJ	0.78		0.94		0.55		14	U	0.62	J	0.07	UJ	0.70	J
290006	19-2C	6-8'	pCi/g	0.31	U	0.23	U	0.11	U	0.80		1.06		0.46		14	U	0.79	J	0.21	J	0.97	
290013	19-2C	13-15'	pCi/g	0.35	U	1.35		0.11	U	1.10		0.97		0.89		14	U	0.83	J	0.07	U	0.72	
300000	19-2D	0-2'	pCi/g	0.23	U	2.67		0.11	U	0.50		0.68		0.28		14	U	0.44		0.07	U	0.42	
301000	19-2D	0-2'	pCi/g	0.41	U	16.86		0.11	U	1.27		1.12		0.82		21.3		1.35		0.07	U	0.78	
310000	19-2E	0-2'	pCi/g	0.32	U	21.51		0.45		2.64		1.29		0.46		34.0		7.45		0.15		0.62	
320000	19-2F	0-2'	pCi/g	0.22	U	0.23	U	0.11	U	0.72		0.78		0.43		14	U	0.81		0.24	J	0.82	
320006	19-2F	6-8'	pCi/g	0.33	U	0.23	U	0.11	U	1.10		0.88		0.42		14.9		0.80		0.13	J	0.95	
330006	19-2G	6-8'	pCi/g	0.43	U	1.53		0.22	U	0.76		0.65		0.90		22.00		0.69		0.08	J	0.69	
330000	19-2G	0-2'	pCi/g	0.29	U	3.83		0.11	U	1.08		1.37		0.72		16		0.79		0.07	U	0.65	
340000	19-2H	0-2'	pCi/g	0.36	U	1.22		0.11	U	1.32		0.77		1.07		14	U	0.88		0.07	U	0.92	
340006	19-2H	6-8'	pCi/g	0.38	U	0.35		0.11	U	1.49		0.98		1.05		14	U	1.02	J	0.07	U	0.97	
341000	19-2H	0-2'	pCi/g	0.37	U	0.51		0.11	U	2.19		1.10		1.20		14	U	1.22	J	0.09	J	0.92	
350013	19-2I	13-14.5'	pCi/g	0.39	U	0.40	U	0.19	U	0.81		0.74		0.85		14.00	U	0.65		0.07	UJ	0.71	
354000	19-2I	BLANK	pCi/L	47.02	U	0.93	U	0.44	U	0.96		0.29	U	0.24	U	530.00	U	0.29	U	0.29	UJ	0.24	U
350000	19-2I	0-2'	pCi/g	0.33	U	0.23	U	0.11	U	1.39		1.29		0.82		15	U	0.76		0.07		0.88	
350006	19-2I	6-8'	pCi/g	0.34	U	0.23	U	0.11	U	1.31		1.14		0.94		16.4		0.64		0.16		0.64	
350020	19-2I	20-22'	pCi/g	0.31	U	1.77		0.11	U	1.28		1.22		1.01		14	U	0.82	J	0.07	U	0.73	
360000	19-2J	0-2'	pCi/g	0.32	U	11.37		0.33		10.69		1.01		0.66		14	U	0.97		0.12	J	0.93	
360006	19-2J	6-8'	pCi/g	0.39	U	1.99		0.11	U	1.34		1.29		0.62		14	U	1.07		0.22	J	0.96	
360013	19-2J	13-15'	pCi/g	0.34	U	0.51		0.11	U	1.00		0.74		0.50		14	U	0.77		0.09	J	0.67	
360020	19-2J	20-22'	pCi/g	0.25	U	0.25		0.11	U	1.34		0.87		0.69		14	U	0.78		0.11	J	0.82	
370012	19-1A	12-14'	pCi/g	0.44	U	3.22		0.11	U	2.01		0.78		0.85		14	U	0.55		0.07	U	0.60	
370006	19-1A	6-8'	pCi/g	0.43	U	16.11		0.27		1.49		0.92		0.95		14	U	0.68	J	0.12	J	0.80	
380006	19-2B	6-8'	pCi/g	0.31	U	82.57		0.26	J	0.70		0.68		0.39		20.30		1.02		0.07	U	0.84	
380012	19-2B	12-14'	pCi/g	0.34	U	2.58		0.11	U	0.59		1.11		1.02		14	U	1.00		0.08		0.86	
384000	19-2B	BLANK	pCi/L	78.43	U	0.93	U	0.93	U	0.96	U	0.29	U	0.24	U	530	U	0.29	U	0.29	U	0.24	U
390011	19-2C	12-14'	pCi/g	0.45	U	0.84		0.11	U	1.07		1.07		1.03		14	U	0.81		0.07	U	0.89	
391006	19-2C	6-8'	pCi/g	0.36	U	0.23	U	0.11	U	1.29		0.93		1.20		14	U	0.76		0.07		0.89	
390006	19-2C	6-8'	pCi/g	0.44	U	5.38		0.11	UJ	1.12		0.82		1.25		14	U	1.04		0.07	J	0.88	
400000	NONE	SPIKE	pCi/g	0.86		103.93		1.54		13.35		2.77		1.21		14	U	0.94		0.08		0.92	
410010	NONE	SPIKE	pCi/g	0.37	U	17.09		0.37		2.64		1.59		0.88		14	U	0.77		0.07		0.78	
420020	NONE	SPIKE	pCi/g	0.35	U	0.23	U	0.11	U	1.15		1.55		0.68		14	U	0.54		0.08		0.78	

P - Qualified due to percent difference between the two columns.
(+) - Qualified due to positive bias.
(-) - Qualified due to negative bias.

4.1.3. Summary of All Validated Data

All analytical data were received from the laboratories in a D-Base format. The data was converted and validation qualifiers were added and the information summarized.

4.1.3.1. Volatile Organics Compounds

The validated volatile organic analytical data are summarized in Table IV.1. All of the data are considered useable except for the data rejected due to blank contamination. Data validation comments were limited to: U - non-detect; J - estimated value; B - blank contamination and R - rejected.

4.1.3.2. Semi-Volatile Organics Compounds

The validated semi-volatile organic analytical data are summarized in Table IV.2. Except for the data rejected for poor surrogate recovery, all of the data are considered useable. Data validation comments were limited to: U - non-detect; J - estimated value; B - blank contamination and R - rejected.

4.1.3.3. Inorganic Compounds

The validated inorganic analytical data are summarized in Table IV.3 and IV.4. All of the data are considered useable. Data validation comments were limited to: U - non-detect; J - estimated value; B - blank contamination and R - rejected.

4.1.3.4. Pesticide Compounds

The validated pesticide and PCB analytical data are summarized in Table IV.5. Except for the rejected data, all of the data are considered useable. Data validation comments were limited to: U - non-detect; J - estimated value; B - blank contamination and R - rejected.

4.1.3.5. Radiological Compounds

The validated radiological analytical data are summarized in Table IV.6. All of the data are considered useable. Data validation comments were limited to: U - non-detect; J - estimated value; B - blank contamination and R -rejected.

5. DATA ANALYSIS

The analysis of the soil data included a comparison of the soil data for both radiological and non-radiological compounds to existing risk-based soil standards developed for USEPA (EPA 1992) and to site specific risk-based cleanup values (HAZWRAP 1994) where they exist for the contaminants of concern. Radiological threshold values were agreed upon for select radiological parameters.

A value of 100 pCi/gram (for Pu-238, which was the dominant radiological isotope detected) was used as the minimum cleanup standard and 25 pCi/gram as the ALARA (as low as reasonably achievable) value, respectively. For the statistical interpretation portion of the investigation, a clean up standard of 25 pCi/gram was used. The radiological remedial action guidelines for specific radiologic compounds are:

- Plutonium-238 — 100 pCi/gram with 25 pCi/gram if feasible (ALARA - as low as reasonably achievable);
- Thorium — 5 pCi/gram for surface and 15 pCi/gram for the subsurface;
- Tritium — 5,200 pCi/ml;
- Americium-241 — 20 pCi/gram; and
- Uranium — No remedial action level set.

(Source: OU 6 D&D Areas, Work Plan, page 3-14).

Mound has developed compound specific regulatory (clean up) levels for non-radiological compounds (HAZWRAP 1994). Where cleanup standards for a compound does not exist, a preliminary list of non site-specific risk-based, compound-specific regulatory threshold levels from an EPA document that provides a suitable basis for the statistical evaluation of the data was used (EPA 1992). The EPA document contains reference doses and carcinogenic potency slopes which have been combined with "standard" exposure scenarios to calculate chemical concentrations corresponding to fixed levels of risk in water, air, fish tissue, and soil. The soil concentrations are broken into two risk categories; commercial/industrial soil (lower exposure scenario) and residential soil (higher exposure scenario). The residential soil concentrations were selected for the regulatory threshold levels because they are the more conservative of the two options. Although these criteria are not final threshold levels, they should be adequate, to assess the effectiveness of the D&D effort.

The principal EPA source used to develop the regulatory threshold levels where used in this report is a risk-based concentration table from an EPA Region III document (EPA 1992). This table is used by the Region III toxicologists as a risk-based screen for Superfund sites and has been used to prepare preliminary remediation goals. The table is not intended as a substitute for setting site-specific cleanup

levels, and is intended as a predictor of generic single-contaminant health risk estimates. The table, containing nearly 600 chemicals, covers nearly every compound detected in Area 19. To avoid inconsistencies with other environmental restoration work at Mound Plant, regulatory threshold levels from another environmental investigation were used for compounds not covered by the Region III table or the site-specific risk-based guideline cleanup values (DOE 1993).

5.1. DATA INTERPRETATION

5.1.1. Volatile Organic

The soil samples were analyzed for volatile organic compounds and the validated data is presented in Table IV.1. Table V.1 displays the risk-based threshold levels (RBTL) or the risk-based guideline cleanup values (RBGCV) used to evaluate the volatile organic analytical data. A review of this table indicates that all of the soil sample results are under the risk-based threshold limits. The major contaminants detected were acetone and methylene chloride. Both compounds are common laboratory contaminants. In general, very few VOCs were detected.

5.1.2. Semi-Volatile Organic

The soil samples were analyzed for semi-volatile organic compounds and the validated data is presented in Table IV.2. Table V.2 displays the risk-based threshold levels or the risk-based guideline cleanup values used to evaluate the semi-volatile organic analytical data. A review of this table indicates that only eight semi-volatile compounds were detected at a concentration above the RBTL or RBGCV. The semi-volatile compounds Benzo(a)anthracene, Benzo(g,h,i)perylene, Benzo(a)pyrene, Dibenzo(a,h)anthracene, Phenanthrene, Benzo(b)fluoranthene, Indeno(1,2,3-cd)pyrene, and Benzo(k)fluoranthene were detected in some samples at a concentration above the RBGCV. Note that in many cases the detection limits for these compounds were above the RBTL.

5.1.3. Inorganic

The soil samples were analyzed for inorganic analytes and the data is summarized in Tables IV.3 and IV.4. Table V.3 displays the RBTLs or RBGCVs used to evaluate the inorganic analytical data. A review of the inorganic analytical tables (Table IV.3 and IV.4) indicates that all of the results are under the inorganic RBTL or RBGCV.

Table V.1. VOC Risk-Based Threshold Levels

Parameter	Number of Detections	Range of Values (µg/kg)	Threshold or Cleanup Value Limit (µg/kg)	Parameter	Number of Detections	Range of Values (µg/kg)	Threshold or Cleanup Value Limit (µg/kg)
Chloromethane	2	.40 - 11	130,000	1,2-Dichloropropane	1	1	25,000[2]
Vinyl Chloride	0	NA	900	Bromodichloromethane	1	.60	10,000
Bromomethane	0	NA	110,000	cis-1,3-Dichloropropene	1	.80	9,500[1]
Chloroethane	0	NA	1,600,000	4-Methyl-2-Pentanone	19	.60 - 20	3,900,000
1,1-Dichloroethene	0	NA	2,800	Toluene	56	.30 - 6.00	16,000,000
Acetone	39	2 - 250	7,800,000	trans-1,3-Dichloropropene	1	.90	9,500[1]
Carbon Disulfide	19	.8 - 5	7,800,000	1,1,2-Trichloroethane	1	1.00	30,000
Methylene Chloride	90	.70 - 58	230,000	Tetrachloroethene	29	.2 - 8	33,000
1,2-Dichloroethene (total)	5	.09 - 6	700,000	2-Hexanone	12	2 - 34	NE
1,1-Dichloroethane	1	40	7,800,000[2]	Dibromochloromethane	2	.20 - .70	7,600[2]
2-Butanone	15	.60 - 72	3,900,000	Chlorobenzene	4	.50 - 11	1,600,000
Chloroform	49	0.1 - 1	280,000	Ethylbenzene	40	.50 - 8.00	7,800,000
1,1,1-Trichloroethane	0	NA	7,000,000	Xylenes (total)	58	.30 - 7.00	160,000,000
Carbon Tetrachloride	0	NA	4,900[2]	Styrene	49	0 - 3	57,000
Benzene	26	.5 - 3.0	22,000[2]	Bromoform	2	.80 - 2	220,000
1,2-Dichloroethane	0	NA	7.00 E + 13	1,1,2,2-Tetrachloroethane	4	.60 - 5.00	8,500
Trichloroethene	4	.60 - 34	150,000				

Notes:
1 - Based on 1,3-Dichloropropene.
2 - Risk-based Guideline Cleanup Values
NE - No regulatory threshold limit has been established.
NA - Not Applicable

Reference: USEPA 1992 and HAZWRAP 1994

Table V.2. Semi-Volatile Risk-Based Threshold Levels

Parameter	Number of Detections	Range of Values (µg/kg)	Threshold or Cleanup Value Limit (µg/kg)	Parameter	Number of Detections	Range of Values (µg/kg)	Threshold or Cleanup Value Limit (µg/kg)
Phenol	1	53	47,000,000	2,4-Dinitrophenol	0	NA	160,000
bis (2-Chloroethyl)ether	0	NA	46,000	4-Nitrophenol	0	NA	4,800,000
2-Chlorophenol	0	NA	390,000	Dibenzofuran	9	10 - 690	NE
1,3-Dichlorobenzene	0	NA	7,000,000	2,4-Dinitrotoluene	0	NA	160,000
1,4-Dichlorobenzene	0	NA	71,000	Diethylphthalate	22	1 - 100	63,000,000
1,2-Dichlorobenzene	0	NA	7,000,000	4-Chlorophenyl-phenylether	0	NA	NE
2-Methylphenol	0	NA	3,900,000	Fluorene	7	13 - 380	3,100,000
2,2'-oxybis (1-Chloropropane)	0	NA	24,000	4-Nitroaniline	1	920	230,000
4-Methylphenol	0	NA	390,000	4,6-Dinitro-2-methylphenol	0	NA	NE
N-Nitroso-di-n-propylamine	2	17 & 51	240	N-Nitrosodiphenylamine	5	78 - 400	130,000[3]
Hexachloroethane	1	740	78,000	4-Bromophenyl-phenylether	0	NA	4,500,000
Nitrobenzene	0	NA	39,000	Hexachlorobenzene	1	740	1100
Isophorone	2	11 & 13	67[3]	Pentachlorophenol	2	94 - 180	5300[3]
2-Nitrophenol	0	NA	4,800,000[1]	Phenanthrene	24	22 - 3,100	88[3]
2,4-Dimethyphenol	0	NA	1,600,000	Anthracene	15	11 - 760	23,000,000
bis (2-Chloroethoxy) methane	0	NA	NE	Carbazole	16	22 - 390	85,000
2,4-Dichlorophenol	0	NA	230,000	Di-n-butylphthalate	57	20 - 1,900	7,800,000
1,2,4-Trichlorobenzene	0	NA	780,000	Fluoranthene	37	15 - 3,300	3,100,000
Naphthalene	7	16 - 190	3,100,000	Pyrene	27	21 - 3,600	2,300,000
4-Chloroaniline	0	NA	310,000	Butylbenzylphthalate	18	14 - 800	16,000,000
Hexachlorobutadiene	1	740	22,000	3,3'-Dichlorobenzidine	0	NA	3,800
4-Chloro-3-methylphenol	0	NA	NE	Benzo (a) anthracene	20	21 - 1,500	880[3]
2-Methylnaphthalene	4	14 - 29	NE	Chrysene	20	30 - 1,500	NE
Hexachlorocyclopentadiene	1	740	550,000	bis (2-Ethylhexyl) phthalate	43	28 - 2,200	120,000[3]
2,4,6-Trichlorophenol	0	NA	150,000	Di-n-octylphthalate	16	43 - 1,500	1,600,000
2,4,5-Trichlorophenol	0	NA	7,800,000	Benzo (b) fluoranthene	20	21 - 1,400	880[3]

Table V.2. Semi-Volatile Risk-Based Threshold Levels (continued)

Parameter	Number of Detections	Range of Values (µg/kg)	Threshold or Cleanup Value Limit (µg/kg)	Parameter	Number of Detections	Range of Values (µg/kg)	Threshold or Cleanup Value Limit (µg/kg)
2-Chloronaphthalene	0	NA	6,300,000[2]	Benzo (k) fluoranthene	17	24 - 1,100	880[3]
2-Nitroaniline	0	NA	4,700	Benzo (a) pyrene	18	23 - 1,600	88[3]
Dimethylphthalate	2	100 & 390	780,000,000	Indeno (1,2,3-cd) pyrene	7	41 - 1,000	880[3]
Acenaphthylene	5	12 - 35	NE	Dibenz (a,h) anthracene	3	24 - 690	88[3]
2,6-Dinitrotoluene	7	82 - 500	2,500	Benzo (g,h,i) perylene	8	28 - 1,100	88[3]
3-Nitroaniline	0	NA	230,000				

Notes:
NE - No regulatory threshold limit has been established.
NA - Not Applicable
1 - Based on the regulatory threshold limit for 4-Nitrophenol.
2 - Based on the regulatory threshold limit for beta-Chloronaphthalene.
3 - Risk-based Guideline Cleanup Value

Reference: USEPA 1992 and HAZWRAP 1994

Table V.3. Inorganic Risk-Based Threshold Levels

Parameter	Number of Detections	Range of Values (µg/kg)	Threshold or Cleanup Value Limit (µg/kg)	Parameter	Number of Detections	Range of Values (µg/kg)	Threshold or Cleanup Value Limit (µg/kg)
Aluminum	98	48,000 - 21,200,000	230,000,000	Magnesium	98	42,000 - 44,000,000	NE
Antimony	0	NA	31,000	Manganese	89	3,000 - 5,820,000	7,800,000
Arsenic	98	2,000 - 32,200	23,000	Mercury	19	80 - 490	23,000
Barium	98	19,000 - 320,000	5,500,000	Nickel	89	3,000 - 30,000	1,600,000
Beryllium	87	170 - 1,100	150[5]	Potassium	98	23,000 - 7,460,000	NE
Cadmium	0	NA	39.	Selenium	13	500 - 1,100	390,000
Calcium	98	3,300 - 269,000	NE	Silver	5	640 - 1,800	390,000
Chromium	98	5,000 - 48,000	390,000[1]	Sodium	98	2,000 - 2,150,000	NE
Cobalt	86	2,000 - 15,000	39,000[2]	Thallium	8	460 - 5,500	5,500[3]
Copper	98	7,000 - 34,000	2,900,000	Vanadium	98	5,000 - 31,000	550,000
Iron	98	27,000 - 311,000	NE	Zinc	98	4,600 - 105,000	23,000,000
Lead	94	1,000 - 36,500	53,000[2]	Cyanide	35	240 - 53,000	390,000[4]

Notes:
NE - No regulatory threshold level has been established because these are naturally occurring compounds.
NA - Not Applicable
1 - Regulated threshold level is based on hexavalent chromium.
2 - Based upon 98% limit of background concentration for eastern United States soils.
3 - Based upon thallic oxide.
4 - Based upon copper cyanide.
5 - Risk-based Guideline Cleanup Value

Reference: USEPA 1992 and HAZWRAP 1994

5.1.4. Pesticide/PCBs

The samples were analyzed for Pesticide/PCB compounds and the validated data is presented in Table IV.5. Table V.4 displays the RBTLs or RBGCVs used to evaluate the pesticide and PCB data. A review of these tables indicate that the soil sample results are under the RBTLs or the RBGCVs. The results listed on Table IV.5 indicate there were no exceedances of any Pesticide/PCB compound RBTLs or RBGCVs, except in samples 410010 and 420020. As discussed in Section 5.2, these are EG&G supplied samples to monitor laboratory performance. These are not samples collected from OU-6 and are included in the tables only as a QA/QC sample.

5.1.5. Radiological

The samples were also analyzed for radiological isotopes and the validated data is summarized in Table IV.6. A review of the radiological data in Table IV.6 and a comparison to the radiological remedial action guidelines indicates that all soil samples except two were below the remedial action guideline of 100 pCi/gram. The radiological data indicates that the dominant radiological contaminant of concern is Plutonium-238 and to a lesser extent Th-228. The two samples that exceeded 100 pCi/gram were Plutonium-238 at boring 19-3A at 132.05 pCi/gram and at boring 19-3B at 100.92 pCi/gram. Both of these locations are near the SM/PP Buildings. Pu-238 was also detected at borings, 19-1A, 19-3F, 19-3G, 19-3M, 19-3N, 19-3O, 19-3U, 19-3X, 19-4A, 19-2E, 19-1B, 19-1C, 19-2C, 19-2D, and 19-2J (these levels range from 2.5 to 82.7 pCi/gram). Most of the elevated levels of Pu-238 were from borings at the SM/PP Building, the WD Building and north of Building 67. Except for the two samples at 19-3A and 19-3B, these radiological values are all under the remedial action guideline value of 100 pCi/gram for Pu-238 but some are over the ALARA value of 25 pCi/gram (excluding Mound spike samples). Thorium-228 was the other main radiological contaminant of concern. Nine readings above 2 pCi/gram were detected for Th-228 and ranged from 2 to 10.7 pCi/gram. In addition, most of the combined Thorium values are under or at 5 pCi/gram. Tritium contamination was detected in most of the rinsate blank samples at concentrations of 723 to 744 pCi/gram, but was not detected in most of the soil samples. For that reason, blank contamination was not considered a factor. Tritium was detected 14 times at levels ranging from 14.3 to 34 pCi/gram. Most of the elevated levels were from borings north of Building 67.

