Site Investigations of the Reservoir No. 2 Burning Ground, Additional Burning Ground, Wastewater Disposal Plant No. 2, and Power House No. 2 Ash Pit Former Plum Brook Ordnance Works Sandusky, Ohio

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List of Acronyms

2BG	Reservoir No. 2 Burning Ground
AR	analysis request
ABG	Additional Burning Ground
ASTM	American Society for Testing and Materials
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CLP	Contract Laboratory Program
COC	chain of custody
D&M	Dames & Moore
DERP	Defense Environmental Restoration Program
DNT	dinitrotoluene
DOD	U.S. Department of Defense
DQE	data quality evaluation
EA	environmental assessment
EPA	U.S. Environmental Protection Agency
FUDS	Formerly Used Defense Sites
GPR	ground-penetrating radar
GSA	General Services Administration
IDW	investigation-derived waste
IT	IT Corporation
LeRC	Lewis Research Center
MDC	maximum detected concentration
µg/kg	microgram per liter
MK	Morrison and Knudsen Corporation
msl	mean sea level
NASA	National Aeronautics and Space Administration
OEPA	Ohio Environmental Protection Agency
OHARNG	Ohio Air National Guard
PAH	polynuclear aromatic hydrocarbon
PBOW	Plum Brook Ordnance Works
PBS	Plum Brook Station
PCB	polychlorinated biphenyl

PH2 Ash Pit	Power House No. 2 Ash Pit
PSA	preliminary site assessment
QA	quality assurance
QAPP	quality assurance project plan
QC	quality control
RBC	risk-based concentration
RCRA	Resource Conservation and Recovery Act
SAP	sampling and analysis plan
SI	site investigation
SOW	statement of work
SVOC	semivolatile organic compound
TAL	target analyte list
TCL	target compound list
TNB	trinitrobenzene
TNT	trinitrotoluene
USACE	U.S. Army Corps of Engineers
UTL	upper tolerance limit
VOC	volatile organic compound
WARWP	West Area Red Water Ponds
WP2	Wastewater Disposal Plant No. 2

Executive Summary

IT Corporation (IT) conducted site investigations (SI) of soils at the Reservoir No. 2 Burning Ground (2BG), the Additional Burning Ground (ABG), Wastewater Disposal Plant No. 2 (WP2), and Powerhouse No. 2 Ash Pit (PH2 Ash Pit) at the former Plum Brook