EG&G representatives provided spiked samples of soil. The purpose of these soil spike samples (samples numbers: MND14-3040-0000, MND14-3041-0010, and MND14-3042-0020 defined in Table IV.6 and Appendix B as 400000, 4100010, and 420020) was to compare the laboratory reported radiological results with EG&G screening results. The concentrations detected in all three of the soil samples were relatively close to the EG&G reported value. Sample number MND14-3042-0020 was within 1 pCi/gram of the EG&G value. Sample MND14-3040-0000 has a reported Pu-238 activity of 103.9 pCi/gram and the EG&G

Table V.4. Pesticide/PCB Risk-Based Threshold Levels

Parameter	Number of Detections	Range of Values (µg/kg)	Threshold or Cleanup Value Limit (µg/kg)	Parameter	Number of Detections	Range of Values (µg/kg)	Threshold or Cleanup Value Limit (µg/kg)
alpha-BHC	29	.20 - 3.20	270	4,4'-DDT	25	0.02 - 6.00	5,000
beta-BHC	0	NA	350[5]	Methoxychlor	11	.52 - 11.2	390,000
delta-BHC	2	0.01 - 1.50	950	Endrin ketone	1	0.22	23,000[2]
gamma-BHC (Lindane)	0	NA	1,300	Endrin aldehyde	0	NA	23,000[2]
Heptaclor	1	0.72	380	alpha-Chlordane	2	0.28 - 4.80	1,300[3]
Aldrin	2	.61 - 4.00	100	gamma-Chlordane	2	0.25	1,300[3]
Heptaclor epoxide	9	.33 - 11.00	190	Toxaphene	0	NA	1,500
Endosulfan I	1	1.40	3,900[1]	Aroclor-1016	0	NA	220[4]
Dieldrin	5	.55 - 6.40	40[5]	Aroclor-1221	0	NA	220[4]
4,4'-DDE	0	NA	1,900[5]	Aroclor-1232	0	NA	220[4]
Endrin	9	0.04 - 2.00	23,000	Aroclor-1242	0	NA	220[4]
Endosulfan II	2	.95 - 2.50	3,900[1]	Aroclor-1248	1	41	83[5]
4,4'-DDD	4	1 - 11	1,900	Aroclor-1254	1	67	83[5]
Endosulfan sulfate	0	NA	3,900[1]	Aroclor-1260	0	NA	83[5]

Notes:
NA - Not Applicable
1 - Based upon the regulatory threshold limit for Endosulfan.
2 - Based upon the regulatory threshold limit for Endrin.
3 - Based upon the regulatory threshold limit for Chlordaane.
4 - Based upon the regulatory threshold limit for total PCBs.
5 - Risk-based Guideline Cleanup Value

Reference: USEPA 1992 and HAZWRAP

reported value is 140 pCi/gram for a precision of 34.2% relative percent difference. The differences in the spike results for sample number 400000 is not considered significant due to the differences in analytical methods and the normal differences between laboratories. Sample number 410010 had a reported activity of 17 pCi/gram versus a EG&G reported value of 54 pCi/gram. This difference is large, but considering the results of the other two spike samples, the performance of laboratory appears acceptable. This is confirmed by the data validation results.

5.2. STATISTICAL ANALYSIS

Analytical data from the laboratory analyses of Area 19 and 14 soils were validated following procedures described in the EPA Functional Guidelines (EPA 1988b, 1990b) and the OU 6 and OU 9 QAPjPs (EG&G 1992a, 1992b). Once the data were validated, the results were evaluated to determine if the D&D activities have been successful in terms of meeting the D&D cleanup goals for plutonium and thorium.

To meet this objective, statistical procedures were used, following EPA's (1989) guidance, for determining whether the mean concentration in the samples collected in Areas 19-1, 19-2, and 19-3 have attained the designated cleanup standards.

After the radiological data have been collected, analyzed, and validated, summary statistics (the mean, the square root of the mean, standard deviation of the mean, and the log of the mean) were calculated for each of the three areas for both plutonium and thorium concentration values. Following EPA's (1989) guidance for concentrations measured below the detection limit, the detection limit was used to calculate the summary statistics for non-detect samples. Since the mean of the sampling data is only an estimate of the mean contamination of the entire sample area (the population), an upper one-sided confidence interval was calculated (using equation 6.8, page 6-11, in (EPA 1989) which provided a range of values within which the true population mean concentration is located. A one-sided confidence interval and the following 4-part decision rule were used to test whether each individual area (19-1, 19-2, and 19-3) has attained the cleanup standard.

Decision Rule Number 1

IF

1. The upper 95 percent confidence interval is less than the cleanup standard of 100 pCi/gram for plutonium-238 for all soils,

AND

2. The upper 95 percent confidence interval is less than the cleanup standard of 5 pCi/gram for thorium isotopes for all surface soils,

AND

3. The upper 95 percent confidence interval is less than the cleanup standard of 15 pCi/gram for thorium isotopes for all subsurface soils,

THEN

4. The area will be declared clean from a D&D perspective, otherwise the area will be declared not clean and additional D&D remediation activities will need to be performed.

If the upper 95 percent confidence intervals are greater than the cleanup standards stated in the decision rule, the data from the verification sampling and analysis program will be further evaluated to determine the location and frequency of additional samples to be collected to determine the magnitude and extent of remaining radiological contamination. This evaluation will include the nature of the contaminants, the frequency of detection, concentration values, lateral and vertical distribution, potential sources, and any other contributing factors that may become evident in the analysis of the sample results (SAIC 1993). The evaluation will not include the results of the samples (400000, 410010, 420020) provided by EG&G to monitor laboratory performance.

Decision Rule Number 2

Other potential contaminants of concern (COC) will be considered for further evaluation if:

1. The COC is positively detected (above the detection limit) in at least one soil sample,

OR

2. The COC is identified, but the exact concentration is unknown (i.e., J-qualified data),

OR

3. The COC is detected at the upper 95% confidence level at levels significantly higher than the same chemicals detected in the QA/QC blank samples, (without application of the 5X or 10X rule),

OR

4. The COC is detected at the upper 95% confidence level at levels significantly higher than naturally occurring levels of the same chemical (i.e., background).

Where "significantly" is not strictly defined by a number but is subjectively determined based on the COC and the site specific conditions.

The list of potential COCs resulting from the stated decision rule will be evaluated to characterize the nature and extent of residual chemical and other radiological contamination in area soils (SAIC 1993).

The evaluation will not include the results of the samples (400000, 410010, 420020) provided by EG&G to monitor laboratory performance.

5.2.1. Volatile Organic

Table V.1 displays the risk based volatile organic threshold levels or cleanup values. The statistical analysis of the data (Appendix B, Table B.1) indicated that the upper 95% confidence level values for the detected concentrations of volatile organic compounds were less than the RBTLs or the RBGCVs and additional sampling, risk assessment, or remediation are not warranted.

5.2.2. Semi-Volatile Organic

Table V.2 displays the risk-based semi-volatile organic threshold levels. The statistical analysis of the data (Appendix B, Table B.2) indicated that the upper 95% confidence level values for the semi-volatile organic compounds are less than the RBTLs and the RBGCVs. Therefore, additional sampling or remediation are not warranted.

5.2.3. Inorganic

Table V.3 displays the risk-based inorganic compound threshold levels. Based on the statistical analysis (Appendix B, Table B.3), the upper 95% confidence level for the detected concentrations of inorganic analytes were less than the RBTLs and the RBGCVs, and additional sampling, site-specific risk assessment work, or remediation are not warranted.

5.2.4. Pesticide/PCBs

Table V.4 displays the risk-based pesticide and PCB compound threshold levels. Since, the upper 95% confidence level (Appendix B) for the detected concentrations of pesticide and PCB compounds were less than the RBTLs or the RBGCVs, additional sampling, risk assessment, or remediation are not necessary.

5.2.5. Radiological

A statistical analysis of the radiological analytical data was performed. Summary statistics (the mean, the log of the mean, population size, and standard deviation of the mean) were calculated for the sample data from each of the three areas (Appendix B, Table B.5). Using EPA guidance (Methods for Evaluating the Attainment of Cleanup Standards, Equation 6.8, pg.6-11, EPA 1989), the upper, one-sided confidence interval was also calculated as a means of determining whether the soil samples from each area attained

the cleanup level. The soil samples in Area 19-1 had an upper 95 percent confidence level value for Plutonium-238 that was 21.036 pCi/gram, which is less than the ALARA value for Plutonium-238. Area 19-1, which had a sample population of seven subsurface samples, had an upper 95 percent confidence interval value for Thorium-228 (0.392 pCi/gram) that was less than the cleanup level (assuming 15 pCi/gram cleanup level for subsurface soils). In accordance with Section 7.1 of the SAP, the mean concentration of samples from the area attained the clean up standards for Plutonium-238 and the subsurface value for Thorium-228. There were no surface soils collected in Area 19-1. However, sample location 19-1B at a depth of 6 to 8 feet, did exceed the ALARA value of 25 pCi/gram, with a value of 82.57 pCi/gram. This value is below the action level of 100 pCi/gram, but is at the approximate bottom depth of the WTS pipeline near the SM/PP building. The results indicate that the cleanup was successful meeting the cleanup value of less than 100 pCi/gram.

Area 19-2 had a sample population of 30 samples. The soil samples in Area 19-2 had upper 95 percent confidence level values for Plutonium-238 and Thorium isotopes which were below 100 pCi/gram Plutonium and 15 pCi/gram Thorium isotopes, respectively. However, one sample in Area 19-2 had concentrations of Thorium isotopes above the surface soil cleanup standard (5 pCi/gram). The soil sample location was 19-2J at a depth of 0-2 feet, that exceeded the Th-228 surface cleanup standard. The mean concentration and upper 95% confidence level for Area 19-2 samples analyzed for Plutonium-238 and Thorium isotopes indicate that the cleanup standards were attained.

Area 19-3 had a sample population of 56 samples. The soil samples in Area 19-3 had upper 95 percent confidence level values for Plutonium isotopes and Thorium which were below 100 pCi/gram (Plutonium-238) and 15 pCi/gram (Thorium isotopes), respectively. However, some soil samples in Area 19-3 had concentrations of Plutonium above the soil cleanup standard (100 pCi/gram). Two soil samples exceeded the Pu-238 cleanup standards, at locations 19-3A and 19-3B. Concentrations of 100.92 for Pu-238 at 19-3B and 132.05 at 19-3A were detected. Additional locations were below the cleanup value (100 pCi/gram) for Pu-238 but were above the ALARA value of 25 pCi/gram at 19-4A (68.94 pCi/gram), 19-3U (46.22 pCi/gram) and 19.3O (31.98 pCi/gram). However, in Area 19-3, the mean concentration and upper 95% confidence level of samples analyzed for Plutonium-238 and Thorium isotopes indicate that the cleanup standards were attained.

5.3. DISCUSSION

5.3.1. Volatile Organic

Based on a comparison of the analytical data for volatile organic compounds to the RBTLs or the RBGCVs, no volatile organic compounds will be considered for further evaluation as potential COCs.

5.3.2. Semi-Volatile Organic

Based on a comparison of the analytical data for the semi-volatile organics, additional sampling or remediation are not warranted for these compounds.

5.3.3. Inorganic

The results listed on Table IV.3 and IV.4 indicate that the inorganic compounds in the soils are under the risk-based threshold levels. Table V.3 displays the risk based threshold levels for inorganic analytes. For convenience, the RBTL's are listed on the side of Table IV.3 so that the data can be easily reviewed. Some inorganic compounds were detected for which there are no RBTLs, however, generally these elements are essential human nutrients, and pose little health risk. Based on a comparison of the inorganic analytical data to the RBTLs or RBGCVs, no inorganic analytes will be considered for further evaluation as potential COCs.

5.3.4. Pesticide/PCBs

A review of the Pesticide/PCB analytical data is displayed in Table IV.5. A comparison of the data which passed the validation process indicates no exceedances of the RBTLs or RBGCVs.

Approximately 20% of the pesticide/PCB data is unusable (rejected during data validation) because of results which were not in compliance with the QAPP or the labs own quality assurance plans. Due to the low levels of PCBs and pesticides in the other samples, it does not appear that these compounds are a concern. No pesticides or PCBs will be considered for further evaluation as potential COCs.

5.3.5. Radiological

Based on the statistical analysis of the radiological soil samples using a clean up standard of 100 pCi/gram for Pu-238, and 15 pCi/gram (subsurface) or 5 pCi/gram (surface) for Thorium isotopes, the previous remediation in Areas 19-1, 19-2, and 19-3 was successful in meeting the goals of the D&D activity.

In Area 19-1, the 95 percent confidence interval value for Plutonium isotopes in subsurface soil samples was below the cleanup level. The upper 95 percent confidence value of 21.04 pCi/gram was primarily due to the concentration of Plutonium 238 (82.57 pCi/gram) in one sample at location 19-1B. Note that only subsurface soil samples were collected in Area 19-1. Based on the statistical results, the remediation in Area 19-1 met the goals of the D&D activity. In Area 19-2, the upper 95 percent confidence values for

Plutonium and Thorium were below the cleanup standard. No Plutonium or Thorium values exceeded the ALARA standard of 25 pCi/gram for Plutonium or the 15 pCi/gram standard for Thorium. Based on the statistical results, no additional sampling or remediation are necessary in Area 19-2.

In Area 19-3, the upper 95 percent confidence values for Plutonium and Thorium were below the cleanup standards. Although several locations had values that exceeded the 100 pCi/gram cleanup standard for Plutonium, based on the statistical results, the remediation of Area 19-3 successfully meet the goals of the D&D activity.

A review of previous radiological soil sampling information (in the OU 6 Verification Plan), indicates that the remediation effort was successful. A review of OU 6 Verification Plan Table II.1 indicates that the major hotspots of Pu-238 have been removed, and this was confirmed by this sampling effort. The highest level of the radiological contaminants (Pu-238) were observed near the SM/PP and WD Buildings, which is expected based on the history of the site.

6 CONCLUSIONS

A soil sampling verification investigation at Mound's OU 6 Area 19 and Area 14 was performed. Based on extensive testing, a review of all the analytical data for both radiological and non-radiological parameters and a statistical analysis of the analytical data, a conclusion was reached that the mean value of the analytical results for Pu-238 and Thorium isotopes have attained the cleanup criteria.

The results of the subsurface soil samples in Area 19-1 and Area 19-2 indicate that the cleanup criteria for Plutonium and Thorium isotopes was attained. However, one sample, 19-1B did exceed the ALARA value of 25 pCi/gram for Plutonium. The results of the subsurface investigation in Area 19-3 indicate that the cleanup criteria for Thorium isotopes was attained.

The results of the soil samples for Pu-238 indicate that some contamination still exists. Levels of Pu-238 of 132.05 and 100.92 pCi/gram were found at the Area 3 locations, 19-3A and 19-3B, respectively. In addition, a Pu-238 value of 82.57 pCi/gram was obtained from a sample collected at the Area 1 location, 19-1B. However, the mean and upper 95 percent confidence value for Pu-238 in Area 3 location indicates that the cleanup was successful.

The statistical analysis of the soil samples for the non-radiological parameters indicated no exceedances of the risk-based threshold levels for volatile organic compounds, semi-volatile organics, pesticides/PCBs, or inorganic analytes. Of the semi-volatile organic compounds analyzed, only a few compounds were detected at concentrations above the risk-based threshold level or cleanup value, but based on the statistical analysis the semi-volatile organic compounds are not a concern.

In conclusion, based on the mean and upper 95% confidence limit, D&D remedial activities in Area 19 and Area 14 have achieved the established goals. Based on these results, no further action is required.

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APPENDIX A

PROJECT SPECIFIC STANDARD OPERATING PROCEDURES

SOP A.1 - FIELD SAMPLING PROCEDURES

Field soil samples were collected from soil borings to verify the remedial efforts performed by the Mound D&D Program. Soil samples were collected per the OU 6 Verification Plan, ER Program SOPs 4.1, 5.1, 5.3 and ASTM Methods. Soil samples were collected at randomly determined depths (0-17 feet) and above the soil/bedrock interface. Samples were screened in the field for radiological and volatile organics (FIDLER and HNu, respectively) prior to containerization in lab cleaned containers. Soil samples were iced soon after collected and soil sample logsheets were prepared and net as an initial chain of custody. All sampling equipment was steam cleaned prior to use. The following lists the procedures that were followed:

1. Decontaminated drill rig and equipment were moved to the drilling location, and prior to drilling the Mound personnel (construction inspector) checked boring location.

2. The soils (surface and subsurface) were screened by Mound's health physic monitors and soil screening facility (0.5 ft. to 1 foot intervals). Readings for radiological and chemical (Hnu) parameters were recorded in field notebooks.

3. Drilling was performed under direct supervision of the assigned Site Geologist.

4. An ATV drilling rig was used to drill the soil borings, using hollow-stem augers with an outside diameter of 7.0 to 8.25 inches. As the augers were advanced, split-spoon samples were collected at randomly determined depths in area 19-3, and at predetermined depths for areas 19-1 and 19-2. Soil samples were collected with a 2-foot-long split-spoon sampler driven into the undisturbed soil material beyond the bottom of the augers. During sampling, the site geologist recorded the weight of the hammer, the diameter of the sampler, penetration distance, and length of sample recovery.

5. Upon retraction, the split-spoon sampler was removed from the drill stem and disassembled, so that the recovered soil was in one half of the split-spoon sampler. Any excessively disturbed or loose material found in the sampler which may not be representative of the interval sampled was discarded. This excess material was stored in drums with drill cuttings if cuttings would not fit back in borehole. Drums were labeled with waste type and well location and number. The drums were transferred to a central drum storage location designated by Mound. The volatile organic sample jars were filled immediately upon disassembly of the split-spoon. Immediately after filling the volatile organic and semi-volatile sample jars, the a screening sample was filled so that Mound could check samples, then the remaining required sample bottles were filled.

6. The sample was visually examined and its characteristics were recorded using the Burmister Soil Classification System (e.g., texture, consistency, moisture content, layering and other pertinent data). See section 3.1.3.

7. Once the desired completion depth for the boring had been reached (bedrock for the soil borings or twenty (20) feet below ground surface) the boreholes were backfilled with bentonite-cement grout.

8. At the conclusion of each boring/drilling activity and prior to proceeding to the next drill site, all drilling tools were properly decontaminated. This decontamination procedure included a

high-pressure hot water wash, a high-pressure water rinse, and air drying. All decontamination washwaters were contained and stored on site for eventual disposal by Mound.

SOP A.2 - PROCEDURES FOR SOIL CLASSIFICATION AND LOGGING

During drilling of soil borings, the site geologist fully described all activities in the bound field notebooks. The following data was recorded in the bound field notebooks, in real-time, at the drill site:

a. Drilling depths in feet and fractions thereof (tenths of feet, rather than inches). Measurements were entered on the soil boring log forms;

b. Soil descriptions, in accordance with the Burmister Classification System and prepared in the field by the attending Site Geologist, which include the following information:

   (1) Classification,
   (2) Unified Soil Classification System (USCS) symbol,
   (3) Secondary components and estimated percentage,
   (4) Color,
   (5) Plasticity,
   (6) Consistency (cohesive soil) or density (noncohesive soil),
   (7) Moisture content,
   (8) Texture/fabric/bedding, and
   (9) Depositional environment;

c. Soil cutting descriptions, including basic classification, secondary components, and other apparent parameters;

d. Numerical, visual estimates of secondary soil constituents. Terms such as "trace (indicate 0-10%)," "little (indicate 10-20%)," "some (indicate 20-35%)," or "and (indicate 35-50%)" were used;

e. Length of sample recovered for each sampled interval for driven (split-spoon) samples;

f. Blow counts, hammer weight, and length of fall for split-spoon samples;

g. Estimated interval for each sample;

h. Depth to water first encountered during drilling and the method of determination;

i. General description of the drilling equipment used, including the rod size, bit type, pump type, rig manufacturer, model, and drilling personnel;

j. Drilling sequence;

k. Any unusual problems;

l. Start and completion dates of all borings, and a chronological time-sequence of all events;

m. Lithologic boundaries; and

n. PID readings obtained from the cuttings or samples.

SOP A.3 - PROCEDURES FOR PACKAGING AND SHIPPING SAMPLES

The following packaging procedures were used for the environmental samples.

1. Clean outside of sample containers;
2. Affix sample labels to corresponding sample containers;
3. Add preservatives to water samples as required;
4. Use bubble wrap to protect glass sample bottles;
5. Enclose all samples containers and bottles in sealed ziplock bags;
6. Place sample containers in an ice chest lined with a plastic trash bag, checking against chain-of-custody record to ensure all samples are listed and are in the correct ice chest;
7. Add styrofoam, vermiculite, or other packing material to the trash bag to fill the empty space between samples;
8. Fasten trash bag with twist-tie or tape;
9. Detach and retain the first two copies of the traffic report and chain-of-custody forms;
10. Seal remaining paperwork in a ziplock bag. Tape the bag to the inside of ice chest lid;
11. Fill 1 to 3 ziplock bags with ice and include in the ice chest shipment if required by sampling and analysis plan. All ice should be double bagged in heavy duty ziplock bags;
12. Affix airbill or airbill stickers to the ice chest;
13. Affix "This End Up" stickers to the ice chest;
14. Affix "Radioactive Material" stickers to each sample bottle (if required);
15. Seal the ice chest with two (2) custody seals (one in the front and one in the back);
16. Tape the ice chest shut using strapping tape;
17. Affix the laboratory address to all ice chests;
18. Remove extraneous stickers from the ice chests; and
19. Ensure that each ice chest has a return address.

APPENDIX B

SUMMARY DOCUMENTATION OF STATISTICAL ANALYSIS

Per the OU 6 Verification Plan, Section 7.1, the radiological and non-radiological analytical data was reduced using EPA guidance document "Methods for Evaluating the Attainment of Cleanup Standards Volume 1: Soils and Solid Media, pg. 6-11, February 1989." The equation used for an upper one-sided 100 (1-α) percent confidence limit around the population mean is presented below:

$$\mu U\alpha = \text{Log}(\bar{x}) + ti\text{-}\alpha,df \frac{s}{\sqrt{n}}$$

where

$\mu U\alpha$	=	is the upper one sided confidence limit
$\bar{x}$	=	mean of the sample population
s	=	standard deviation
n	=	population
ti-α,df	=	100 (1-α) value from "Table for Selected Alpha and Degrees of Freedom" (EPA, 1989).

The analytical data was reduced and the samples divided by Area 19-1, 19-2 and 19-3. Standard deviation as well as mean population calculations were performed on soil samples only. All sample blanks were removed from the tables to achieve precise values for mean and standard deviation. The analytical data is summarized on the following page. Values for tiα,df were obtained from Appendix A in the aforementioned EPA reference document.

Tables B.1 through B.5 provide the results of the summary statistics. The row labeled "Count" is the sample size or population. The row labeled "N Value" is the square root of the sample size or population (square root of the "Count" value). The row labeled "Degrees of Freedom" is the value for ti-α,df.

Concentration units are in μg/kg unless otherwise noted.

SUMMARY RADIOLOGICAL STATISTICAL ANALYSIS

Location	Compound	s	x	n	$t_{\alpha,df}$	μU_{α}
19-1	Pu-238	27.69	15.85	2.65	1.895	21.04
19-2	Pu-238	5.17	2.76	5.48	1.694	2.04
19-3	Pu-238	24.06	8.91	7.48	1.674	6.33
19-1	Th-228	0.44	1.18	2.65	1.895	0.392
19-2	Th-228	1.81	0.973	5.48	1.694	0.693
19-3	Th-228	0.86	1.17	7.48	1.674	0.263

STATISTICAL SUMMARY TABLES

Table B.1. Statistical Analysis of Volatile Organics

Sample Number	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	1,2-Dichloroethene (total)	1,2-Dichloropropane	2-Butanone	2-Hexanone
RBTC/RBGVC	7000000	6500	30000	7800000	2800	7.00E+13	700000	25000	3900000	NE
AREA 19-1										
391006	12	12	12	12	12	12	12	12	14	12
[illegible]011	11	11	11	11	11	11	11	11	11	2
[illegible]006	12	12	12	12	12	12	12	12	12	12
380012	12	12	12	12	12	12	12	12	12	12
380006	12	12	12	12	12	12	12	12	12	12
370012	11	11	11	11	11	11	11	11	11	11
370006	12	12	12	12	12	12	12	12	12	12
Count	7	7	7	7	7	7	7	7	7	7
Mean	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.079	1.018
Stan. Dev.	0.452	0.452	0.452	0.452	0.452	0.452	0.452	0.452	0.928	3.458
N Value	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645
Degrees of Freedo	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895
Cleanup Standard	1.393	1.393	1.393	1.393	1.393	1.393	1.393	1.393	1.742	3.495
AREA 19-2										
360020	11	11	11	11	11	11	11	11	23	12
360013	12	12	12	12	12	12	12	12	12	12
360006	11	11	11	11	11	11	11	11	11	11
360000	11	11	11	11	11	11	11	11	11	11
350020	11	11	11	11	11	11	11	11	11	11
350013	12	12	12	12	12	12	12	12	12	12
350006	12	12	12	12	12	12	12	12	12	12
350000	11	11	11	11	11	11	11	11	11	11
341000	11	11	11	11	11	11	11	11	11	11
340006	13	13	13	13	13	13	13	13	13	13
340000	11	11	11	11	11	11	11	11	11	11
330006	11	11	11	11	11	11	11	11	11	11
330000	11	11	11	11	11	11	11	11	5	11
320006RA	11	11	11	11	11	11	11	11	11	11
320000RA	11	11	11	11	11	11	11	11	1	11
310000	11	11	11	11	11	11	11	11	11	11
301000	11	11	11	11	11	11	11	11	11	11
300000	12	12	12	12	12	12	12	12	12	12
290013	11	11	11	11	11	11	11	11	1	11
290006	11	11	11	11	11	11	11	11	11	11
290000	11	11	11	11	11	11	11	11	11	11
281000	10	10	10	10	10	10	10	10	10	6
280020	10	10	10	10	10	10	10	10	1	10
280013	12	12	12	12	12	12	12	12	12	12
280006	12	12	12	12	12	12	12	12	12	12
280000	10	10	10	10	10	10	10	10	10	10
270020	11	11	11	11	11	11	11	11	15	17
[illegible]0013	11	11	11	11	11	11	11	11	11	11
[illegible]0006	10	10	10	10	10	10	10	10	10	10
270000	11	11	11	11	11	11	11	11	11	11
Count	30	30	30	30	30	30	30	30	30	30
Mean	1.047	1.047	1.047	1.047	1.047	1.047	1.047	1.047	1.021	1.051
Stan. Dev.	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	4.12	1.564
N Value	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477
Degrees of Freedo	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694
Cleanup Standard	1.254	1.254	1.254	1.254	1.254	1.254	1.254	1.254	2.295	1.535

Table B.1. Statistical Analysis of Volatile Organics

Sample Number	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	1,2-Dichloroethene (total)	1,2-Dichloropropane	2-Butanone	2-Hexanone
RBTC/RBGVC	7000000	8500	30000	7600000	2800	7.00E+13	700000	25000	3900000	NE
AREA 19-3										
260020	11	11	11	11	11	11	11	11	11	11
010	11	11	11	11	11	11	11	11	11	11
002	10	10	10	10	10	10	10	10	10	10
250016	10	10	10	10	10	10	10	10	9	10
250009	11	11	11	11	11	11	11	11	11	11
240011	12	12	12	12	12	12	12	12	12	12
240004	12	12	12	12	12	12	12	12	12	12
230014	11	11	11	11	11	11	11	11	25	6
230005	11	11	11	11	11	11	11	11	23	10
220010	11	11	11	11	11	11	11	11	11	11
220005	11	11	11	11	11	11	11	11	11	11
210012	11	11	11	11	11	11	11	11	11	11
210005	12	12	12	12	12	12	12	12	12	12
200020	11	11	11	11	11	11	11	11	1	11
200009	10	10	10	10	10	10	10	10	10	10
191020	11	11	11	11	11	11	11	11	11	11
190020	10	10	10	10	10	10	10	10	10	10
190007	11	11	11	11	11	11	11	11	11	11
180020	11	11	11	11	11	11	11	11	34	11
180012	10	10	10	10	10	10	10	10	10	10
171020	12	12	12	12	12	12	12	12	12	12
170020	11	11	11	11	11	11	11	11	11	11
170007	11	11	11	11	11	11	11	11	11	11
160018	12	12	12	12	12	12	12	12	12	12
160010	12	12	12	12	12	12	12	12	72	12
150020RA	11	11	11	11	11	11	11	11	11	11
150001	11	11	11	11	11	11	11	11	11	11
140006RA	11	11	11	11	11	11	1	11	10	11
140001RA	11	11	11	11	11	11	11	11	11	11
130008	11	11	11	0	11	11	6	11	11	11
130003	11	11	11	11	11	11	4	11	18	34
120020	11	11	11	11	11	11	11	11	11	11
120001	10	10	10	10	10	10	0	10	10	10
110017	11	11	11	11	11	11	11	11	11	11
110006	12	12	12	12	12	12	12	12	12	12
101020	11	11	11	11	11	11	0	11	9	3
100020	11	11	11	11	11	11	11	11	11	11
100011	11	11	11	11	11	11	11	11	11	11
090017	11	11	11	11	11	11	11	11	11	11
090002	11	11	11	11	11	11	11	11	11	11
080009	12	12	12	12	12	12	12	12	12	12
080001	11	11	11	11	11	11	11	11	11	11
71001	11	11	11	11	11	11	11	11	11	11
70012	12	12	12	12	12	12	12	12	1	12
070001	11	11	11	11	11	11	11	11	11	11
060005	11	11	11	11	11	11	11	11	11	11
060000	11	11	11	11	11	11	11	11	11	11
050010	11	1	11	11	11	11	0	11	11	6
050004	11	1	1	11	11	11	11	1	11	11
040012	11	11	11	11	11	11	11	11	11	11
040007	11	11	11	11	11	11	11	11	11	11
030004	11	11	11	11	11	11	11	11	11	11
020006	11	11	11	11	11	11	11	11	11	11
020003	12	12	12	12	12	12	12	12	12	12
011002	11	11	11	11	11	11	11	11	11	11
010002	11	11	11	11	11	11	11	11	11	11
Count	56	56	56	56	56	56	56	56	56	56
Mean	1.044	1.03	1.037	1.037	1.044	1.044	1.005	1.037	1.103	1.047
Stan. Dev.	0.53	1.897	1.435	1.509	0.53	0.53	2.989	1.435	9.168	3.43
N Value	7.483	7.483	7.483	7.483	7.483	7.483	7.483	7.483	7.483	7.483
Degrees of Freedo	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674
Cleanup Standard	1.163	1.477	1.358	1.375	1.163	1.163	1.674	1.358	3.154	1.814

Table B.1. Statistical Analysis of Volatile Organics (Continued)

Sample Number	4-Methyl-2-Pentanone	Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	WCS	Chloroform	Chloromethane
RBTC/RBGVC	3900000	7800000	22000	10000	220000	110000	7800000	490	1600000	1600000	280000	130000
AREA 19-1												
391006	12	49	12	12	12	12	12	12	12	12	0	12
[illegible]011	3	11	3	11	11	11	11	11	11	11	0	11
[illegible]006	12	28	1	12	12	12	12	12	12	12	0	12
380012	12	12	12	12	12	12	12	12	12	12	12	12
380006	6	20	12	12	12	12	12	12	12	12	0	12
370012	11	11	11	11	11	11	11	11	11	11	0	11
370006	12	27	12	12	12	12	12	12	12	12	1	12
Count	7	7	7	7	7	7	7	7	7	7	7	7
Mean	0.987	1.354	0.951	1.069	1.069	1.069	1.069	1.069	1.069	1.069	0.316	1.069
Stan. Dev.	3.411	12.726	4.575	0.452	0.452	0.452	0.452	0.452	0.452	0.452	4.053	0.452
N Value	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645
Degrees of Freedo	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895
Cleanup Standard	3.431	10.471	4.229	1.393	1.393	1.393	1.393	1.393	1.393	1.393	3.22	1.393
AREA 19-2												
360020	8	11	2	11	11	11	11	11	11	11	0	11
360013	12	12	1	12	12	12	12	12	12	12	12	12
360006	11	11	1	11	11	11	11	11	11	11	1	11
360000	11	11	11	11	11	11	11	11	11	11	0	11
350020	11	11	11	11	11	11	11	11	11	11	11	11
350013	12	12	12	12	12	12	12	12	12	12	12	12
350006	2	250	12	12	12	12	12	12	12	12	12	12
350000	11	11	11	11	11	11	11	11	11	11	11	11
341000	11	14	11	11	11	11	11	11	11	11	0	11
340006	13	96	13	13	13	13	13	13	13	13	13	13
340000	1	41	11	11	11	11	11	11	11	11	0	11
330006	11	11	11	11	11	11	2	11	11	11	1	11
330000	11	42	11	11	11	11	11	11	11	11	11	11
320006RA	11	11	11	11	11	11	11	11	11	11	11	11
320000RA	11	23	11	11	11	11	11	11	11	11	11	11
310000	11	11	11	11	11	11	11	11	11	11	11	11
301000	11	11	11	11	11	11	11	11	11	11	1	11
300000	12	12	12	12	12	12	12	12	12	12	0	12
290013	11	10	11	11	11	11	1	11	11	11	1	11
290006	11	34	11	11	11	11	1	11	11	11	11	11
290000	11	34	11	11	11	11	11	11	11	11	11	11
281000	3	13	10	10	10	10	10	10	10	10	0	10
280020	10	10	10	10	10	10	10	10	10	10	10	10
280013	12	12	12	12	12	12	12	12	12	12	12	12
280006	12	12	12	12	12	12	12	12	12	12	12	12
280000	10	10	10	10	10	10	10	10	10	10	10	10
270020	7	11	1	11	11	11	3	11	11	11	1	11
[illegible]0013	11	27	1	11	11	11	2	11	11	11	1	11
[illegible]0006	10	48	1	10	10	10	1	10	10	10	1	10
270000	11	41	11	11	11	11	11	11	11	11	0	11
Count	30	30	30	30	30	30	30	30	30	30	30	30
Mean	0.999	1.458	0.982	1.047	1.047	1.047	0.968	1.047	1.047	1.047	0.797	1.047
Stan. Dev.	2.94	44.675	4.064	0.67	0.67	0.67	3.897	0.67	0.67	0.67	5.425	0.67
N Value	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477
Degrees of Freedo	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694
Cleanup Standard	1.908	15.338	2.219	1.254	1.254	1.254	2.173	1.254	1.254	1.254	2.475	1.254

Table B.1. Statistical Analysis of Volatile Organics (Continued)

Sample Number	4-Methyl-2-Pentanone	Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	WCS	Chloroform	Chloromethane
RBTC/RBGVC	3900000	7800000	22000	10000	220000	110000	7800000	490	1600000	1600000	280000	130000
AREA 19-3												
[illegible]0020	11	11	1	11	11	11	11	11	1	11	1	11
[illegible]010	11	11	1	11	11	11	1	11	11	11	11	11
[illegible]0002	10	10	10	10	10	10	10	10	10	10	10	10
250016	10	10	10	10	10	10	10	10	10	10	10	10
250009	11	11	11	11	11	11	11	11	11	11	11	11
240011	12	37	12	12	12	12	12	12	12	12	0	12
240004	12	12	12	12	12	12	12	12	12	12	12	12
230014	4	200	1	11	11	11	5	11	11	11	1	11
230005	4	87	3	11	11	11	11	11	11	11	0	11
220010	11	20	11	11	11	11	11	11	11	11	11	11
220005	11	61	1	11	11	11	11	11	11	11	11	11
210012	11	43	11	11	11	11	11	11	11	11	11	11
210005	12	12	12	12	12	12	12	12	12	12	12	12
200020	11	28	1	11	11	11	3	11	11	11	1	11
200009	10	49	2	10	10	10	3	10	10	10	1	10
191020	11	2	11	11	11	11	2	11	11	11	1	11
190020	10	68	2	10	10	10	2	10	10	10	1	10
190007	11	37	11	11	11	11	11	11	11	11	0	11
180020	11	11	11	11	11	11	3	11	11	11	0	11
180012	10	10	1	10	10	10	10	10	10	10	10	10
171020	12	26	12	12	12	12	12	12	12	12	12	12
170020	11	42	11	11	11	11	11	11	11	11	11	11
170007	11	11	11	11	11	11	11	11	11	11	11	11
160018	12	35	12	12	12	12	12	12	12	12	12	12
160010	12	7	1	12	12	12	4	12	12	12	1	12
150020RA	11	11	1	11	11	11	11	11	11	11	1	11
150001	11	12	2	11	11	11	11	11	11	11	1	11
140006RA	10	12	1	11	11	11	11	11	11	11	0	11
140001RA	11	11	11	11	11	11	11	11	11	11	1	11
130008	11	11	11	11	11	11	11	11	11	11	0	11
130003	13	11	2	11	11	11	11	11	11	11	1	11
120020	11	11	11	11	11	11	2	11	11	11	11	11
120001	10	10	10	10	10	10	10	10	10	10	1	10
110017	11	11	11	11	11	11	11	11	11	11	0	11
110006	12	12	12	12	12	12	12	12	12	12	12	12
101020	6	17	1	11	11	11	4	11	11	11	1	11
100020	11	11	1	11	11	11	1	11	11	11	11	11
100011	11	11	1	11	11	11	11	11	11	11	1	11
090017	11	11	11	11	11	11	11	11	11	11	1	11
090002	11	11	11	11	11	11	11	11	11	11	11	11
080009	12	15	12	12	12	12	2	12	12	12	12	12
[illegible]80001	11	11	11	11	11	11	11	11	11	11	11	11
[illegible]1001	20	11	11	11	11	11	11	11	11	11	11	11
[illegible]0012	1	12	12	12	12	12	12	12	12	12	0	12
070001	11	11	11	11	11	11	11	11	11	11	11	11
060005	11	11	11	11	11	11	11	11	11	11	11	11
060000	11	11	11	11	11	11	11	11	11	11	0	11
050010	4	10	1	11	11	11	11	11	1	11	1	11
050004	11	11	2	1	1	11	11	11	2	11	11	0
040012	11	14	11	11	11	11	11	11	11	11	1	11
040007	11	23	11	11	11	11	11	11	11	11	0	11
030004	5	12	11	11	11	11	11	11	11	11	1	11
020006	11	11	11	11	11	11	11	11	11	11	11	11
020003	1	14	12	12	12	12	12	12	12	12	1	12
011002	11	34	11	11	11	11	11	11	11	11	0	11
010002	11	12	11	11	11	11	11	11	11	11	1	11
Count	56	56	56	56	56	56	56	56	56	56	56	56
Mean	1.013	1.347	0.892	1.037	1.037	1.044	0.968	1.044	1.023	1.044	0.72	1.037
Stan. Dev.	2.909	28.897	4.721	1.485	1.46	0.53	3.529	0.53	2.298	0.53	5.294	1.509
N Value	7.483	7.483	7.483	7.483	7.483	7.483	7.483	7.483	7.483	7.483	7.483	7.483
Degrees of Freedo	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674
Cleanup Standard	1.664	7.811	1.948	1.369	1.364	1.163	1.757	1.163	1.537	1.163	1.904	1.375

Table B.1. Statistical Analysis of Volatile Organics (Continued)

Sample Number	Dibromochloromethane	Ethylbenzene	Methylene Chloride	Styrene	Tetrachloroethene	Toluene	Trichloroethene	Vinyl Chloride	Xylene (total)	cis-1,3-Dichloroprop	trans-1,3-Dichloropropene
RBTC/RBGVC	76000	7800000	230000	57000	33000	2E+07	150000	900	1.6E+08	9500	9500
AREA 19-1											
391006	12	1	5	12	12	1	12	12	0	12	12
[illegible]0011	11	11	6	1	11	2	11	11	0	11	11
[illegible]0006	12	2	5	1	12	12	12	12	12	12	12
380012	12	12	4	12	12	1	12	12	2	12	12
380006	12	1	5	0	0	1	12	12	12	12	12
370012	11	11	5	11	11	11	11	11	11	11	11
370006	12	2	8	1	12	1	12	12	1	12	12
Count	7	7	7	7	7	7	7	7	7	7	7
Mean	1.069	0.754	0.735	0.734	1.001	0.616	1.069	1.069	0.743	1.069	1.069
Stan. Dev.	0.452	4.933	1.178	5.427	4.036	4.683	0.452	0.452	5.348	0.452	0.452
N Value	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645
Degrees of Freedo	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895
Cleanup Standard	1.393	4.288	1.579	4.622	3.693	3.971	1.393	1.393	4.575	1.393	1.393
AREA 19-2											
360020	11	2	6	1	11	11	11	11	1	11	11
360013	12	12	25	0	12	12	12	12	0	12	12
360006	11	11	17	1	11	4	11	11	2	11	11
360000	11	11	15	11	1	11	11	11	1	11	11
350020	11	11	11	11	1	1	11	11	1	11	11
350013	12	12	12	12	12	12	12	12	1	12	12
350006	12	2	11	1	12	2	12	12	4	12	12
350000	11	11	11	1	11	11	11	11	1	11	11
341000	11	1	18	11	11	1	11	11	11	11	11
340006	13	2	19	13	13	1	13	13	1	13	13
340000	11	1	10	11	11	1	11	11	0	11	11
330006	11	2	11	11	11	5	11	11	1	11	11
330000	11	7	43	2	11	6	11	11	1	11	11
320006RA	11	3	25	1	11	11	11	11	2	11	11
320000RA	11	11	24	11	11	11	11	11	11	11	11
310000	11	11	12	11	1	1	11	11	11	11	11
301000	11	11	11	11	11	11	11	11	11	11	11
300000	12	12	11	12	0	12	12	12	12	12	12
290013	11	3	16	1	11	3	11	11	11	11	11
290006	11	11	27	11	1	1	11	11	0	11	11
290000	11	11	16	11	11	11	11	11	11	11	11
281000	10	10	14	1	10	1	10	10	1	10	10
280020	10	10	10	10	10	10	10	10	10	10	10
280013	12	12	12	1	2	12	12	12	12	12	12
280006	12	12	12	1	12	12	12	12	12	12	12
280000	10	10	10	10	10	10	10	10	10	10	10
270020	11	11	23	1	11	2	11	11	0	11	11
[illegible]70013	11	1	23	11	11	2	11	11	11	11	11
[illegible]70006	10	2	39	1	1	3	10	10	1	10	10
270000	11	3	10	1	0	2	11	11	2	11	11
Count	30	30	30	30	30	30	30	30	30	30	30
Mean	1.047	0.882	1.225	0.798	0.925	0.807	1.047	1.047	0.705	1.047	1.047
Stan. Dev.	0.67	4.411	8.487	5.204	4.572	4.655	0.67	0.67	4.975	0.67	0.67
N Value	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477
Degrees of Freedo	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694
Cleanup Standard	1.254	2.246	3.85	2.408	2.339	2.247	1.254	1.254	2.244	1.254	1.254

Table B.1. Statistical Analysis of Volatile Organics (Continued)

Sample Number	Dibromochloromethane	Ethylbenzene	Methylene Chloride	Styrene	Tetrachloroethene	Toluene	Trichloroethene	Vinyl Chloride	Xylene (total)	cis-1,3-Dichloroprop	trans-1,3-Dichloropropene
RBTC/RBGVC	76000	7800000	230000	57000	33000	2E+07	150000	900	1.6E+08	9500	9500
AREA 19-3											
260020	11	2	26	1	11	2	11	11	1	11	11
0010	11	1	7	1	11	1	11	11	1	11	11
0002	10	1	8	10	10	10	10	10	0	10	10
250016	10	10	6	10	1	1	10	10	0	10	10
250009	11	1	5	0	11	1	11	11	11	11	11
240011	12	1	10	12	12	1	12	12	0	12	12
240004	12	12	8	0	12	1	12	12	1	12	12
230014	11	6	6	3	1	5	11	11	2	11	11
230005	11	1	7	0	11	2	11	11	11	11	11
220010	11	11	10	11	11	1	11	11	0	11	11
220005	11	1	9	0	11	1	11	11	11	11	11
210012	11	11	21	11	11	11	11	11	11	11	11
210005	12	12	16	12	12	1	12	12	1	12	12
200020	11	2	45	11	11	2	11	11	1	11	11
200009	10	4	58	1	10	4	10	10	1	10	10
191020	11	11	12	11	11	1	11	11	1	11	11
190020	10	4	36	1	10	4	10	10	4	10	10
190007	11	1	7	0	11	1	11	11	0	11	11
180020	11	11	13	11	11	2	11	11	1	11	11
180012	10	3	21	1	2	3	10	10	1	10	10
171020	12	12	21	12	12	12	12	12	12	12	12
170020	11	11	21	11	11	11	11	11	11	11	11
170007	11	11	6	11	11	11	11	11	1	11	11
160018	12	12	23	12	3	2	12	12	2	12	12
160010	12	3	17	12	12	3	12	12	2	12	12
150020RA	11	11	42	1	4	11	11	11	2	11	11
150001	11	4	30	1	6	4	11	11	1	11	11
140006RA	11	1	11	11	1	11	6	11	1	11	11
140001RA	11	3	18	11	11	11	11	11	1	11	11
130006	11	11	19	1	8	2	34	11	1	11	11
130003	11	6	28	2	2	5	1	11	2	11	11
120020	11	11	7	11	11	11	11	11	1	11	11
120001	10	10	10	1	1	1	10	10	2	10	10
110017	11	11	10	11	11	11	11	11	11	11	11
110006	12	12	12	12	3	12	12	12	1	12	12
101020	11	11	44	1	1	3	11	11	3	11	11
100020	11	11	17	1	11	11	11	11	1	11	11
100011	11	2	30	1	11	2	11	11	1	11	11
090017	11	11	15	1	2	11	11	11	11	11	11
090002	11	11	10	11	11	11	11	11	11	11	11
080009	12	12	17	12	12	12	12	12	12	12	12
080001	11	11	7	11	11	11	11	11	11	11	11
071001	11	4	12	2	1	2	11	11	4	11	11
70012	12	12	7	0	12	12	12	12	12	12	12
070001	11	11	9	0	11	11	11	11	1	11	11
060005	11	3	12	1	2	2	11	11	2	11	11
060000	11	2	11	1	11	1	11	11	2	11	11
050010	11	11	17	2	1	1	11	11	5	11	11
050004	1	3	13	2	5	2	1	11	7	1	1
040012	11	11	6	0	11	11	11	11	11	11	11
040007	11	11	6	11	11	11	11	11	11	11	11
030004	11	2	7	1	1	2	11	11	1	11	11
020006	11	11	5	0	11	0	11	11	11	11	11
020003	12	12	8	12	12	1	12	12	12	12	12
011002	11	11	7	0	11	11	11	11	11	11	11
010002	11	1	8	0	11	1	11	11	11	11	11
Count	56	56	56	56	56	56	56	56	56	56	56
Mean	1.037	0.865	1.183	0.724	0.921	0.73	1.042	1.044	0.666	1.037	1.037
Stan. Dev.	1.472	4.482	11.429	5.199	4.232	4.593	3.737	0.53	4.683	1.46	1.448
N Value	7.483	7.483	7.483	7.483	7.483	7.48	7.483	7.483	7.483	7.483	7.483
Degrees of Freedo	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674
Cleanup Standard	1.366	1.868	3.75	1.867	1.868	1.758	1.878	1.163	1.714	1.364	1.361

Table B.2. Statistical Analysis of Semivolatile Compounds

SAMPLE NO	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-oxybis(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol
RBTL / RBGCV	780000	7000000	7000000	71000	24000	7800000	150000	230000
AREA 19-1								
390006	390	390	390	390	390	980	390	390
390011	380	380	380	380	380	960	380	380
380006	400	400	400	400	400	1000	400	400
380012	400	400	400	400	400	1000	400	400
380006	400	400	400	400	400	1000	400	400
370012	370	370	370	370	370	920	370	370
Count	6	6	6	6	6	6	6	6
Mean	2.591	2.591	2.591	2.591	2.591	2.990	2.591	2.591
Stan. Dev.	11.547	11.547	11.547	11.547	11.547	29.25	11.547	11.547
N Value	2.449	2.449	2.449	2.449	2.449	2.449	2.449	2.449
Degrees of Freedom	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895
Cleanup Standard	11.526	11.526	11.526	11.526	11.526	25.623	11.526	11.526
AREA 19-2								
360020	360	360	360	360	360	910	360	360
360013	390	390	390	390	390	970	390	390
360006	380	380	380	380	380	960	380	380
360000	380	380	380	380	380	950	380	380
350020	370	370	370	370	370	940	370	370
350013	390	390	390	390	390	980	390	390
350006	410	410	410	410	410	1000	410	410
350000	380	380	380	380	380	960	380	380
341000	380	380	380	380	380	950	380	380
340006	430	430	430	430	430	1100	430	430
340000	370	370	370	370	370	940	370	370
330006	360	360	360	360	360	910	360	360
330000	350	350	350	350	350	880	350	350
320006	370	370	370	370	370	920	370	370
320000	370	370	370	370	370	920	370	370
310000	400	400	400	400	400	990	400	400
301000	370	370	370	370	370	910	370	370
300000	400	400	400	400	400	990	400	400
290013	370	370	370	370	370	920	370	370
290006	360	360	360	360	360	900	360	360
290000	350	350	350	350	350	880	350	350
281000	350	350	350	350	350	870	350	350
280020	360	360	360	360	360	910	360	360
280013	400	400	400	400	400	1000	400	400
280006	400	400	400	400	400	990	400	400
280000	350	350	350	350	350	870	350	350
270020	360	360	360	360	360	910	360	360
270013	360	360	360	360	360	910	360	360
270006	360	360	360	360	360	900	360	360
270000RA	380	380	380	380	380	920	380	380
Count	30	30	30	30	30	30	30	30
Mean	2.574	2.574	2.574	2.574	2.574	2.973	2.574	2.574
Stan. Dev.	19.619	19.619	19.619	19.619	19.619	48.63	19.619	19.619
N Value	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477
Degrees of Freedom	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694
Cleanup Standard	8.642	8.642	8.642	8.642	8.642	18.014	8.642	8.642

Table B.2. Statistical Analysis of Semivolatile Compounds

SAMPLE NO	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-oxybis(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol
RTL / RBGCV	780000	7000000	7000000	71000	24000	7800000	150000	230000
EA 19-3								
260020RE	370	370	370	370	370	930	370	370
260010RE	380	380	380	380	380	940	380	380
260002RE	330	330	330	330	330	830	330	330
250016	370	370	370	370	370	930	370	370
250009	380	380	380	380	380	960	380	380
240011RA	390	390	390	390	390	950	390	390
240004	400	400	400	400	400	1000	400	400
230014	380	380	380	380	380	950	380	380
230005	390	390	390	390	390	970	390	390
220010	370	370	370	370	370	920	370	370
220005	370	370	370	370	370	940	370	370
210012	370	370	370	370	370	940	370	370
210005	400	400	400	400	400	990	400	400
200020	370	370	370	370	370	920	370	370
200009	360	360	360	360	360	900	360	360
191020	370	370	370	370	370	910	370	370
19007RA	370	370	370	370	370	890	370	370
190020RA	350	350	350	350	350	860	350	350
180020	370	370	370	370	370	920	370	370
180012	360	360	360	360	360	910	360	360
171020	780	780	780	780	780	1900	780	780
170020	380	380	380	380	380	950	380	380
170007	370	370	370	370	370	940	370	370
160018	410	410	410	410	410	1000	410	410
160010	410	410	410	410	410	1000	410	410
150020	360	360	360	360	360	910	360	360
150001	360	360	360	360	360	910	360	360
140006	370	370	370	370	370	930	370	370
140001	350	350	350	350	350	880	350	350
130008	360	360	360	360	360	910	360	360
130003	360	360	360	360	360	910	360	360
120020	740	740	740	740	740	1900	740	740
120001	690	690	690	690	690	1700	690	690
110017	370	370	370	370	370	920	370	370
110006	420	420	420	420	420	1000	420	420
1020	370	370	370	370	370	930	370	370
00020	360	360	360	360	360	910	360	360
090017	370	370	370	370	370	930	370	370
090002	370	370	370	370	370	920	370	370
080009	410	410	410	410	410	1000	410	410
080001	370	370	370	370	370	940	370	370
070012	390	390	390	390	390	970	390	390
070001	710	710	710	710	710	1800	710	710
060005	720	720	720	720	720	1800	720	720
060000	740	740	740	740	740	1900	740	740
050010	380	380	380	380	380	950	380	380
050004	370	370	370	370	370	920	370	370
040012	350	350	350	350	350	890	350	350
040007	370	370	370	370	370	940	370	370
030004	360	360	360	360	360	900	360	360
020006	370	370	370	370	370	920	370	370
020003	380	380	380	380	380	960	380	380
011002	380	380	380	380	380	950	380	380
010002	380	380	380	380	380	950	380	380
Count	54	54	54	54	54	54	54	54
Mean	2.616	2.616	2.616	2.616	2.616	3.014	2.616	2.616
Stan. Dev.	113.434	113.434	113.434	113.434	113.434	285.929	113.434	113.434
N Value	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348
Degrees of Freedom	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674
Cleanup Standard	28.458	28.458	28.458	28.458	28.458	68.154	28.458	28.458

Table B.2. Statistical Analysis of Semivolatile Compounds (Continued)

SAMPLE NO	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine
STL / RBGCV	1600000	160000	160000	2500	6300000	390000	3900000	4700	4800000	3800
EA 19-1										
91006	390	980	390	82	390	390	390	980	390	390
390011	380	960	380	240	380	380	380	960	380	380
390006	400	1000	400	250	400	400	400	1000	400	400
380012	400	1000	400	400	400	400	400	1000	400	400
380006	400	1000	400	400	400	400	400	1000	400	400
370012	370	920	370	370	370	370	370	920	370	370
Count	6	6	6	6	6	6	6	6	6	6
Mean	2.591	2.990	2.591	2.463	2.591	2.591	2.591	2.990	2.591	2.591
Stan. Dev.	11.547	29.25	11.547	113.991	11.547	11.547	11.547	29.25	11.547	11.547
N Value	2.449	2.449	2.449	2.449	2.449	2.449	2.449	2.449	2.449	2.449
Degrees of Freedom	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895
Cleanup Standard	11.526	25.623	11.526	90.668	11.526	11.526	11.526	25.623	11.526	11.526
AREA 19-2										
360020	360	910	360	360	360	360	360	910	360	360
360013	390	970	390	390	390	390	390	970	390	390
360006	380	960	380	380	380	380	380	960	380	380
360000	380	950	380	380	380	380	380	950	380	380
350020	370	940	370	370	370	370	370	940	370	370
350013	390	980	390	390	390	390	390	980	390	390
350006	410	1000	410	410	410	410	410	1000	410	410
350000	380	960	380	380	380	380	380	960	380	380
341000	380	950	380	380	380	380	380	950	380	380
340006	430	1100	430	430	430	430	430	1100	430	430
340000	370	940	370	370	370	370	370	940	370	370
330006	360	910	360	360	360	360	360	910	360	360
330000	350	880	350	350	350	350	350	880	350	350
320006	370	920	370	370	370	370	370	920	370	370
320000	370	920	370	370	370	370	370	920	370	370
310000	400	990	400	400	400	400	400	990	400	400
301000	370	910	370	370	370	370	370	910	370	370
300000	400	990	400	400	400	400	400	990	400	400
290013	370	920	370	370	370	370	370	920	370	370
290006	360	900	360	360	360	360	360	900	360	360
290000	350	880	350	350	350	350	350	880	350	350
1000	350	870	350	350	350	350	350	870	350	350
280020	360	910	360	360	360	360	360	910	360	360
280013	400	1000	400	400	400	400	400	1000	400	400
280006	400	990	400	400	400	400	400	990	400	400
280000	350	870	350	350	350	350	350	870	350	350
270020	360	910	360	360	360	360	360	910	360	360
270013	360	910	360	360	360	360	360	910	360	360
270006	360	900	360	360	360	360	360	900	360	360
270000RA	380	920	380	380	380	380	380	920	380	380
Count	30	30	30	30	30	30	30	30	30	30
Mean	2.574	2.973	2.574	2.574	2.574	2.574	2.574	2.973	2.574	2.574
Stan. Dev.	19.619	48.63	19.619	19.619	19.619	19.619	19.619	48.63	19.619	19.619
N Value	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477
Degrees of Freedom	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694
Cleanup Standard	8.642	18.014	8.642	8.642	8.642	8.642	8.642	18.014	8.642	8.642

Table B.2. Statistical Analysis of Semivolatile Compounds (Continued)

SAMPLE NO	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine
BTL / RBGCV	1600000	160000	160000	2500	6300000	390000	3900000	4700	4600000	3800
EA 19-3										
260020RE	370	930	370	370	370	370	370	930	370	370
260010RE	380	940	380	380	380	380	380	940	380	380
260002RE	330	830	330	330	330	330	330	830	330	330
250016	370	930	370	370	370	370	370	930	370	370
250009	380	960	380	380	380	380	380	960	380	380
240011RA	390	950	390	390	390	390	390	950	390	390
240004	400	1000	400	400	400	400	400	1000	400	400
230014	380	950	380	85	380	380	380	950	380	380
230005	390	970	390	95	390	390	390	970	390	390
220010	370	920	370	370	370	370	370	920	370	370
220005	370	940	370	370	370	370	370	940	370	370
210012	370	940	370	370	370	370	370	940	370	370
210005	400	990	400	400	400	400	400	990	400	400
200020	370	920	370	370	370	370	370	920	370	370
200009	360	900	360	360	360	360	360	900	360	360
191020	370	910	370	370	370	370	370	910	370	370
19007RA	370	890	370	370	370	370	370	890	370	370
190020RA	350	860	350	350	350	350	350	860	350	350
180020	370	920	370	370	370	370	370	920	370	370
180012	360	910	360	360	360	360	360	910	360	360
171020	780	1900	780	780	780	780	780	1900	780	780
170020	380	950	380	380	380	380	380	950	380	380
170007	370	940	370	370	370	370	370	940	370	370
160018	410	1000	410	410	410	410	410	1000	410	410
160010	410	1000	410	290	410	410	410	1000	410	410
150020	360	910	360	360	360	360	360	910	360	360
150001	360	910	360	360	360	360	360	910	360	360
140006	370	930	370	370	370	370	370	930	370	370
140001	350	880	350	350	350	350	350	880	350	350
130008	360	910	360	360	360	360	360	910	360	360
130003	360	910	360	360	360	360	360	910	360	360
120020	740	1900	740	740	740	740	740	1900	740	740
120001	690	1700	690	690	690	690	690	1700	690	690
110017	370	920	370	370	370	370	370	920	370	370
110006	420	1000	420	420	420	420	420	1000	420	420
01020	370	930	370	370	370	370	370	930	370	370
00020	360	910	360	360	360	360	360	910	360	360
090017	370	930	370	370	370	370	370	930	370	370
090002	370	920	370	370	370	370	370	920	370	370
080009	410	1000	410	410	410	410	410	1000	410	410
080001	370	940	370	370	370	370	370	940	370	370
070012	390	970	390	390	390	390	390	970	390	390
070001	710	1800	710	710	710	710	710	1800	710	710
060005	720	1800	720	720	720	720	720	1800	720	720
060000	740	1900	740	500	740	740	740	1900	740	740
050010	380	950	380	380	380	380	380	950	380	380
050004	370	920	370	370	370	370	370	920	370	370
040012	350	890	350	350	350	350	350	890	350	350
040007	370	940	370	370	370	370	370	940	370	370
030004	360	900	360	360	360	360	360	900	360	360
020006	370	920	370	370	370	370	370	920	370	370
020003	380	960	380	380	380	380	380	960	380	380
011002	380	950	380	380	380	380	380	950	380	380
010002	380	950	380	380	380	380	380	950	380	380
Count	54	54	54	54	54	54	54	54	54	54
Mean	2.616	3.014	2.616	2.598	2.616	2.616	2.616	3.014	2.616	2.616
Stan. Dev.	113.434	285.929	113.434	121.865	113.434	113.434	113.434	285.929	113.434	113.434
N Value	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348
Degrees of Freedom	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674
Cleanup Standard	28.458	68.154	28.458	30.361	28.458	28.458	28.458	68.154	28.458	28.458

Table B.2. Statistical Analysis of Semivolatile Compounds (Continued)

SAMPLE NO	3-Nitroaniline	4-Bromophenyl-phenylether	4-Chloroaniline	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene
BTL / RBGCV	230000	4500000	310000	390000	230000	4800000	23000000	880	88	880
AREA 19-1										
391006	980	390	390	390	980	980	390	390	390	390
390011	960	380	380	380	960	960	380	380	380	380
390006	1000	400	400	400	1000	1000	400	400	400	400
380012	1000	400	400	400	1000	1000	400	400	400	400
380006	1000	400	400	400	1000	1000	400	400	400	400
370012	920	370	370	370	920	920	370	370	370	370
Count	6	6	6	6	6	6	6	6	6	6
Mean	2.990	2.591	2.591	2.591	2.990	2.990	2.591	2.591	2.591	2.591
Stan. Dev.	29.25	11.547	11.547	11.547	29.25	29.25	11.547	11.547	11.547	11.547
N Value	2.449	2.449	2.449	2.449	2.449	2.449	2.449	2.449	2.449	2.449
Degrees of Freedom	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895
Cleanup Standard	25.623	11.526	11.526	11.526	25.623	25.623	11.526	11.526	11.526	11.526
AREA 19-2										
360020	910	360	360	360	910	910	360	360	360	360
360013	970	390	390	390	970	970	390	390	390	390
360006	960	380	380	380	960	960	380	380	380	380
360000	950	380	380	380	950	950	380	380	380	380
350020	940	370	370	370	940	940	370	370	370	370
350013	980	390	390	390	980	980	390	390	390	390
350006	1000	410	410	410	1000	1000	410	410	410	410
350000	960	380	380	380	960	960	380	380	380	380
341000	950	380	380	380	950	950	380	380	380	380
340006	1100	430	430	430	1100	1100	430	430	430	430
340000	940	370	370	370	940	940	370	370	370	370
330006	910	360	360	360	910	910	360	360	360	360
330000	880	350	350	350	880	880	350	350	350	350
320006	920	370	370	370	920	920	370	370	370	370
320000	920	370	370	370	920	920	370	370	370	370
310000	990	400	400	400	990	990	400	400	100	100
301000	910	370	370	370	910	910	370	370	370	370
300000	990	400	400	400	990	990	27	660	760	730
290013	920	370	370	370	920	920	370	370	370	370
290006	900	360	360	360	900	900	360	360	360	360
290000	880	350	350	350	880	880	350	350	35	350
281000	870	350	350	350	870	870	350	350	350	350
280020	910	360	360	360	910	910	360	360	360	360
280013	1000	400	400	400	1000	1000	400	400	400	400
280006	990	400	400	400	990	990	400	400	400	400
280000	870	350	350	350	870	870	350	350	350	350
270020	910	360	360	360	910	910	360	360	360	360
270013	910	360	360	360	910	910	360	360	360	360
270006	900	360	360	360	900	900	360	360	360	360
270000RA	920	380	380	380	920	920	380	380	380	380
Count	30	30	30	30	30	30	30	30	30	30
Mean	2.973	2.574	2.574	2.574	2.973	2.973	2.560	2.564	2.564	2.576
Stan. Dev.	48.63	19.619	19.619	19.619	48.63	48.63	65.227	54.687	107.568	84.043
N Value	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477
Degrees of Freedom	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694
Cleanup Standard	18.014	8.642	8.642	8.642	18.014	18.014	22.734	19.498	35.834	28.57

Table B.2. Statistical Analysis of Semivolatile Compounds (Continued)

SAMPLE NO	3-Nitroaniline	4-Bromophenyl-phenylether	4-Chloroaniline	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene
TL / RBGCV	230000	4500000	310000	390000	230000	4800000	23000000	880	88	880
A 19-3										
260020RE	930	370	370	370	930	930	370	370	370	370
260010RE	940	380	380	380	940	940	380	380	380	380
260002RE	830	330	330	330	830	830	330	330	330	330
250016	930	370	370	370	930	930	370	370	370	370
250009	960	380	380	380	960	960	380	380	380	380
240011RA	950	390	390	390	950	950	390	390	390	390
240004	1000	400	400	400	1000	1000	400	400	400	400
230014	950	380	380	380	950	950	380	380	380	380
230005	970	390	390	390	970	970	390	390	390	390
220010	920	370	370	370	920	920	370	370	370	370
220005	940	370	370	370	940	940	370	370	370	370
210012	940	370	370	370	940	940	370	370	370	370
210005	990	400	400	400	990	990	400	400	400	400
200020	920	370	370	370	920	920	370	370	370	370
200009	900	360	360	360	900	900	360	360	360	360
191020	910	370	370	370	910	910	370	370	370	370
190007RA	890	370	370	370	890	890	370	370	370	370
190020RA	860	350	350	350	860	860	350	350	350	350
180020	920	370	370	370	920	920	370	370	370	370
180012	910	360	360	360	910	910	360	360	360	360
171020	1900	780	780	780	1900	1900	780	780	780	780
170020	950	380	380	380	950	950	380	380	380	380
170007	940	370	370	370	940	940	370	370	370	370
160018	1000	410	410	410	1000	1000	410	410	410	410
160010	1000	410	410	410	1000	1000	410	31	29	410
150020	910	360	360	360	910	910	360	360	360	360
150001	910	360	360	360	910	910	360	360	360	360
140006	930	370	370	370	930	930	12	370	110	110
140001	880	350	350	350	880	880	35	37	480	470
130008	910	360	360	360	910	910	360	360	66	360
130003	910	360	360	360	910	910	360	360	360	360
120020	1900	740	740	740	1900	1900	740	740	740	740
120001	1700	690	690	690	1700	1700	19	230	300	240
110017	920	370	370	370	920	920	370	370	370	370
110006	1000	420	420	420	1000	1000	420	420	420	420
020	930	370	370	370	930	930	370	370	370	370
20020	910	360	360	360	910	910	360	360	360	360
090017	930	370	370	370	930	930	370	370	370	370
090002	920	370	370	370	920	920	370	370	370	370
080009	1000	410	410	410	1000	1000	470	1100	1100	950
080001	940	370	370	370	940	940	370	370	370	370
070012	970	390	390	390	970	970	32	390	390	390
070001	1800	710	710	710	1800	1800	350	1000	1100	980
060005	1800	720	720	720	1800	1800	760	1500	1600	1200
060000	1900	740	740	740	1900	1900	530	1300	1300	1100
050010	950	380	380	380	950	950	380	380	380	380
050004	920	370	370	370	920	920	41	81	72	66
040012	890	350	350	350	890	890	350	350	350	350
040007	940	370	370	370	940	940	370	370	370	370
030004	900	360	360	360	900	900	360	360	21	23
020006	920	370	370	370	920	920	370	370	24	24
020003	960	380	380	380	960	960	380	380	21	25
011002	950	380	380	380	950	950	380	11	380	67
010002	950	380	380	380	950	950	380	14	74	80
Count	54	54	54	54	54	54	54	54	54	54
Mean	3.014	2.616	2.616	2.616	3.014	3.014	2.565	2.619	2.611	2.599
Stan. Dev.	285.929	113.434	113.434	113.434	285.929	285.929	142.143	267.252	288.771	232.951
N Value	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348
Degrees of Freedom	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674
Cleanup Standard	68.154	28.458	28.458	28.458	68.154	68.154	34.948	63.504	68.398	55.669

Table B.2. Statistical Analysis of Semivolatile Compounds (Continued)

SAMPLE NO	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Butylbenzylphthalate	Carbazole	Di-n-butylphthalate	Di-n-octylphthalate	Dibenz(a,h)anthracene	Diethylphthalate	Dimethylphthalate	Fluoranthene
STL / RBGCV	88	880	16000000	85000	7800000	1600000	88	63000000	780000000	3100000
EA 19-1										
1006	390	390	390	22	390	43	390	390	390	29
390011	380	380	380	76	380	370	380	380	380	90
390006	400	400	400	32	400	1500	400	400	400	95
380012	400	400	400	390	400	660	400	400	400	400
380006	400	400	400	320	400	550	400	400	400	400
370012	370	370	370	370	310	370	370	370	370	240
Count	6	6	6	6	6	6	6	6	6	6
Mean	2.591	2.591	2.591	2.305	2.580	2.765	2.591	2.591	2.591	2.320
Stan. Dev.	11.547	11.547	11.547	160.555	32.146	452.814	11.547	11.547	11.547	149.153
N Value	2.449	2.449	2.449	2.449	2.449	2.449	2.449	2.449	2.449	2.449
Degrees of Freedom	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895
Cleanup Standard	11.526	11.526	11.526	126.54	27.454	353.146	11.526	11.526	11.526	117.732
AREA 19-2										
360020	360	360	360	360	360	350	360	360	360	360
360013	390	390	390	390	390	250	390	390	390	390
360006	380	380	380	380	380	390	380	380	380	380
360000	380	380	380	380	380	400	380	380	380	380
350020	370	370	370	370	370	590	370	370	370	370
350013	390	390	390	40	390	510	390	390	390	390
350006	410	410	410	410	600	410	410	410	410	410
350000	380	380	380	380	380	100	380	380	380	380
341000	380	380	380	380	760	380	380	380	380	380
340006	430	430	430	430	1000	430	430	430	430	430
340000	370	370	370	370	810	370	370	370	370	370
330006	360	360	360	360	530	360	360	360	360	19
330000	350	350	350	350	350	350	350	350	350	350
320006	370	370	370	370	370	370	370	370	370	370
320000	370	370	370	370	370	370	370	370	370	370
310000	200	400	400	400	430	400	400	400	400	210
301000	370	370	370	370	510	370	370	370	370	53
300000	1000	310	400	61	310	400	400	400	400	2200
290013	370	370	370	370	750	370	370	370	370	370
290006	360	360	360	360	550	360	360	360	360	360
290000	42	350	350	340	43	700	350	350	350	350
1000	350	350	350	50	350	390	350	350	350	350
0020	360	360	360	360	360	420	360	360	360	360
280013	400	400	400	53	400	630	400	400	400	400
280006	400	400	400	53	400	540	400	400	400	400
280000	350	350	350	32	350	250	350	350	350	350
270020	360	360	360	360	360	440	360	360	360	360
270013	360	360	360	360	360	320	360	360	360	360
270006	360	360	360	360	360	460	360	360	360	360
270000RA	380	380	380	380	380	320	380	380	380	380
Count	30	30	30	30	30	30	30	30	30	30
Mean	2.578	2.571	2.574	2.490	2.648	2.602	2.574	2.574	2.574	2.610
Stan. Dev.	134.346	22.313	19.619	130.037	179.548	112.309	19.619	19.619	19.619	344.842
N Value	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477
Degrees of Freedom	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694
Cleanup Standard	44.13	9.472	8.642	42.71	58.181	37.338	8.642	8.642	8.642	109.267

Table B.2. Statistical Analysis of Semivolatile Compounds (Continued)

SAMPLE NO	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Butylbenzylphthalate	Carbazole	Di-n-butylphthalate	Di-n-octylphthalate	Dibenz(a,h)anthracene	Diethylphthalate	Dimethylphthalate	Fluoranthene
TL/RBGCV	88	880	16000000	85000	7800000	1600000	88	63000000	780000000	3100000
A 19-3										
260020RE	370	370	370	370	370	590	370	370	24	370
260010RE	380	380	380	380	380	530	380	380	380	380
260002RE	330	330	330	330	330	450	330	330	330	330
250016	370	370	370	89	370	960	370	370	370	370
250009	380	380	380	380	510	380	380	380	380	970
240011RA	390	390	390	390	390	300	390	390	390	390
240004	400	400	400	400	400	360	400	400	400	400
230014	380	380	380	260	380	720	380	380	380	37
230005	390	390	390	190	390	700	390	390	390	34
220010	370	370	370	370	780	370	370	370	370	370
220005	370	370	370	370	1500	370	370	370	370	370
210012	370	370	370	370	370	20	370	370	370	370
210005	400	400	400	400	400	260	400	400	400	400
200020	370	370	370	370	1200	370	370	370	370	370
200009	360	360	360	360	670	360	360	360	360	360
191020	370	370	370	370	370	280	370	370	370	370
190007RA	370	370	370	370	370	270	370	370	370	370
190020RA	350	350	350	350	350	280	350	350	350	350
180020	370	370	370	370	370	510	370	370	370	370
180012	360	360	360	360	360	210	360	360	360	360
171020	780	780	780	780	780	780	780	780	780	780
170020	380	380	380	380	380	380	380	63	380	380
170007	370	370	370	370	370	370	370	370	370	370
160016	410	410	410	410	410	220	410	410	410	410
160010	38	410	38	410	45	130	410	410	410	100
150020	360	360	360	610	360	400	360	360	32	360
150001	360	360	360	470	360	410	360	360	360	360
140006	220	370	190	490	140	640	370	370	370	370
140001	490	350	330	520	600	680	350	350	350	350
130006	360	360	120	320	130	770	360	360	360	360
130003	360	360	360	360	360	96	360	360	360	360
120020	740	740	740	740	740	740	740	740	740	740
120001	690	330	690	690	690	690	690	100	690	320
110017	370	370	370	370	370	370	370	370	70	370
110006	420	420	420	420	26	420	420	78	420	73
020	370	370	370	230	370	650	370	370	370	370
020	360	360	360	180	360	740	360	360	360	360
090017	370	370	190	370	63	370	370	78	370	370
090002	370	370	370	370	370	370	370	370	69	370
080009	760	810	410	240	410	410	410	76	410	2100
080001	370	370	370	370	370	370	370	68	370	370
070012	390	390	390	390	30	390	390	72	390	240
070001	750	700	710	220	710	710	710	78	710	2100
060005	940	1100	720	360	720	720	720	69	720	3300
060000	840	1100	740	270	740	740	740	72	740	2600
050010	380	380	800	380	60	380	380	66	380	34
050004	370	69	460	370	370	370	370	370	370	210
040012	350	350	350	350	1900	350	350	350	350	350
040007	370	370	370	370	24	370	370	370	370	370
030004	21	360	24	360	560	360	360	12	360	49
020006	34	370	25	370	400	370	370	370	370	56
020003	34	380	27	380	780	380	380	15	380	54
011002	79	380	76	380	630	380	380	28	380	150
010002	61	28	95	14	590	380	24	43	380	140
Count	54	54	54	54	54	54	54	54	54	54
Mean	2.591	2.619	2.573	2.572	2.677	2.651	2.61	2.476	2.591	2.693
Stan. Dev.	187.707	181.698	179.71	127.721	335.225	193.975	124.951	165.819	148.459	613.747
N Value	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348
Degrees of Freedom	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674
Cleanup Standard	45.354	44.013	43.514	31.669	79.047	46.642	31.076	40.252	36.412	142.515

Table B.2. Statistical Analysis of Semivolatile Compounds (Continued)

SAMPLE NO	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-cd)pyrene	Isophorone	N-Nitroso-di-n-propylamine
[illegible]TL / RBGCV	3100000	1100	22000	550000	78000	880	67	240
[illegible]A 19-1								
[illegible]006	390	390	390	390	390	390	390	390
390011	380	380	380	380	380	380	380	380
390006	400	400	400	400	400	400	400	17
380012	400	400	400	400	400	400	400	400
380006	400	400	400	400	400	400	400	400
370012	370	370	370	370	370	370	370	370
Count	6	6	6	6	6	6	6	6
Mean	2.591	2.591	2.591	2.591	2.591	2.591	2.591	2.513
Stan. Dev.	11.547	11.547	11.547	11.547	11.547	11.547	11.547	138.673
N Value	2.449	2.449	2.449	2.449	2.449	2.449	2.449	2.449
Degrees of Freedom	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895
Cleanup Standard	11.526	11.526	11.526	11.526	11.526	11.526	11.526	109.816
AREA 19-2								
360020	360	360	360	360	360	360	360	360
360013	390	390	390	390	390	390	390	390
360006	15	380	380	380	380	380	380	380
360000	25	380	380	380	380	380	380	380
350020	22	370	370	370	370	370	370	370
350013	390	390	390	390	390	390	390	390
350006	410	410	410	410	410	410	410	410
350000	380	380	380	380	380	380	380	380
341000	380	380	380	380	380	380	380	380
340006	430	430	430	430	430	430	430	430
340000	370	370	370	370	370	370	370	370
330006	360	360	360	360	360	360	360	360
330000	350	350	350	350	350	350	350	350
320006	370	370	370	370	370	370	370	370
320000	370	370	370	370	370	370	370	370
310000	400	400	400	400	400	400	400	400
301000	370	370	370	370	370	370	370	370
300000	81	400	400	400	400	310	400	400
290013	370	370	370	370	370	370	370	370
290006	360	360	360	360	360	360	360	360
290000	88	350	350	350	350	350	350	350
[illegible]000	350	350	350	350	350	350	350	350
[illegible]0020	360	360	360	360	360	360	360	360
280013	400	400	400	400	400	400	400	400
280006	400	400	400	400	400	400	400	400
280000	350	350	350	350	350	350	350	350
270020	360	360	360	360	360	360	360	360
270013	360	360	360	360	360	360	360	360
270006	360	360	360	360	360	360	360	360
270000RA	380	380	380	380	380	380	380	380
Count	30	30	30	30	30	30	30	30
Mean	2.506	2.574	2.574	2.574	2.574	2.571	2.574	2.574
Stan. Dev.	124.659	19.619	19.619	19.619	19.619	22.313	19.619	19.619
N Value	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477
Degrees of Freedom	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694
Cleanup Standard	41.062	8.642	8.642	8.642	8.642	9.472	8.642	8.642

Table B.2. Statistical Analysis of Semivolatile Compounds (Continued)

SAMPLE NO	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-cd)pyrene	Isophorone	N-Nitroso-di-n-propylamine
[illegible]TL / RBGCV	3100000	1100	22000	550000	78000	880	67	240
[illegible]A 19-3								
[illegible]20020RE	370	370	370	370	370	370	370	370
260010RE	380	380	380	380	380	380	380	380
260002RE	330	330	330	330	330	330	330	330
250016	370	370	370	370	370	370	370	370
250009	380	380	380	380	380	380	380	380
240011RA	390	390	390	390	390	390	390	390
240004	400	400	400	400	400	400	400	400
230014	380	380	380	380	380	380	380	380
230005	390	390	390	390	390	390	390	390
220010	370	370	370	370	370	370	370	370
220005	370	370	370	370	370	370	370	370
210012	370	370	370	370	370	370	370	370
210005	25	400	400	400	400	400	400	400
200020	370	370	370	370	370	370	370	370
200009	360	360	360	360	360	360	360	360
191020	370	370	370	370	370	370	370	370
19007RA	370	370	370	370	370	370	370	370
190020RA	350	350	350	350	350	350	350	350
180020	370	370	370	370	370	370	370	370
180012	360	360	360	360	360	360	360	360
171020	780	780	780	780	780	780	780	780
170020	380	380	380	380	380	380	380	380
170007	370	370	370	370	370	370	370	370
160018	410	410	410	410	410	410	410	410
160010	56	410	410	410	410	410	410	410
150020	360	360	360	360	360	360	360	360
150001	360	360	360	360	360	360	360	360
140006	150	370	370	370	370	370	370	370
140001	600	350	350	350	350	350	350	350
130006	220	360	360	360	360	360	360	360
130003	360	360	360	360	360	360	360	360
120020	740	740	740	740	740	740	740	740
120001	690	690	690	690	690	690	690	690
110017	370	370	370	370	370	370	370	370
110006	420	420	420	420	420	420	420	420
[illegible]020	370	370	370	370	370	370	370	370
[illegible]0020	360	360	360	360	360	360	360	360
090017	370	370	370	370	370	370	370	370
090002	370	370	370	370	370	370	370	370
080009	320	410	410	410	410	760	410	410
080001	370	370	370	370	370	370	370	370
070012	390	390	390	390	390	390	390	390
070001	140	710	710	710	710	740	710	710
060005	380	720	720	720	720	880	720	720
060000	260	740	740	740	740	820	740	740
050010	380	380	380	380	380	380	380	380
050004	370	370	370	370	370	370	370	370
040012	350	350	350	350	350	350	350	350
040007	370	370	370	370	370	370	370	370
030004	360	360	360	360	360	360	360	360
020006	370	370	370	370	370	370	370	370
020003	380	380	380	380	380	380	13	380
011002	380	380	380	380	380	380	380	380
010002	380	380	380	380	380	380	11	380
Count	54	54	54	54	54	54	54	54
Mean	2.569	2.616	2.616	2.616	2.616	2.628	2.602	2.616
Stan. Dev.	123.716	113.434	113.434	113.434	113.434	136.677	136.422	113.434
N Value	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348
Degrees of Freedom	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674
Cleanup Standard	30.754	28.458	28.458	28.458	28.458	33.765	33.681	28.458

Table B.2. Statistical Analysis of Semivolatile Compounds (Continued)

SAMPLE NO	N-Nitrosodiphenylamine (1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate
RBTL / RBGCV	130000	3100000	39000	53000	88	5E+07	2300000	46000	120000
EA 19-1									
1006	390	390	390	390	980	390	19	390	390
390011	78	380	380	380	960	380	380	380	380
390006	250	400	400	400	1000	400	400	400	400
380012	400	400	400	400	1000	400	400	400	400
380006	400	400	400	400	180	400	400	400	400
370012	370	370	370	920	370	370	370	370	370
Count	6	6	6	6	6	6	6	6	6
Mean	2.498	2.591	2.591	2.683	2.874	2.591	2.516	2.591	2.591
Stan. Dev.	117.964	11.547	11.547	196.165	339.432	11.547	138.745	11.547	11.547
N Value	2.449	2.449	2.449	2.449	2.449	2.449	2.449	2.449	2.449
Degrees of Freedom	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895
Cleanup Standard	93.777	11.526	11.526	154.473	265.521	11.526	109.875	11.526	11.526
AREA 19-2									
360020	360	360	360	360	910	360	360	360	360
360013	390	390	390	390	970	390	390	390	390
360006	380	380	380	380	960	380	380	380	380
360000	380	380	380	380	950	380	380	380	380
350020	370	370	370	370	940	370	370	370	370
350013	390	390	390	390	980	390	390	390	390
350006	410	410	410	1000	410	410	410	410	180
350000	380	380	380	380	960	380	380	380	380
341000	380	380	380	950	380	380	380	380	380
340006	430	430	430	1100	430	430	430	430	430
340000	370	370	370	180	370	370	370	370	46
330006	360	360	360	910	360	360	21	360	180
330000	350	350	350	350	880	350	350	350	350
320006	370	370	370	370	920	370	370	370	370
320000	370	370	370	370	920	370	370	370	370
310000	400	400	400	990	400	400	200	400	1500
301000	370	370	370	910	370	370	46	370	1500
300000	400	400	400	990	1200	400	2000	400	400
290013	370	370	370	920	370	370	370	370	1300
290006	360	360	360	900	360	360	360	360	1600
290000	350	350	350	350	880	45	350	350	350
31000	350	350	350	350	870	350	350	350	350
00020	360	360	360	360	910	360	360	360	360
280013	400	400	400	400	1000	400	400	400	400
280006	400	400	400	400	990	400	400	400	400
280000	350	350	350	350	870	350	350	350	350
270020	360	360	360	360	910	360	360	360	360
270013	360	360	360	360	910	360	360	360	360
270006	360	360	360	360	900	360	360	360	360
270000RA	380	380	380	380	920	53	380	380	380
Count	30	30	30	30	30	30	30	30	30
Mean	2.574	2.574	2.574	2.734	2.888	2.549	2.602	2.574	2.697
Stan. Dev.	19.619	19.619	19.619	280.195	262.098	83.783	310.712	19.619	392.875
N Value	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477
Degrees of Freedom	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694
Cleanup Standard	8.642	8.642	8.642	89.396	83.953	26.463	98.703	8.642	124.211

Table B.2. Statistical Analysis of Semivolatile Compounds (Continued)

SAMPLE NO	N-Nitrosodiphenylamine (1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate
RBTL / RBGCV	130000	3100000	39000	53000	88	5E+07	2300000	46000	120000
EA 19-3									
0020RE	370	370	370	370	930	370	370	370	370
260010RE	380	380	380	380	940	380	380	380	380
260002RE	330	330	330	330	830	330	330	330	330
250016	370	370	370	370	930	370	370	370	370
250009	380	380	380	960	670	380	380	380	65
240011RA	390	390	390	390	950	390	390	390	390
240004	400	400	400	400	1000	400	400	400	400
230014	190	380	380	380	950	380	380	380	380
230005	120	390	390	390	970	390	390	390	390
220010	370	370	370	920	370	370	370	370	61
220005	370	370	370	940	370	370	370	370	370
210012	370	370	370	370	940	370	370	370	370
210005	400	400	400	400	990	400	400	400	400
200020	370	370	370	920	370	370	370	370	46
200009	360	360	360	900	360	360	360	360	360
191020	370	370	370	370	910	370	370	370	370
19007RA	370	370	370	370	890	370	370	370	370
190020RA	350	350	350	350	860	350	350	350	350
180020	370	370	370	370	920	370	370	370	370
180012	360	360	360	360	910	360	360	360	360
171020	780	780	780	1900	780	780	780	780	780
170020	380	380	380	950	380	380	380	380	380
170007	370	370	370	940	370	370	370	370	370
160018	410	410	410	410	1000	410	410	410	410
160010	51	410	410	410	1000	27	410	410	410
150020	360	360	360	360	910	360	360	360	360
150001	360	360	360	360	910	360	360	360	360
140006	370	370	16	370	930	110	370	370	370
140001	350	350	350	350	880	270	350	350	350
130008	360	360	360	360	910	120	360	360	360
130003	360	360	360	360	910	360	360	360	360
120020	740	740	740	1900	740	740	740	740	740
120001	690	690	690	1700	130	690	500	690	690
110017	370	370	370	370	920	370	370	370	370
110006	420	420	420	1000	420	420	130	420	420
01020	370	370	370	370	930	370	370	370	370
0020	360	360	360	360	910	360	360	360	360
090017	370	370	370	930	370	370	370	370	200
090002	370	370	370	370	920	370	370	370	370
080009	410	89	410	1000	2400	410	2400	410	410
080001	370	370	370	940	370	370	370	370	370
070012	390	390	390	970	160	390	260	390	390
070001	710	48	710	1800	1700	710	2500	710	290
060005	720	190	720	1800	3100	720	3600	720	720
060000	740	85	740	1900	2200	740	3100	740	740
050010	380	380	380	950	38	380	380	380	380
050004	370	370	370	920	200	370	220	370	370
040012	350	350	350	890	350	350	350	350	42
040007	370	370	370	940	370	370	370	370	370
030004	360	360	360	900	25	360	42	360	29
020006	370	370	370	920	25	370	45	370	28
020003	380	380	380	94	22	380	47	380	40
011002	380	380	380	950	67	380	130	380	140
010002	380	380	380	950	56	380	120	380	58
Count	54	54	54	54	54	54	54	54	54
Mean	2.6	2.572	2.61	2.869	2.885	2.597	2.732	2.616	2.544
Stan. Dev.	132.515	115.161	125.362	473.288	573.708	137.243	692.065	113.434	171.492
N Value	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348	7.348
Degrees of Freedom	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674
Cleanup Standard	32.789	28.808	31.17	110.692	133.585	33.863	160.396	28.458	41.613

Table B.3 Statistical Analysis of Inorganic Data

Sample Number	Units	AG	AL	AS	BA	BE	BI	CA	CD	CN	CO	CR
RBTL / RBGCV	MG/KG	390	230000	23	5500	150	NE	NE	39	390	39	390
AREA 19-1												
391006	MG/KG	1	17700	6	32	1	1	26400	1	0	14	30
390011	MG/KG	1	15600	4	28	1	0	55600	1	0	15	24
390006	MG/KG	1	13900	3	26	1	0	49400	1	0	14	24
380012	MG/KG	1	21200	4	44	1	0	74500	1	0	12	29
380006	MG/KG	1	14700	4	52	1	0	95300	1	0	11	23
370012	MG/KG	1	9250	3	19	1	0	95600	1	0	10	14
370006	MG/KG	1	11300	4	22	1	0	74400	1	0	15	21
Count		7	7	7	7	7	7	7	7	7	7	7
Mean		0.636	14807.143	4.000	31.700	0.906	0.474	67314.286	0.636	0.000	12.929	23.629
Stan. Dev.		0.038	3662.204	0.938	11.334	0.198	0.053	23352.114	0.038	0.000	1.806	5.039
N Value		2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645
Degrees of Freedom		1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895
Cleanup Standard		0.027	2627.942	1.274	9.621	0.142	0.038	16735.360	0.027	0.000	2.405	4.984
AREA 19-2												
360020	MG/KG	1	15400	4	36	1	1	115000	1	0	11	21
360013	MG/KG	1	11200	4	27	1	0	154000	1	0	11	16
360006	MG/KG	1	11900	6	81	1	0	76000	1	0	7	15
360000	MG/KG	1	18100	9	97	1	1	3300	1	0	10	22
350020	MG/KG	1	3770	4	32	0	0	138000	1	0	4	9
350013	MG/KG	1	12400	4	33	1	0	93300	1	0	11	18
350006	MG/KG	1	13900	4	39	1	1	54200	1	0	13	22
350000	MG/KG	1	14300	4	37	1	0	82400	1	0	12	20
341000	MG/KG	1	11000	3	16	1	0	32800	1	0	12	19
340006	MG/KG	1	17300	5	24	1	0	56000	1	0	15	28
340000	MG/KG	1	14600	2	19	1	0	39500	1	0	11	24
330006	MG/KG	1	9810	5	32	1	0	109000	1	0	9	15
330000	MG/KG	1	8100	4	36	1	0	92800	1	1	6	11
320006	MG/KG	1	7440	4	31	1	1	93500	1	1	6	13
320000	MG/KG	0	5470	6	253	0	0	116000	0	1	5	10
310000	MG/KG	1	9840	4	39	1	0	55000	1	0	8	16
301000	MG/KG	0	8250	2	30	1	0	62100	0	1	7	14
300000	MG/KG	1	4720	3	40	0	0	130000	1	0	4	10
290013	MG/KG	0	7750	3	31	0	0	172000	0	0	6	11
290006	MG/KG	1	3370	32	43	0	0	102000	1	0	6	8
290000	MG/KG	1	7280	6	35	0	0	104000	1	0	6	11
281000	MG/KG	1	1200	4	14	0	0	245000	1	1	2	5
280020	MG/KG	1	5350	3	28	0	0	170000	1	1	4	10
280013	MG/KG	1	11700	10	78	1	0	21300	1	0	8	17
280006	MG/KG	1	11800	9	79	1	0	20900	1	1	8	16
280000	MG/KG	2	1440	4	16	0	0	260000	1	1	2	6
270020	MG/KG	1	6560	5	46	0	0	102000	1	0	5	11
270013	MG/KG	1	6030	5	51	0	0	104000	1	0	5	11
270006	MG/KG	0	6580	5	46	0	0	114000	0	0	5	11
270000	MG/KG	1	13100	7	54	1	0	75200	1	0	7	20
Count		30	30	30	30	30	30	30	30	30	30	30
Mean		0.666	9322.000	5.640	47.367	0.592	0.434	99776.667	0.603	0.243	7.410	14.587
Stan. Dev.		0.265	4416.727	5.299	42.963	0.234	0.101	58274.584	0.101	0.295	3.333	5.523
N Value		5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477
Degrees of Freedom		1.697	1.697	1.697	1.697	1.697	1.697	1.697	1.697	1.697	1.697	1.697
Cleanup Standard		0.082	1372.453	2.393	14.987	0.073	0.031	18060.863	0.031	0.091	1.903	2.875

Table B.3 Statistical Analysis of Inorganic Data

Sample Number	Units	AG	AL	AS	BA	BE	BI	CA	CD	CN	CO	CR
RBTL / RBGCV	MG/KG	390	230000	23	5500	150	NE	NE	39	390	39	390
AREA 19-3												
260020	MG/KG	1	5190	4	31	0	0	106000	1	1	5	8
260010	MG/KG	1	7520	5	37	1	0	100000	1	1	6	12
260002	MG/KG	1	9760	7	49	1	0	65400	1	0	7	17
250016	MG/KG	1	18800	4	52	1	1	113000	1	0	12	25
250009	MG/KG	1	11800	3	26	1	0	34600	1	0	11	21
240011	MG/KG	1	19900	3	34	1	0	57900	1	0	14	29
240004	MG/KG	1	15500	3	28	1	0	58700	1	0	11	20
230014	MG/KG	1	18600	5	32	1	0	67700	1	0	12	26
230005	MG/KG	1	15600	4	50	1	0	95500	1	0	11	21
220010	MG/KG	1	8080	3	17	0	0	195000	1	0	8	12
220005	MG/KG	1	12000	3	20	1	0	51200	1	0	11	19
210012	MG/KG	1	14200	3	29	1	0	73400	1	1	10	19
210005	MG/KG	1	7890	4	37	1	1	132000	1	1	6	14
200020	MG/KG	1	4720	4	43	0	0	104000	1	0	5	10
200009	MG/KG	1	3570	4	33	0	0	119000	1	0	4	7
200003	MG/KG	1	7980	6	43	0	0	99100	1	0	6	13
191020	MG/KG	1	5610	5	43	0	0	98600	1	0	5	10
190020	MG/KG	1	4530	5	41	0	0	92200	1	0	4	9
190007	MG/KG	1	5850	5	34	0	0	125000	1	0	4	11
180020	MG/KG	1	6460	4	48	0	0	100000	1	1	5	11
180012	MG/KG	0	5240	4	41	0	0	123000	0	1	4	9
171020	MG/KG	1	14700	5	40	1	1	41600	1	0	14	23
170007	MG/KG	1	11700	3	320	1	0	128000	1	0	8	16
160018	MG/KG	1	16200	4	29	1	0	72000	1	1	14	26
160010	MG/KG	1	17300	5	25	1	0	62800	1	0	14	27
150020	MG/KG	1	6800	5	50	0	1	112000	1	0	5	10
150001	MG/KG	1	13300	4	27	1	1	49900	1	2	11	21
140020	MG/KG	0	12500	3	69	1	0	107000	0	0	10	17
140006	MG/KG	1	9410	4	23	1	1	103000	1	0	6	13
140001	MG/KG	1	12700	5	40	1	1	78800	1	0	9	18
130008	MG/KG	1	13900	4	30	1	1	105000	1	0	10	18
130003	MG/KG	1	11700	5	36	1	1	116000	1	0	8	17
120020	MG/KG	1	6530	4	57	0	1	107000	1	1	6	11
120001	MG/KG	1	5110	4	26	0	0	83800	1	2	6	9
110017	MG/KG	1	6380	4	41	0	0	170000	1	1	5	9
110006	MG/KG	1	13800	3	39	1	1	98700	1	0	10	18
101020	MG/KG	1	6900	5	55	0	0	115000	1	0	6	11
100020	MG/KG	1	4850	5	38	0	0	104000	1	1	5	9
100011	MG/KG	1	5820	5	33	0	1	112000	1	0	4	9
090017	MG/KG	1	5570	5	29	0	0	107000	1	0	5	9
090002	MG/KG	1	6730	5	29	0	0	146000	1	0	6	11
080009	MG/KG	0	75	3	0	0	0	1190	0	0	0	0
080001	MG/KG	1	7290	5	34	0	0	95000	1	0	6	13
071001	MG/KG	1	18900	7	82	1	1	63200	1	0	11	25
070012	MG/KG	1	9030	3	31	1	0	193000	1	0	7	12
070001	MG/KG	1	17600	4	77	1	1	53800	1	0	11	22
060005	MG/KG	1	12600	4	57	1	1	116000	1	1	8	17
060000	MG/KG	1	12300	5	50	1	1	97100	1	0	9	17
050010	MG/KG	1	10400	3	34	1	1	119000	1	0	9	16
050004	MG/KG	1	7680	3	32	1	1	187000	1	0	6	12
040012	MG/KG	1	6660	2	24	0	0	87400	1	0	6	10
040007	MG/KG	1	6680	5	50	0	0	67300	1	0	5	12
030004	MG/KG	1	10100	2	39	1	0	91400	1	0	6	14
020006	MG/KG	1	2500	4	23	0	0	24000	1	0	2	6
011002	MG/KG	0	8550	4	30	0	0	27700	0	0	5	13
010002	MG/KG	1	5310	3	24	0	0	23800	1	0	4	9
Count		56	56	56	56	56	56	56	56	56	56	56
Mean		0.599	9756.688	4.066	42.643	0.597	0.551	94246.250	0.584	0.212	7.448	14.696
Stan. Dev.		0.124	4679.216	1.059	39.924	0.269	0.227	39843.417	0.098	0.408	3.261	6.039
N Value		7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480
Degrees of Freedom		1.671	1.671	1.671	1.671	1.671	1.671	1.671	1.671	1.671	1.671	1.671
Cleanup Standard		0.028	1049.306	0.846	10.549	0.060	0.051	8905.823	0.022	0.091	1.601	2.516

Table B.3 Statistical Analysis of Inorganic Data (Continued)

Sample Number	Units	CU	FE	HG	K	LI	MG	MN	MO	NA	NI
RBTL / RBGCV	MG/KG	2900	NE	23	NE	NE	NE	7800	NE	NE	1600
AREA 19-1											
391006	MG/KG	22	30200	0	4830	34	8500	624	2	193	30
390011	MG/KG	22	27000	0	4580	30	7760	806	2	204	26
390006	MG/KG	22	26900	0	3400	30	7420	757	2	175	27
380012	MG/KG	21	23800	0	7460	32	8930	707	2	434	24
380006	MG/KG	17	21500	0	4400	20	7060	989	2	542	19
370012	MG/KG	14	17000	0	2340	19	11000	812	2	177	16
370006	MG/KG	19	22100	0	2710	25	6470	965	2	162	22
Count		7	7	7	7	7	7	7	7	7	7
Mean		19.614	24071.429	0.106	4245.714	27.300	8162.857	808.571	1.943	269.571	23.400
Stan. Dev.		2.842	4048.179	0.009	1581.770	5.461	1391.184	121.940	0.118	141.675	4.302
N Value		2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645
Degrees of Freedom		1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895
Cleanup Standard		3.329	2904.684	0.006	1136.881	5.349	1000.620	90.271	0.373	103.933	4.451
AREA 19-2											
360020	MG/KG	15	22400	0	4770	29	15400	879	2	343	19
360013	MG/KG	12	19200	0	3100	21	12700	1000	2	325	18
360006	MG/KG	13	14300	0	1700	11	27800	655	2	187	13
360000	MG/KG	18	21300	0	1310	11	2840	582	2	87	15
350020	MG/KG	9	7910	0	1400	8	74600	360	4	201	7
350013	MG/KG	17	21700	0	3180	22	12600	742	2	233	18
350006	MG/KG	18	26000	0	2950	26	8860	648	2	214	24
350000	MG/KG	20	25700	0	3170	30	9480	831	2	215	23
341000	MG/KG	18	21600	0	2100	26	6320	515	2	144	23
340006	MG/KG	24	30800	0	4620	37	11100	597	2	262	2
340000	MG/KG	21	21400	0	3810	30	7170	471	2	174	1
330006	MG/KG	16	21400	0	2570	18	14400	619	2	234	17
330000	MG/KG	12	13500	0	1840	12	26200	365	2	236	11
320006	MG/KG	15	12900	0	2310	16	37000	320	2	277	14
320000	MG/KG	13	10000	0	1570	10	42100	260	1	229	11
310000	MG/KG	14	16100	0	1840	19	15200	375	2	167	17
301000	MG/KG	13	13900	0	1900	18	18800	352	2	207	14
300000	MG/KG	10	7890	0	918	8	38100	263	2	264	8
290013	MG/KG	12	15300	0	2400	18	12600	735	1	197	12
290006	MG/KG	9	13200	0	916	7	46300	207	2	158	13
290000	MG/KG	14	12900	0	1660	11	37000	355	2	151	12
281000	MG/KG	6	7930	0	549	1	40800	349	2	134	3
280020	MG/KG	10	11200	0	1790	11	16700	340	2	218	7
280013	MG/KG	17	18700	0	926	7	8930	464	2	66	16
280006	MG/KG	17	17600	0	921	7	11400	460	2	138	15
280000	MG/KG	6	9250	0	646	1	43700	413	2	154	3
270020	MG/KG	11	10400	0	2300	12	43000	250	2	177	11
270013	MG/KG	12	10600	0	1990	12	41900	247	2	326	11
270006	MG/KG	12	10700	0	2210	12	39800	231	1	286	12
270000	MG/KG	15	17100	0	2350	16	22400	369	2	375	18
Count		30	30	30	30	30	30	30	30	30	30
Mean		13.917	16096.000	0.106	2123.867	15.520	24840.000	475.133	1.893	212.643	12.933
Stan. Dev.		4.092	5933.074	0.023	1048.947	8.730	16604.742	206.480	0.440	71.872	5.975
N Value		5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477
Degrees of Freedom		1.697	1.697	1.697	1.697	1.697	1.697	1.697	1.697	1.697	1.697
Cleanup Standard		2.411	1842.517	0.007	328.334	3.896	5149.228	66.653	0.413	24.597	2.963

Table B.3 Statistical Analysis of Inorganic Data (Continued)

Sample Number	Units	CU	FE	HG	K	LI	MG	MN	MO	NA	NI
RBTL / RBGCV	MG/KG	2900	NE	23	NE	NE	NE	7800	NE	NE	1600
AREA 19-3											
260020	MG/KG	12	10000	0	1620	19	42100	223	2	163	11
260010	MG/KG	14	13200	0	2000	12	33600	249	2	195	13
260002	MG/KG	17	15900	0	1950	12	24600	722	2	173	16
250016	MG/KG	17	23100	0	7110	31	12300	874	2	319	21
250009	MG/KG	16	22800	0	2450	28	7720	787	2	184	25
240011	MG/KG	23	26600	0	6700	34	13200	676	2	235	27
240004	MG/KG	16	18200	0	5710	23	7280	529	2	169	17
230014	MG/KG	20	22500	0	6510	29	7680	623	2	214	24
230005	MG/KG	14	23000	0	3160	24	9910	798	2	169	22
220010	MG/KG	11	14700	0	2570	16	5820	1260	2	260	13
220005	MG/KG	19	21200	0	3560	22	5510	544	2	178	19
210012	MG/KG	17	23000	0	4370	33	16200	585	2	230	22
210005	MG/KG	16	12800	0	2200	13	35300	439	2	220	12
200020	MG/KG	11	9760	0	1440	11	43800	223	2	207	12
200009	MG/KG	10	8040	0	1090	8	44200	192	2	143	10
200003	MG/KG	14	13300	0	1240	9	27400	349	2	142	13
191020	MG/KG	12	11200	0	1930	11	40800	223	2	153	12
190020	MG/KG	12	9240	0	1440	10	37700	211	2	153	11
190007	MG/KG	13	10300	0	1820	9	48600	205	2	232	11
180020	MG/KG	14	11700	0	1990	14	42400	260	2	202	13
180012	MG/KG	14	9050	0	1410	9	46000	304	2	672	10
171020	MG/KG	21	31100	0	3970	36	12900	442	2	262	26
170007	MG/KG	15	19300	0	3200	23	16300	489	2	289	14
160018	MG/KG	25	30900	0	4560	38	10500	563	2	531	27
160010	MG/KG	22	32600	0	5040	37	11800	596	2	526	26
150020	MG/KG	13	12300	0	2280	15	33900	296	2	252	13
150001	MG/KG	21	23600	0	3170	28	13300	502	2	543	23
140020	MG/KG	15	20500	0	3630	29	13100	549	2	249	17
140006	MG/KG	16	15400	0	3040	19	33800	286	2	279	14
140001	MG/KG	18	22200	0	3570	22	20000	449	2	696	18
130008	MG/KG	18	24100	0	4370	27	14800	592	2	419	20
130003	MG/KG	17	18800	0	3560	20	27400	472	2	367	15
120020	MG/KG	13	12800	0	1950	16	36300	304	2	298	11
120001	MG/KG	12	12300	0	939	13	28000	288	2	247	11
110017	MG/KG	11	11400	0	2140	13	25400	332	2	231	11
110006	MG/KG	15	23000	0	3050	26	7950	434	2	578	21
101020	MG/KG	13	12500	0	2260	15	41900	272	2	226	14
100020	MG/KG	14	11400	0	1330	12	35600	278	2	154	12
100011	MG/KG	14	11700	0	1720	11	44900	208	2	197	12
090017	MG/KG	13	9820	0	1680	13	45500	190	2	249	12
090002	MG/KG	12	11400	0	2020	10	37500	362	2	178	10
080009	MG/KG	0	142	0	23	0	42	10	0	2	0
080001	MG/KG	13	13200	0	1660	12	36600	299	2	209	14
071001	MG/KG	15	24700	0	3810	27	12900	544	2	232	20
070012	MG/KG	13	15500	0	2270	17	8160	656	2	256	11
070001	MG/KG	14	23900	0	3370	26	7930	478	2	191	19
060005	MG/KG	15	18600	0	2810	21	13100	440	2	281	14
060000	MG/KG	17	19600	0	2420	22	19800	440	2	320	16
050010	MG/KG	14	20400	0	1990	24	7390	500	2	249	16
050004	MG/KG	34	14200	0	1830	14	10100	431	2	230	10
040012	MG/KG	7	11900	0	1730	14	9280	278	2	106	11
040007	MG/KG	11	10800	0	934	8	27800	330	2	166	11
030004	MG/KG	10	16000	0	3010	18	12200	249	2	659	14
020006	MG/KG	7	6050	0	655	4	35400	185	2	136	7
011002	MG/KG	11	13200	0	2340	15	27700	299	1	144	11
010002	MG/KG	9	10300	0	1250	11	33500	250	2	130	9
Count		56	56	56	56	56	56	56	56	56	56
Mean		14.548	16342.893	0.117	2675.904	18.419	23658.432	420.866	1.825	262.418	15.002
Stan. Dev.		4.787	6650.559	0.054	1487.127	8.676	13911.702	212.278	0.324	145.297	5.473
N Value		7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480
Degrees of Freedom		1.671	1.671	1.671	1.671	1.671	1.671	1.671	1.671	1.671	1.671
Cleanup Standard		2.232	1489.920	0.012	335.645	3.203	3112.189	50.046	0.334	34.878	2.399

Table B.3 Statistical Analysis of Inorganic Data (Continued)

Sample Number	Units	PB	SB	SE	SN	TA	TL	V	ZN
RBTL / RBGCV	MG/KG	53	31	390	NE	NE	5.5	550	23000
AREA 19–1									
391006	MG/KG	5	8	0	2	512	1	28	59
390011	MG/KG	4	8	0	2	375	2	22	49
390006	MG/KG	7	7	0	2	453	1	20	52
380012	MG/KG	6	7	0	2	403	1	31	49
380006	MG/KG	7	8	0	2	385	0	24	41
370012	MG/KG	6	7	1	2	164	0	13	33
370006	MG/KG	10	7	0	2	289	0	15	42
Count		7	7	7	7	7	7	7	7
Mean		6.514	7.414	0.441	2.114	368.714	0.919	21.757	46.214
Stan. Dev.		1.776	0.442	0.040	0.125	105.138	0.465	6.117	7.718
N Value		2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645
Degrees of Freedom		1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895
Cleanup Standard		2.086	1.187	0.029	0.415	77.892	0.333	5.720	7.194
AREA 19–2									
360020	MG/KG	8	35	0	2	811	0	23	40
360013	MG/KG	7	34	0	2	788	0	16	50
360006	MG/KG	11	7	0	2	153	0	24	39
360000	MG/KG	14	7	0	2	241	1	37	53
350020	MG/KG	5	7	0	2	171	0	8	22
350013	MG/KG	9	7	0	2	172	0	18	52
350006	MG/KG	11	8	1	2	397	0	20	45
350000	MG/KG	7	7	0	2	157	0	19	49
341000	MG/KG	6	8	1	2	221	0	17	43
340006	MG/KG	10	7	1	2	466	0	25	55
340000	MG/KG	5	6	1	2	444	0	20	46
330006	MG/KG	10	7	0	2	218	0	16	33
330000	MG/KG	7	7	0	2	155	0	13	34
320006	MG/KG	5	7	0	2	173	0	14	32
320000	MG/KG	6	28	0	2	647	0	12	27
310000	MG/KG	7	6	1	2	252	0	17	41
301000	MG/KG	7	6	0	2	241	0	12	41
300000	MG/KG	8	8	1	2	216	0	10	27
290013	MG/KG	8	5	0	2	124	0	10	33
290006	MG/KG	6	8	1	2	176	0	7	31
290000	MG/KG	8	6	0	2	146	0	14	37
281000	MG/KG	2	7	0	2	168	0	2	5
280020	MG/KG	5	7	0	2	180	0	6	20
280013	MG/KG	13	8	0	2	216	0	27	51
280006	MG/KG	13	8	0	2	214	0	28	48
280000	MG/KG	2	7	0	2	167	0	4	5
270020	MG/KG	6	7	0	2	175	1	15	28
270013	MG/KG	6	7	0	2	215	1	13	28
270006	MG/KG	6	5	0	2	201	1	14	28
270000	MG/KG	10	6	0	2	328	1	28	44
Count		30	30	30	30	30	30	30	30
Mean		7.513	9.433	0.474	1.960	274.433	0.430	16.267	36.230
Stan. Dev.		2.922	7.568	0.224	0.227	179.514	0.141	7.757	12.680
N Value		5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477
Degrees of Freedom		1.697	1.697	1.697	1.697	1.697	1.697	1.697	1.697
Cleanup Standard		1.781	3.320	0.069	0.363	58.059	0.044	3.615	5.488

Table B.3 Statistical Analysis of Inorganic Data (Continued)

Sample Number	Units	PB	SB	SE	SN	TA	TL	V	ZN
RBTL / RBGCV	MG/KG	53	31	390	NE	NE	5.5	550	23000
AREA 19–3									
260020	MG/KG	5	7	0	2	152	0	10	27
260010	MG/KG	6	7	0	2	166	0	13	34
260002	MG/KG	8	7	0	2	163	0	20	49
250016	MG/KG	7	7	1	2	388	0	25	49
250009	MG/KG	6	7	0	2	477	0	15	48
240011	MG/KG	6	8	1	2	553	0	27	54
240004	MG/KG	4	8	1	2	310	0	23	34
230014	MG/KG	5	7	0	2	405	1	28	46
230005	MG/KG	7	8	0	2	233	1	21	46
220010	MG/KG	9	6	0	2	186	0	10	54
220005	MG/KG	11	7	1	2	262	0	17	35
210012	MG/KG	4	8	0	2	182	0	18	45
210005	MG/KG	7	8	0	2	187	0	13	36
200020	MG/KG	7	8	0	2	176	0	10	26
200009	MG/KG	5	6	0	2	141	0	7	23
200003	MG/KG	12	7	0	2	166	1	17	47
191020	MG/KG	7	8	1	2	213	0	12	26
190020	MG/KG	5	7	1	2	181	0	10	26
190007	MG/KG	6	7	0	2	173	0	12	33
180020	MG/KG	5	7	0	2	161	0	13	30
180012	MG/KG	4	6	0	2	134	0	11	21
171020	MG/KG	6	7	0	2	402	0	16	55
170007	MG/KG	7	8	0	2	190	0	14	40
160018	MG/KG	11	8	0	2	293	0	24	56
160010	MG/KG	8	8	0	2	336	0	26	51
150020	MG/KG	6	6	0	2	142	0	12	32
150001	MG/KG	5	7	0	2	200	0	21	49
140020	MG/KG	6	6	0	2	238	0	14	41
140006	MG/KG	7	6	0	2	147	0	16	39
140001	MG/KG	9	7	0	2	163	0	21	44
130008	MG/KG	11	7	0	2	168	0	21	52
130003	MG/KG	8	38	0	2	888	0	19	42
120020	MG/KG	6	8	0	2	237	0	11	32
120001	MG/KG	8	6	0	2	140	0	9	54
110017	MG/KG	5	37	0	2	175	0	9	28
110006	MG/KG	6	7	0	2	170	0	16	46
101020	MG/KG	6	38	0	2	889	0	14	33
100020	MG/KG	5	7	0	2	158	0	9	32
100011	MG/KG	6	7	0	2	158	0	11	33
090017	MG/KG	6	6	0	2	141	0	11	31
090002	MG/KG	6	7	0	2	157	0	12	28
080009	MG/KG	12	0	0	0	1	0	0	0
080001	MG/KG	6	7	0	2	156	0	14	34
071001	MG/KG	13	6	0	2	459	0	30	59
070012	MG/KG	6	8	0	2	186	0	10	31
070001	MG/KG	9	7	0	2	313	0	24	54
060005	MG/KG	9	6	0	2	284	0	17	43
060000	MG/KG	9	7	0	2	274	0	18	48
050010	MG/KG	6	6	0	2	256	0	11	48
050004	MG/KG	37	7	0	2	167	0	8	105
040012	MG/KG	4	7	0	2	221	1	7	26
040007	MG/KG	8	7	0	2	231	1	16	33
030004	MG/KG	6	7	0	2	201	1	12	29
020006	MG/KG	5	7	0	2	154	0	6	22
011002	MG/KG	12	6	0	2	226	1	12	32
010002	MG/KG	9	7	0	2	162	1	8	31
Count		56	56	56	56	56	56	56	56
Mean		7.530	8.445	0.430	1.950	244.500	0.437	14.836	39.273
Stan. Dev.		4.478	7.011	0.136	0.328	157.444	0.113	6.052	14.401
N Value		7.480	7.480	7.480	7.480	7.480	7.480	7.480	7.480
Degrees of Freedom		1.671	1.671	1.671	1.671	1.671	1.671	1.671	1.671
Cleanup Standard		1.877	2.493	0.030	0.363	37.561	0.025	2.523	4.811

Table B.4 Statistical Analysis of Pesticide/PCB

Sample Number	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248
	1900	1900	5000.00	100.00	220.00	220.00	220.00	220.00	83
391006	3.90	3.90	3.20	2.00	31.00	39.00	24.00	11.00	47.00
390011	3.80	3.80	3.80	1.90	31.00	38.00	23.00	11.00	46.00
390006	4.00	4.00	4.00	2.00	32.00	40.00	24.00	11.00	48.00
380012	4.00	4.00	4.00	2.00	32.00	40.00	24.00	11.00	48.00
380006	4.00	4.00	4.00	2.00	32.00	40.00	24.00	11.00	48.00
370012	4.00	4.00	6.00	2.00	29.00	37.00	22.00	10.00	44.00
370006	4.00	4.00	5.00	2.00	31.00	39.00	23.00	11.00	47.00
Count	7	7	7	7	7	7	7	7	7
Mean	0.597	0.597	0.632	0.298	1.493	1.591	1.37	1.036	1.671
Stan. Dev	0.073	0.073	0.854	0.035	0.99	1.069	0.728	0.35	1.355
N Value	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645
Degrees of Freedom	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895
Cleanup Standard	0.649	0.649	1.244	0.323	2.202	2.357	1.892	1.287	2.642
360020	3.60	3.60	3.60	1.80	36.00	72.00	36.00	36.00	36.00
360013	1.00	3.90	3.90	1.90	39.00	78.00	39.00	39.00	39.00
360006	3.80	3.80	3.80	1.90	38.00	77.00	38.00	38.00	38.00
360000	3.80	3.80	3.80	1.90	38.00	76.00	38.00	38.00	38.00
350020	3.80	3.80	3.80	1.90	38.00	76.00	38.00	38.00	38.00
350013	3.90	3.90	3.90	2.00	39.00	78.00	39.00	39.00	39.00
350006	2.00	4.00	4.00	2.00	33.00	41.00	24.00	11.00	49.00
350000	3.80	3.80	3.80	1.90	38.00	77.00	38.00	38.00	38.00
341000	4.00	4.00	4.00	2.00	30.00	38.00	23.00	11.00	45.00
340006	4.00	4.00	4.00	2.00	34.00	43.00	26.00	12.00	51.00
340000F	3.70	3.70	3.00	1.90	30.00	37.00	22.00	10.00	45.00
330006	4.00	4.00	3.00	4.00	29.00	36.00	22.00	10.00	43.00
330000	3.50	3.50	3.50	1.80	35.00	70.00	35.00	35.00	35.00
320006	11.00	3.70	3.70	1.90	37.00	74.00	37.00	37.00	37.00
320000	3.70	3.70	3.70	1.80	37.00	73.00	37.00	37.00	37.00
310000	4.00	4.00	3.00	2.00	32.00	40.00	24.00	11.00	48.00
301000	3.70	3.70	0.15	1.80	29.00	37.00	22.00	10.00	44.00
300000	4.00	4.00	2.30	2.00	32.00	40.00	24.00	11.00	48.00
290013	3.70	3.70	1.60	1.90	30.00	37.00	22.00	10.00	44.00
290006	3.60	3.60	2.20	1.80	29.00	36.00	22.00	10.00	43.00
290000	3.50	3.50	0.90	1.80	35.00	70.00	35.00	35.00	35.00
281000	3.50	3.50	3.50	1.70	35.00	69.00	35.00	35.00	35.00
280020	3.60	3.60	1.70	1.80	36.00	72.00	36.00	36.00	36.00
280013	4.00	4.00	4.00	2.00	40.00	80.00	40.00	40.00	40.00
280006	4.00	4.00	4.00	0.61	40.00	79.00	40.00	40.00	40.00
280000	3.50	3.50	3.50	1.70	35.00	69.00	35.00	35.00	35.00
270020	3.60	3.60	3.60	1.80	29.00	36.00	22.00	10.00	43.00
270013	3.60	3.60	3.60	1.80	29.00	36.00	22.00	10.00	43.00
270006	3.60	3.60	0.67	1.80	29.00	36.00	22.00	10.00	43.00
270000	3.80	3.80	3.80	1.90	31.00	38.00	23.00	11.00	46.00
Count	30	30	30	30	30	30	30	30	30
Mean	0.585	0.576	0.496	0.28	1.532	1.759	1.485	1.394	1.613
Stan. Dev	1.458	0.178	1.078	0.459	3.794	18.431	7.334	13.411	4.579
N Value	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477
Degrees of Freedom	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694
Cleanup Standard	1.036	0.631	0.829	0.422	2.705	7.46	3.753	5.542	3.029
260020	3.70	3.70	3.70	1.90	37.00	75.00	37.00	37.00	37.00
260010	3.80	3.80	2.60	1.90	38.00	76.00	38.00	38.00	38.00
260002	3.60	3.60	2.30	1.80	36.00	72.00	36.00	36.00	36.00
250016	3.70	3.70	3.20	1.90	30.00	37.00	22.00	10.00	44.00
250009	4.00	4.00	4.00	2.00	31.00	38.00	23.00	11.00	46.00
240004	4.00	4.00	4.00	2.00	32.00	40.00	24.00	11.00	48.00
240011	3.90	3.90	3.90	2.00	31.00	39.00	24.00	11.00	47.00
230014	3.80	3.80	3.80	1.90	30.00	38.00	23.00	11.00	45.00
230005	3.90	3.90	3.20	1.90	31.00	39.00	23.00	11.00	47.00
220010	4.00	4.00	4.00	2.00	29.00	37.00	22.00	10.00	44.00
220005	4.00	4.00	4.00	2.00	30.00	37.00	22.00	10.00	45.00
210012	3.80	3.80	3.60	1.90	38.00	76.00	38.00	38.00	38.00
210005	4.00	4.00	4.00	2.00	40.00	80.00	40.00	40.00	40.00
200020	4.00	4.00	4.00	2.00	29.00	37.00	22.00	10.00	44.00
200009	3.60	3.60	3.00	1.80	29.00	36.00	22.00	10.00	43.00
191020	3.70	3.70	3.70	1.80	29.00	37.00	22.00	10.00	44.00
190020	3.50	3.50	3.50	1.80	28.00	35.00	21.00	9.90	43.00
190007	3.70	3.70	3.70	1.90	30.00	37.00	22.00	10.00	44.00
180020	3.70	3.70	3.70	1.80	37.00	73.00	37.00	37.00	37.00
180012	3.70	3.70	3.70	1.80	37.00	73.00	37.00	37.00	37.00
160018	4.10	4.10	3.10	2.00	41.00	81.00	41.00	41.00	41.00
160010	4.10	4.10	1.50	2.10	41.00	82.00	41.00	41.00	41.00
150020	3.60	3.60	3.60	1.80	36.00	72.00	36.00	36.00	36.00
150001	3.60	3.60	3.60	1.80	36.00	72.00	36.00	36.00	36.00
140006	3.70	3.70	3.70	1.90	37.00	74.00	37.00	37.00	37.00
140001	3.50	3.50	3.50	1.80	35.00	70.00	35.00	35.00	35.00
130008	3.60	3.60	3.60	1.80	36.00	72.00	36.00	36.00	36.00
130003	3.60	3.60	3.60	1.80	36.00	72.00	36.00	36.00	36.00
110017	7.30	7.30	7.30	3.70	73.00	150.00	73.00	73.00	73.00
101020	3.70	3.70	3.70	1.90	37.00	74.00	37.00	37.00	37.00
100020	3.70	3.70	3.70	1.80	37.00	73.00	37.00	37.00	37.00
100011	3.60	3.60	4.00	1.80	36.00	72.00	36.00	36.00	36.00
090002	3.60	3.60	3.60	1.80	36.00	72.00	36.00	36.00	36.00
040012	3.50	3.50	3.50	1.80	28.00	35.00	21.00	9.90	43.00
040007	3.70	3.70	3.70	1.90	30.00	37.00	22.00	10.00	45.00
030004	3.60	3.60	3.60	1.80	29.00	36.00	22.00	10.00	41.00
020006	3.70	3.70	3.80	1.80	29.00	37.00	22.00	10.00	44.00
020003	3.80	3.80	3.80	1.90	31.00	38.00	23.00	11.00	46.00
011002	3.80	3.80	3.80	1.90	30.00	38.00	23.00	11.00	45.00
010002	3.80	3.80	3.80	1.90	31.00	38.00	23.00	11.00	46.00
Count	40	40	40	40	40	40	40	40	40
Mean	0.585	0.585	0.563	0.285	1.537	1.761	1.487	1.393	1.622
Stan. Dev	0.576	0.578	0.761	0.296	7.297	23.605	10.048	15.379	6.417
N Value	6.557	6.557	6.557	6.557	6.557	6.557	6.557	6.557	6.557
Degrees of Freedom	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674
Cleanup Standard	0.733	0.733	0.757	0.361	3.4	7.767	4.052	5.319	3.26

Table B.4 Statistical Analysis of Pesticide/PCB (Continued)

Sample Number	Aroclor-1254	Aroclor-1260	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor epoxide	Methoxychlor
	83	83	40	3900.00	3900.00	3900.00	23000.00	23000.00	23000.00	190.00	360.00	390000.00
391006	11.00	11.00	1.50	2.00	3.90	3.90	2.80	3.90	3.90	2.00	2.00	20.00
390011	11.00	11.00	1.50	1.90	3.80	3.80	2.80	3.80	3.80	1.90	1.90	0.52
390006	11.00	11.00	1.50	2.00	4.00	4.00	2.90	4.00	4.00	2.00	2.00	6.60
380012	11.00	11.00	1.50	2.00	4.00	4.00	0.22	4.00	4.00	2.00	2.00	8.90
380006	11.00	11.00	1.00	2.00	4.00	4.00	1.20	4.00	4.00	0.72	2.00	20.00
370012	10.00	10.00	1.00	2.00	4.00	4.00	3.00	4.00	4.00	2.00	2.00	18.00
370006	11.00	11.00	2.00	2.00	4.00	4.00	3.00	4.00	4.00	2.00	2.00	19.00
Count	7	7	7	7	7	7	7	7	7	7	7	7
Mean	1.036	1.036	0.155	0.298	0.597	0.597	0.357	0.597	0.597	0.256	0.298	1.123
Stan. Dev	0.35	0.35	0.319	0.035	0.073	0.073	1.026	0.073	0.073	0.443	0.035	7.289
N Value	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645	2.645
Degrees of Freedom	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895	1.895
Cleanup Standard	1.287	1.287	0.384	0.323	0.649	0.649	1.092	0.649	0.649	0.573	0.323	6.345
360020	36.00	36.00	3.60	1.80	3.60	3.60	3.60	3.60	3.60	1.80	1.80	18.00
360013	39.00	39.00	0.60	1.90	3.90	3.90	3.90	3.90	3.90	1.30	1.90	19.00
360006	38.00	38.00	0.55	1.90	3.80	3.80	3.80	3.80	3.80	0.92	1.90	19.00
360000	38.00	38.00	3.80	1.90	3.80	3.80	3.80	3.80	3.80	1.90	1.90	19.00
350020	38.00	38.00	3.80	1.90	3.80	3.80	3.80	3.80	3.80	1.90	1.90	19.00
350013	39.00	39.00	3.90	2.00	3.90	3.90	3.90	3.90	3.90	2.00	2.00	20.00
350006	11.00	11.00	2.00	2.00	4.00	4.00	0.00	4.00	4.00	2.00	2.00	20.00
350000	38.00	38.00	3.80	1.90	3.80	3.80	3.80	3.80	3.80	1.90	1.90	19.00
341000	11.00	11.00	1.00	2.00	4.00	4.00	2.00	4.00	4.00	2.00	2.00	19.00
340006	12.00	12.00	2.00	2.00	4.00	4.00	3.00	4.00	4.00	2.00	2.00	21.00
340000R	10.00	10.00	1.40	1.90	3.70	3.70	2.00	3.70	3.70	1.90	1.90	19.00
330006	10.00	10.00	1.00	2.00	4.00	4.00	1.00	4.00	4.00	2.00	1.00	18.00
330000	35.00	35.00	3.50	1.80	3.50	3.50	3.50	3.50	3.50	1.80	1.80	18.00
320006	37.00	37.00	3.70	1.90	3.70	3.70	3.70	3.70	3.70	1.90	1.90	19.00
320000	37.00	37.00	3.70	1.80	3.70	3.70	3.70	3.70	3.70	1.80	1.80	18.00
310000	11.00	11.00	1.50	2.00	4.00	4.00	2.90	4.00	4.00	2.00	2.00	20.00
301000	10.00	10.00	1.40	1.80	3.70	3.70	0.31	3.70	3.70	1.80	0.33	18.00
300000	11.00	11.00	0.95	2.00	4.00	4.00	2.90	4.00	4.00	2.00	1.20	20.00
290013	10.00	10.00	1.40	1.90	3.70	3.70	2.70	3.70	3.70	1.90	1.90	19.00
290006	10.00	10.00	1.40	1.80	3.60	3.60	2.60	3.60	3.60	1.80	1.80	18.00
290000	35.00	35.00	3.50	1.80	3.50	3.50	3.50	3.50	3.50	1.80	1.80	18.00
281000	35.00	35.00	3.50	1.70	3.50	3.50	3.50	3.50	3.50	1.70	1.70	17.00
280020	36.00	36.00	3.60	1.80	3.60	3.60	3.60	3.60	3.60	1.80	1.80	18.00
280013	40.00	40.00	5.20	2.00	4.00	4.00	0.25	4.00	4.00	2.00	2.00	20.00
280006	40.00	40.00	4.90	2.00	4.00	4.00	4.00	4.00	4.00	2.00	2.00	20.00
280000	35.00	35.00	3.50	1.70	3.50	3.50	3.50	3.50	3.50	1.70	0.48	17.00
270020	10.00	10.00	1.40	1.80	3.60	3.60	2.60	3.60	3.60	1.80	1.80	2.30
270013	10.00	10.00	1.40	1.80	3.60	3.60	2.60	3.60	3.60	1.80	1.80	18.00
270006	10.00	10.00	1.40	1.80	3.60	3.60	2.60	3.60	3.60	1.80	1.80	1.60
270000	11.00	11.00	6.40	1.90	3.80	3.80	2.80	3.80	3.80	1.90	1.90	19.00
Count	30	30	30	30	30	30	30	30	30	30	30	30
Mean	1.394	1.394	0.425	0.275	0.576	0.576	0.457	0.576	0.576	0.263	0.239	1.248
Stan. Dev	13.411	13.411	1.507	0.093	0.178	0.178	1.124	0.178	0.178	0.22	0.414	4.312
N Value	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477	5.477
Degrees of Freedom	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694	1.694
Cleanup Standard	5.542	5.542	0.891	0.304	0.631	0.631	0.805	0.631	0.631	0.331	0.367	2.582
260020	37.00	37.00	3.70	1.90	3.70	3.70	3.70	3.70	3.70	1.90	1.90	19.00
260010	38.00	38.00	3.80	1.40	3.80	3.80	0.16	3.80	3.80	1.90	1.90	19.00
260002	36.00	36.00	3.60	1.80	3.60	3.60	0.78	3.60	3.60	1.80	6.00	18.00
250016	10.00	10.00	1.40	1.90	3.70	3.70	2.70	3.70	3.70	1.90	1.90	19.00
250009	11.00	11.00	2.00	2.00	4.00	4.00	3.00	4.00	4.00	2.00	2.00	19.00
240004	11.00	11.00	1.50	2.00	4.00	4.00	2.90	4.00	4.00	2.00	1.90	20.00
240011	11.00	11.00	1.50	2.00	3.90	3.90	2.80	3.90	3.90	2.00	2.00	20.00
230014	11.00	11.00	0.62	1.90	3.80	3.80	0.82	3.80	3.80	1.90	1.90	3.60
230005	11.00	11.00	1.50	1.90	3.90	3.90	2.80	3.90	3.90	1.90	1.90	19.00
220010	10.00	10.00	1.00	2.00	4.00	4.00	1.00	4.00	4.00	2.00	2.00	18.00
220005	10.00	10.00	1.00	2.00	4.00	4.00	3.00	4.00	4.00	2.00	2.00	19.00
210012	38.00	38.00	3.80	1.90	3.80	3.80	3.80	3.80	3.80	1.90	7.00	19.00
210005	40.00	40.00	4.00	2.00	4.00	4.00	4.00	4.00	4.00	2.00	2.00	20.00
200020	10.00	10.00	1.00	2.00	4.00	4.00	3.00	4.00	4.00	2.00	2.00	18.00
200009	10.00	10.00	1.40	1.80	3.60	3.60	2.60	3.60	3.60	1.80	5.00	18.00
191020	10.00	10.00	1.40	1.80	3.70	3.70	2.60	3.70	3.70	1.80	1.80	18.00
190020	9.90	9.90	1.30	1.80	3.50	3.50	2.60	3.50	3.50	1.80	1.80	18.00
190007	10.00	10.00	1.40	1.90	3.70	3.70	2.70	3.70	3.70	1.90	1.90	19.00
180020	37.00	37.00	3.70	1.80	3.70	3.70	3.70	3.70	3.70	1.80	1.80	18.00
180012	37.00	37.00	3.70	1.80	3.70	3.70	3.70	3.70	3.70	1.80	1.80	18.00
160018	41.00	41.00	4.10	2.00	4.10	4.10	0.29	4.10	4.10	2.00	11.00	20.00
160010	41.00	41.00	4.10	2.10	4.10	4.10	0.12	4.10	4.10	2.10	8.00	21.00
150020	36.00	36.00	3.60	1.80	3.60	3.60	3.60	3.60	3.60	1.80	1.80	18.00
150001	36.00	36.00	3.60	1.80	3.60	3.60	3.60	3.60	3.60	1.80	1.80	18.00
140006	37.00	37.00	3.70	1.90	3.70	3.70	3.70	3.70	3.70	1.90	1.90	19.00
140001	35.00	35.00	3.50	1.80	3.50	3.50	3.50	3.50	3.50	1.80	1.80	18.00
130008	36.00	36.00	3.60	1.80	3.60	3.60	3.60	3.60	3.60	1.80	1.80	18.00
130003	36.00	36.00	3.60	1.80	3.60	3.60	3.60	3.60	3.60	1.80	1.80	18.00
110017	73.00	73.00	7.30	3.70	7.30	7.30	7.30	7.30	7.30	3.70	3.70	37.00
101020	37.00	37.00	3.70	1.90	3.70	3.70	3.70	3.70	3.70	1.90	1.90	19.00
100020	37.00	37.00	3.70	1.80	3.70	3.70	3.70	3.70	3.70	1.80	1.80	18.00
100011	36.00	36.00	3.60	1.80	2.50	3.60	3.60	3.60	3.60	1.80	1.80	18.00
090002	36.00	36.00	3.60	1.80	3.60	3.60	3.60	3.60	3.60	1.80	1.80	18.00
040012	9.90	9.90	1.30	1.80	3.50	3.50	0.46	3.50	3.50	1.80	1.80	11.20
040007	10.00	10.00	1.40	1.90	0.95	3.70	2.70	3.70	3.70	1.90	1.90	4.20
030004	10.00	10.00	1.40	1.80	3.60	3.60	2.60	3.60	3.60	1.80	1.80	18.00
020006	10.00	10.00	1.40	1.80	3.70	3.70	2.60	3.70	3.70	1.80	1.80	10.00
020003	11.00	11.00	1.50	1.90	3.80	3.80	2.80	3.80	0.22	1.90	1.90	7.67
011002	11.00	11.00	1.40	1.90	3.80	3.80	2.70	3.80	3.80	1.90	1.90	2.90
010012	67.00	11.00	1.50	1.90	3.80	3.80	2.80	3.80	3.80	1.90	1.90	19.00
Count	40	40	40	40	40	40	40	40	40	40	40	40
Mean	1.417	1.393	0.419	0.282	0.574	0.585	0.451	0.585	0.574	0.285	0.417	[illegible]
Stan. Dev	16.571	15.379	1.409	0.307	0.76	0.578	1.317	0.578	0.809	0.296	1.973	[illegible]
N Value	6.557	6.557	6.557	6.557	6.557	6.557	6.557	6.557	6.557	6.557	6.557	6.557
Degrees of Freedom	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674	1.674
Cleanup Standard	5.648	5.319	0.779	0.36	0.768	0.733	0.787	0.733	0.781	0.361	0.921	[illegible]

Sample Number	Toxaphene	alpha-BHC	alpha-Chlordane	beta-BHC	delta-BHC	gamma-BHC(Lindane)	gamma-Chlordane
	1500.00	270.00	1300.00	350	950.00	1300.00	1300.00
391006	31.00	2.00	2.00	2.00	2.00	2.00	2.00
390011	31.00	1.90	1.90	1.90	1.90	1.90	1.90
390006	32.00	2.00	2.00	2.00	2.00	2.00	2.00
380012	32.00	2.00	2.00	2.00	2.00	2.00	2.00
380006	32.00	2.00	2.00	2.00	2.00	2.00	2.00
370012	29.00	2.00	2.00	2.00	2.00	2.00	2.00
370006	31.00	2.00	0.00	2.00	2.00	2.00	2.00
Count	7	7	7	7	7	7	7
Mean	1.493	0.298	0.23	0.298	0.298	0.298	0.298
Stan. Dev	0.99	0.035	0.695	0.035	0.035	0.035	0.035
N Value	2.645	2.645	2.645	2.645	2.645	2.645	2.645
Degrees of Freedom	1.895	1.895	1.895	1.895	1.895	1.895	1.895
Cleanup Standard	2.202	0.323	0.728	0.323	0.323	0.323	0.323
360020	180.00	1.80	1.80	1.80	1.80	1.80	1.80
360013	190.00	0.59	1.90	1.90	1.90	1.90	1.90
360006	190.00	0.49	1.90	1.90	1.90	1.90	1.90
360000	190.00	1.40	1.90	1.90	1.90	1.90	1.90
350020	190.00	2.30	1.90	1.90	1.90	1.90	1.90
350013	200.00	2.60	2.00	2.00	2.00	2.00	2.00
350006	33.00	1.00	2.00	2.00	2.00	2.00	2.00
350000	190.00	2.50	1.90	1.90	1.90	1.90	1.90
341000	30.00	1.00	2.00	2.00	2.00	2.00	2.00
340006	34.00	2.00	2.00	2.00	2.00	2.00	2.00
340000R	30.00	2.00	1.90	1.90	1.90	1.90	1.90
330006	29.00	2.00	2.00	2.00	2.00	2.00	2.00
330000	180.00	1.80	1.80	1.80	1.80	1.80	1.80
320006	190.00	2.40	1.90	1.90	1.90	1.90	1.90
320000	180.00	2.20	1.80	1.80	1.80	1.80	1.80
310000	32.00	2.00	2.00	2.00	2.00	2.00	2.00
301000	29.00	1.80	1.80	1.80	1.80	1.80	1.80
300000	32.00	0.67	2.00	2.00	2.00	2.00	2.00
290013	30.00	1.20	1.90	1.90	1.90	1.90	1.90
290006	29.00	0.76	1.80	1.80	1.80	1.80	1.80
290000	180.00	0.99	1.80	1.80	1.80	1.80	1.80
281000	170.00	1.70	1.70	1.70	1.70	1.70	1.70
280020	180.00	1.80	1.80	1.80	0.01	1.80	1.80
280013	200.00	3.20	2.00	2.00	2.00	2.00	2.00
280006	200.00	2.00	2.00	2.00	2.00	2.00	2.00
280000	170.00	1.70	1.70	1.70	1.70	1.70	1.70
270020	29.00	1.80	1.80	1.80	1.80	1.80	1.80
270013	29.00	1.80	1.80	1.80	1.80	1.80	1.80
270006	29.00	1.80	1.80	1.80	1.80	1.80	1.80
270000	31.00	0.41	4.80	1.90	1.90	1.90	1.90
Count	30	30	30	30	30	30	30
Mean	2.055	0.219	0.297	0.275	0.261	0.275	0.275
Stan. Dev	78.04	0.668	0.532	0.093	0.349	0.093	0.093
N Value	5.477	5.477	5.477	5.477	5.477	5.477	5.477
Degrees of Freedom	1.694	1.694	1.694	1.694	1.694	1.694	1.694
Cleanup Standard	26.192	0.426	0.462	0.304	0.369	0.304	0.304
260020	190.00	1.90	1.90	1.90	1.90	1.90	1.90
260010	190.00	0.88	1.90	1.90	1.90	1.90	1.90
260002	180.00	1.80	1.80	1.80	1.80	1.80	1.80
250016	30.00	1.90	1.90	1.90	1.90	1.90	1.90
250009	31.00	2.00	2.00	2.00	2.00	2.00	2.00
240004	32.00	2.00	2.00	2.00	2.00	2.00	2.00
240011	31.00	2.00	2.00	2.00	2.00	2.00	2.00
230014	30.00	1.90	1.90	1.90	1.90	1.90	1.90
230006	31.00	1.90	1.90	1.90	1.90	1.90	1.90
220010	29.00	2.00	2.00	2.00	2.00	2.00	2.00
220006	30.00	1.00	2.00	2.00	2.00	2.00	2.00
210012	190.00	1.90	1.90	1.90	1.90	1.90	1.90
210006	200.00	2.00	2.00	2.00	2.00	2.00	2.00
200020	29.00	2.00	2.00	2.00	2.00	2.00	2.00
200009	29.00	2.00	1.80	1.80	1.80	1.80	1.80
191020	29.00	1.80	1.80	1.80	1.80	1.80	1.80
190020	28.00	1.80	1.80	1.80	1.80	1.80	1.80
190007	30.00	1.90	1.90	1.90	1.90	1.90	1.90
180020	180.00	2.00	1.80	1.80	1.80	1.80	1.80
180012	180.00	2.20	1.80	1.80	1.80	1.80	1.80
160018	200.00	2.10	2.00	2.00	2.00	2.00	2.00
160010	210.00	1.60	2.10	2.10	2.10	2.10	2.10
150020	180.00	1.80	1.80	1.80	1.80	1.80	1.80
150006	180.00	1.80	1.80	1.80	1.80	1.80	1.80
140006	190.00	1.90	1.90	1.90	1.90	1.90	1.90
140001	180.00	1.80	1.80	1.80	1.80	1.80	1.80
130008	180.00	0.20	1.80	1.80	1.80	1.80	1.80
130003	180.00	1.80	1.80	1.80	1.80	1.80	1.80
110017	370.00	3.70	3.70	3.70	3.70	3.70	3.70
101020	190.00	1.90	1.90	1.90	1.90	1.90	1.90
100020	180.00	1.80	1.80	1.80	1.80	1.80	1.80
100011	180.00	0.29	1.80	1.50	1.80	1.80	1.80
090002	180.00	1.80	1.80	1.80	1.80	1.80	1.80
040012	28.00	1.80	1.80	1.80	1.80	1.80	1.80
040007	30.00	1.90	0.26	1.90	1.90	1.90	1.90
030004	29.00	1.80	1.80	1.80	1.80	1.80	1.80
020006	29.00	1.80	1.80	1.80	1.80	1.80	1.80
020003	31.00	1.90	1.90	1.90	1.90	1.90	1.90
011002	30.00	1.90	0.28	1.90	1.90	1.90	1.90
010002	31.00	1.90	1.90	1.90	1.90	1.90	1.90
Count	40	40	40	40	40	40	40
Mean	2.052	0.257	0.266	0.283	0.285	0.285	0.285
Stan. Dev	67.738	0.516	0.467	0.303	0.296	0.296	0.296
N Value	6.557	6.557	6.557	6.557	6.557	6.557	6.557
Degrees of Freedom	1.674	1.674	1.674	1.674	1.674	1.674	1.674
Cleanup Standard	24.451	0.389	0.385	0.36	0.361	0.361	0.361

Table B.5. Statistical Analysis of Radiological Data

Sample Number	Units	Am-241	Q	Pu-238	Q	Pu 239/240	Q	Th-228	Q	Th-230	Q	Th-232	Q	Tritium	Q	U-234	Q	U-235	Q	U-238	Q
AREA 19-1																					
[illegible]0006	pCi/g	0.44	U	5.38		0.11	UJ	1.12		0.82		1.25		14	U	1.04		0.07	J	0.88	
[illegible]0016	pCi/g	0.36	U	0.23	U	0.11	U	1.29		0.93		1.20		14	U	0.76		0.07		0.89	
[illegible]0011	pCi/g	0.45	U	0.84		0.11	U	1.07		1.07		1.03		14	U	0.81		0.07	U	0.89	
380012	pCi/g	0.34	U	2.58		0.11	U	0.59		1.11		1.02		14	U	1.00		0.08		0.86	
380006	pCi/g	0.31	U	82.57		0.26	J	0.70		0.68		0.39		20.30		1.02		0.07	U	0.84	
370006	pCi/g	0.43	U	16.11		0.27		1.49		0.92		0.95		14	U	0.68	J	0.12	J	0.80	
370012	pCi/g	0.44	U	3.22		0.11	U	2.01		0.78		0.85		14	U	0.55		0.07	U	0.60	
Count		7		7		7		7		7		7		7		7		7		7	
Mean		0.398		15.847		0.154		1.181		0.901		0.858		14.9		0.837		0.079		0.823	
Stan. Dev.		0.053		27.687		0.07		0.448		0.143		0.284		2.205		0.175		0.017		0.096	
N Value		2.645		2.645		2.645		2.645		2.645		2.645		2.645		2.645		2.645		2.645	
Degrees of Freedom		1.895		1.895		1.895		1.895		1.895		1.895		1.895		1.895		1.895		1.895	
Cleanup Standard		0.038		21.036		0.05		0.392		0.102		0.189		2.753		0.125		0.012		0.069	
AREA 19-2																					
360020	pCi/g	0.25	U	0.25		0.11	U	1.34		0.87		0.69		14	U	0.78		0.11	J	0.82	
360013	pCi/g	0.34	U	0.51		0.11	U	1.00		0.74		0.50		14	U	0.77		0.09	J	0.67	
360006	pCi/g	0.39	U	1.99		0.11	U	1.34		1.29		0.62		14	U	1.07		0.22	J	0.96	
360000	pCi/g	0.32	U	11.37		0.33		10.69		1.01		0.66		14	U	0.97		0.12	J	0.93	
350020	pCi/g	0.31	U	1.77		0.11	U	1.28		1.22		1.01		14	U	0.82	J	0.07	U	0.73	
350006	pCi/g	0.34	U	0.23	U	0.11	U	1.31		1.14		0.94		16.4		0.64		0.16		0.64	
350000	pCi/g	0.33	U	0.23	U	0.11	U	1.39		1.29		0.82		15	U	0.76		0.07		0.88	
350013	pCi/g	0.39	U	0.40	U	0.19	U	0.81		0.74		0.85		14.00	U	0.65		0.07	UJ	0.71	
341000	pCi/g	0.37	U	0.51		0.11	U	2.19		1.10		1.20		14	U	1.22	J	0.09	J	0.92	
340006	pCi/g	0.38	U	0.35		0.11	U	1.49		0.98		1.05		14	U	1.02	J	0.07	U	0.97	
340000	pCi/g	0.36	U	1.22		0.11	U	1.32		0.77		1.07		14	U	0.88		0.07	U	0.92	
330000	pCi/g	0.29	U	3.83		0.11	U	1.08		1.37		0.72		16		0.79		0.07	U	0.65	
330006	pCi/g	0.43	U	1.53		0.22	U	0.76		0.65		0.90		22.00		0.69		0.08	J	0.69	
320006	pCi/g	0.33	U	0.23	U	0.11	U	1.10		0.88		0.42		14.9		0.80		0.13	J	0.95	
320000	pCi/g	0.22	U	0.23	U	0.11	U	0.72		0.78		0.43		14	U	0.81		0.24	J	0.82	
310000	pCi/g	0.32	U	21.51		0.45		2.64		1.29		0.46		34.0		7.45		0.15		0.82	
301000	pCi/g	0.41	U	16.86		0.11	U	1.27		1.12		0.82		21.3		1.35		0.07	U	0.78	
300000	pCi/g	0.23	U	2.67		0.11	U	0.50		0.68		0.28		14	U	0.44		0.07	U	0.42	
290013	pCi/g	0.35	U	1.35		0.11	U	1.10		0.97		0.89		14	U	0.83	J	0.07	U	0.72	
290006	pCi/g	0.31	U	0.23	U	0.11	U	0.80		1.06		0.48		14	U	0.79	J	0.21	J	0.97	
290000	pCi/g	0.32	U	10.67		0.11	UJ	0.78		0.94		0.55		14	U	0.62	J	0.07	UJ	0.70	J
281000	pCi/g	0.22	U	0.23	U	0.11	U	0.24	U	0.56		0.35		14	U	0.23		0.07	U	0.25	
280000	pCi/g	0.19	U	0.88		0.11	U	0.40		0.07		0.07		14	U	0.26		0.07	U	0.11	
280020	pCi/g	0.28	U	1.68		0.22	U	0.52		0.88		0.42		14.00	U	0.87		0.07	UJ	0.81	
280013	pCi/g	0.30	U	0.45	U	0.22	U	0.45		0.61		0.39		14.00	U	0.78		0.15	J	0.82	
280006	pCi/g	0.27	U	0.44	U	0.21	U	0.51		0.73		0.21		15.30		0.56		0.07	UJ	0.70	
[illegible]0020	pCi/g	0.29	U	0.23	U	0.11	UJ	0.66		0.83		0.35		14	U	0.73		0.07	U	0.87	
[illegible]0013	pCi/g	0.39	U	0.23	U	0.11	UJ	0.43		1.06		0.36		14	U	0.70		0.07	U	0.78	
270006	pCi/g	0.31	U	0.23	U	0.11	UJ	0.80		0.97		0.36		14	U	0.81		0.07	U	0.74	
270000	pCi/g	0.30	U	0.44	U	0.21	U	1.76		2.59		2.39		14.00	U	0.61		0.07	UJ	0.64	
Count		30		30		30		30		30		30		30		30		30		30	
Mean		0.318		2.758		0.149		1.356		0.973		0.675		15.43		0.99		0.1		0.74	
Stan. Dev.		0.058		5.17		0.078		1.812		0.401		0.425		3.955		1.221		0.049		0.196	
N Value		5.477		5.477		5.477		5.477		5.477		5.477		5.477		5.477		5.477		5.477	
Degrees of Freedom		1.694		1.694		1.694		1.694		1.694		1.694		1.694		1.694		1.694		1.694	
Cleanup Standard		0.018		2.04		0.024		0.693		0.124		0.131		2.412		0.378		0.015		0.061	

Table B.5. Statistical Analysis of Radiological Data

Sample Number	Units	Am-241	Q	Pu-238	Q	Pu 239/240	Q	Th-228	Q	Th-230	Q	Th-232	Q	Tritium	Q	U-234	Q	U-235	Q	U-238	Q
AREA 19-3																					
260020	pCi/g	0.34	U	0.23	U	0.11	U	0.81		0.70		0.44		14	U	0.80	J	0.08	J	0.88	
260010	pCi/g	0.30	U	0.23	U	0.11	U	0.86		1.23		0.39		14	U	0.69	J	0.07	J	0.70	
260002	pCi/g	0.68		68.64		0.91		1.23		1.01		0.47		14	U	0.60	J	0.07	U	0.59	
250016	pCi/g	0.28	U	0.23	U	0.11	UJ	1.04		0.78		0.93		14	U	0.65		0.09	J	0.84	
250009	pCi/g	0.28	U	0.74		0.11	U	1.24		1.10		1.09		14	U	0.82		0.08		0.85	
240011	pCi/g	0.36	U	17.57		0.12	J	1.20		0.95		0.97		14	U	0.77		0.07	U	0.91	
240004	pCi/g	0.37	U	0.23	U	0.11	UJ	1.39		1.07		1.22		14	U	1.19		0.07	U	0.74	
230014	pCi/g	0.35	U	0.22	U	0.11	U	0.65		0.79		0.85		14	U	0.78		0.07		0.91	
230005	pCi/g	0.39	U	1.11		0.11	U	0.71		0.55		0.54		14	U	0.44		0.07	U	0.53	
220010	pCi/g	0.32	U	0.45	U	0.21	U	0.47	U	0.91		0.58		14.00	U	0.61		0.06	UJ	0.64	
220005	pCi/g	0.31	U	0.39	U	0.19	U	1.09		1.15		1.46		14.00	U	0.77		0.07	UJ	0.65	
210012	pCi/g	0.33	U	4.97		0.11	U	1.36		0.68		0.82		14	U	1.19	J	0.08	J	0.88	
210005	pCi/g	0.34		46.22		0.20		1.11		1.08		0.82		14	U	1.16	J	0.22	J	0.75	
200009	pCi/g	0.29	U	0.23	U	0.11	U	0.64		1.01		0.36		14	U	0.89	J	0.12	J	0.77	
200020	pCi/g	0.22	U	0.41	U	0.20	U	0.43	U	0.86		0.46		14.00	U	0.76		0.10	J	0.77	
191020	pCi/g	0.24	U	0.23	U	0.11	UJ	0.39		1.17		0.25		17.30		0.82		0.08	J	0.76	
190020	pCi/g	0.32	U	0.23	U	0.11	UJ	0.50		0.92		0.40		14	U	0.81		0.07	J	0.70	
190007	pCi/g	0.37	U	0.23	U	0.11	UJ	0.66		1.06		0.46		18.70		0.70		0.08	J	0.68	
180020	pCi/g	0.30	U	0.23	U	0.11	U	1.05		1.00		0.51		14	U	0.72	J	0.07	U	0.69	
180012	pCi/g	0.22	U	0.37	U	0.18	U	0.39		0.69		0.37		14.00	U	0.49		0.07	UJ	0.82	
171020	pCi/g	0.37	U	0.23	U	0.11	UJ	1.20		0.79		0.96		14	U	0.59		0.07	J	0.74	
170020	pCi/g	0.34	U	0.23	U	0.11	UJ	1.40		1.26		1.18		14	U	0.70		0.13	J	0.74	
170007	pCi/g	0.38	U	0.23	U	0.11	UJ	1.07		1.02		1.02		14	U	0.65		0.07	U	0.68	
160010	pCi/g	0.36	U	0.23	U	0.11	U	1.51		1.31		1.18		14	U	0.71	J	0.07	J	0.90	
160018	pCi/g	0.40	U	0.46	U	0.22	U	0.46	U	0.49		0.37		14.00	U	0.71		0.08	J	0.80	
150020	pCi/g	0.33	U	0.23	U	0.11	U	0.73		0.70		0.44		14	U	0.83		0.16	J	0.87	
150001	pCi/g	0.43		31.98		0.23		1.05		1.09		0.70		14	U	0.91		0.19	J	0.73	
140001	pCi/g	0.35	U	20.18		0.20		4.23		0.82		0.57		14	U	1.12		0.18	J	1.09	
140006	pCi/g	0.32	U	2.50		0.11	U	0.67		1.00		0.58		14	U	0.65		0.06		0.72	
130006	pCi/g	0.39	U	0.33		0.11	U	1.35		1.48		1.46		14	U	0.83		0.12		1.12	
130003	pCi/g	0.37	U	6.82		0.11	U	0.69		0.84		0.58		14	U	0.72		0.07	U	0.74	
120020	pCi/g	0.29	U	0.22	U	0.11	U	4.17		0.88		0.44		14	U	0.68		0.07	U	0.77	
120001	pCi/g	0.38	U	3.01	J	0.21	U	2.58		1.32		1.90		17.40		0.85		0.10	J	0.85	
110017	pCi/g	0.31	U	0.45		0.11	U	0.74		0.83		0.50		14	U	0.71		0.06		0.67	
110006	pCi/g	0.36	U	0.45	U	0.21	U	0.89		0.95		1.27		14.00	U	1.18		0.11	JJ	1.21	
101020	pCi/g	0.35	U	0.23	U	0.11	U	0.78		0.92		0.35		14	U	0.69		0.06	J	0.66	
100020	pCi/g	0.23	U	0.23	U	0.11	U	1.06		1.00		0.47		14	U	0.63	J	0.09	J	0.77	
100011	pCi/g	0.32	U	0.23	U	0.11	U	0.64		0.80		0.36		14	U	0.73		0.03	J	0.71	
090017	pCi/g	0.28	U	0.40	U	0.19	U	0.42	U	1.24		0.53		14.00	U	0.69		0.07	UJ	0.66	
090002	pCi/g	0.33	U	0.22	U	0.11	U	0.44		0.90		0.34		14	U	0.58		0.07	U	0.58	
080009	pCi/g	0.26	U	0.23	U	0.11	U	1.55		0.97		0.88		14	U	0.77	J	0.09	J	0.82	
080001	pCi/g	0.37	U	1.10		0.11	U	0.84		1.25		0.51		14	U	0.78	J	0.12	J	0.65	
071001	pCi/g	0.34	U	10.95		0.11	UJ	1.18		1.05		0.95		14	U	0.52		0.07	U	0.71	
070012	pCi/g	0.36	U	0.23	U	0.11	UJ	1.44		1.21		1.31		14	U	0.67		0.07	U	0.87	
070001	pCi/g	0.40	U	6.10		0.12	J	1.53		0.97		1.10		14	U	0.52		0.07	U	0.72	
060005	pCi/g	0.37	U	1.48		0.11	U	1.23		1.25		0.80		14	U	0.58		0.06		0.55	
060000	pCi/g	0.39	U	7.54		0.11	U	1.76		1.25		0.97		14	U	0.67		0.07	U	0.59	
050010	pCi/g	0.40	U	0.45	U	0.21	U	0.48		0.43		0.24		14.00	U	0.61		0.10	J	0.70	
050004	pCi/g	0.27	U	0.45	U	0.21	U	0.47	U	0.44		0.38		14.00	U	0.49		0.07	UJ	0.42	
040012	pCi/g	0.33	U	0.23	U	0.11	U	0.98		0.84		0.68		14	U	0.55		0.10		0.61	
040007	pCi/g	0.31	U	0.23	U	0.11	U	1.16		1.40		0.72		14	U	0.75		0.07	U	0.74	
030004	pCi/g	0.31	U	3.25		0.11	U	3.52		0.61		0.23		14	U	0.39		0.07	U	0.37	
020006	pCi/g	0.30	U	16.55		0.30		3.66		0.95		0.15		14	U	0.53		0.10		0.53	
020003	pCi/g	0.31		100.92		0.54	J	1.10		0.99		0.98		14	U	0.52		0.05	J	0.71	
011002	pCi/g	0.26	U	132.05		1.92		0.84		0.88		0.71		14	U	0.68		0.07	U	0.52	
010002	pCi/g	0.30		5.04		0.20	U	0.66		0.59		0.50		14.00	U	0.54		0.07	UJ	0.48	
Count		56		56		56		56		56		56		56		56		56		56	
Mean		0.335		8.911		0.192		1.177		0.954		0.714		14.204		0.723		0.087		0.733	
Stan. Dev.		0.065		24.056		0.284		0.86		0.237		0.37		0.868		0.181		0.033		0.154	
N Value		7.483		7.483		7.483		7.483		7.483		7.483		7.483		7.483		7.483		7.483	
Degrees of Freedom		1.674		1.674		1.674		1.674		1.674		1.674		1.674		1.674		1.674		1.674	
Cleanup Standard		0.015		6.331		0.059		0.263		0.053		0.083		1.347		0.04		0.007		0.034	

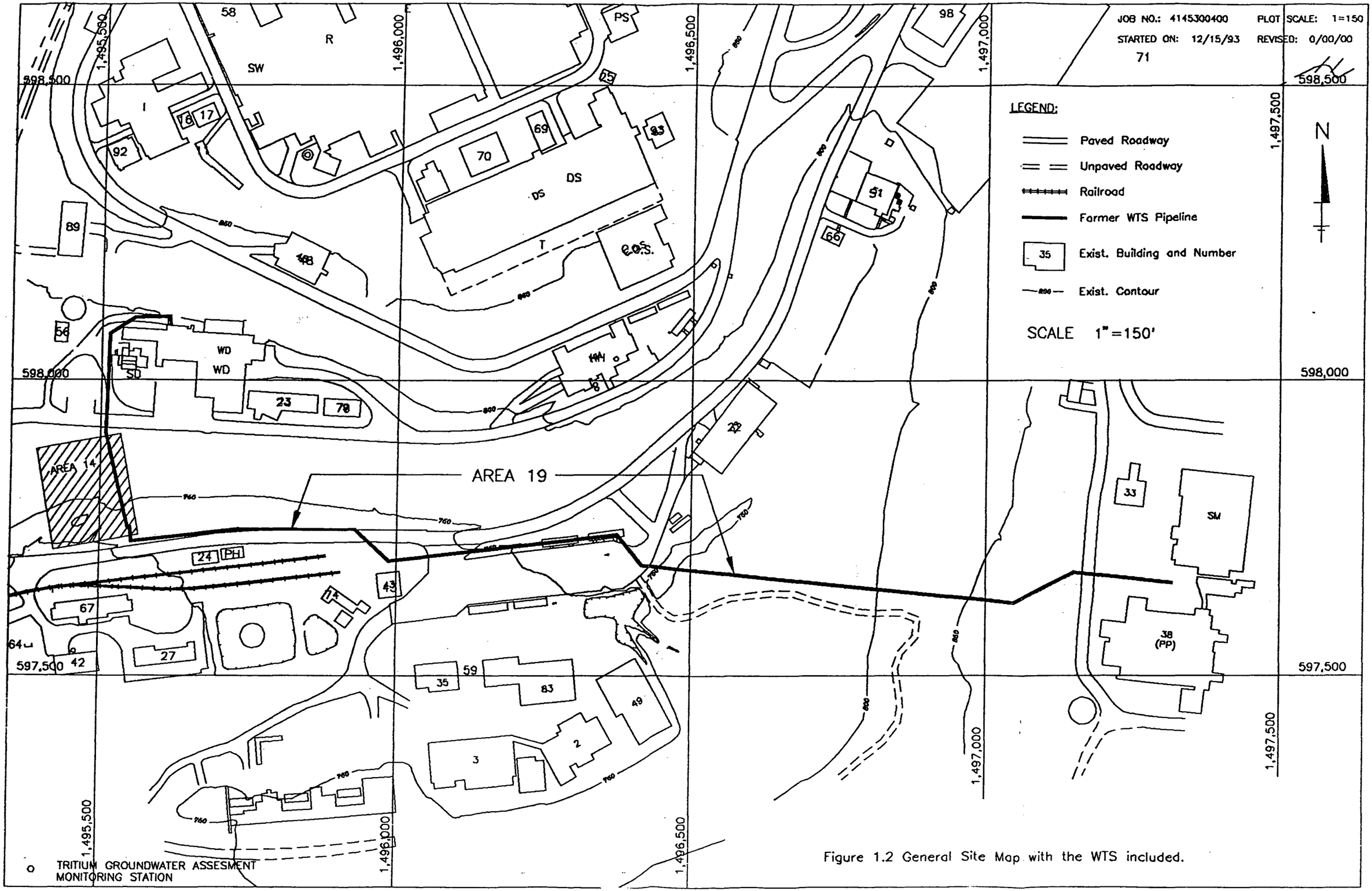

Figure 1.2 General Site Map with the WTS included.

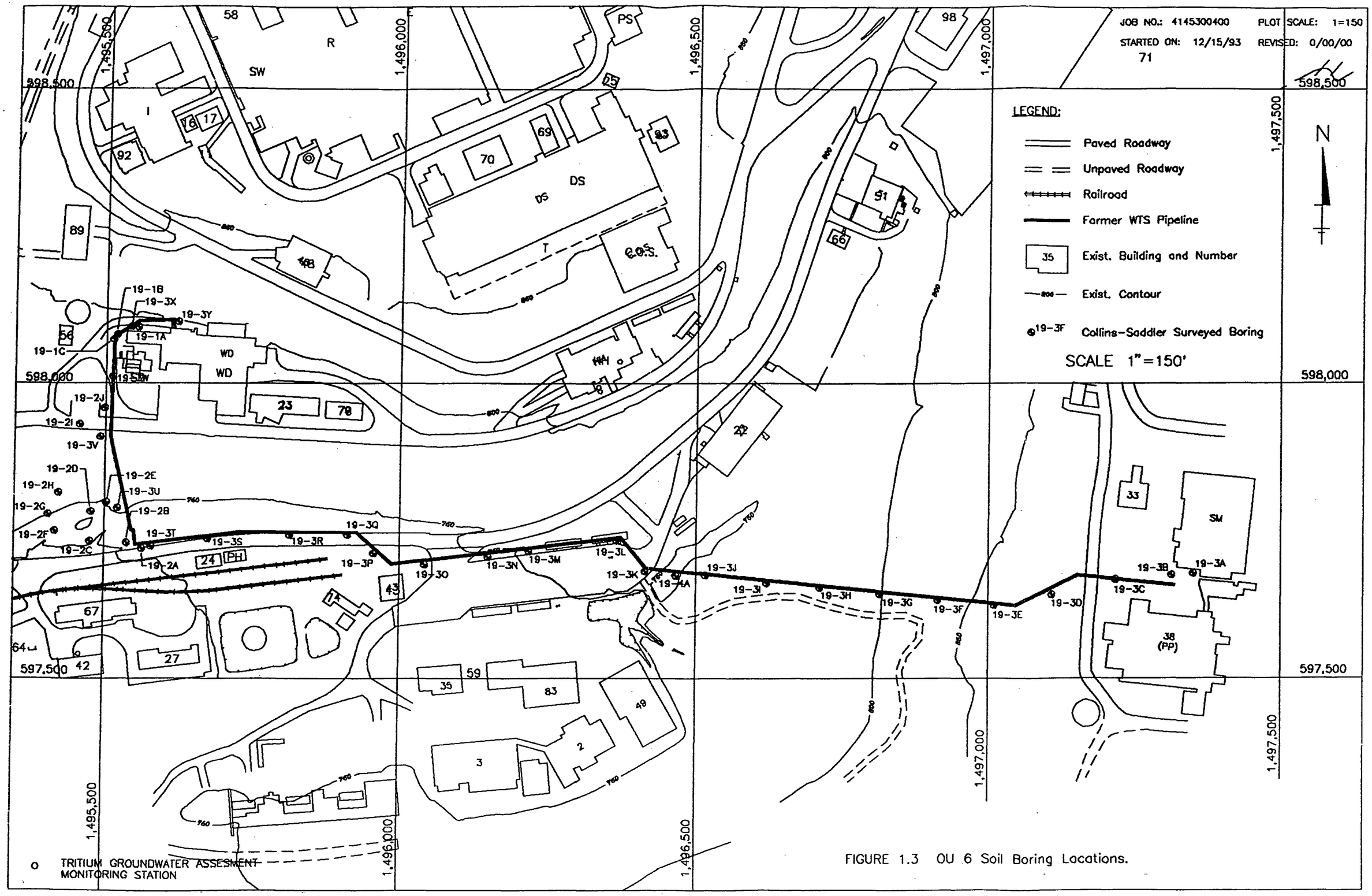

FIGURE 1.3 OU 6 Soil Boring Locations.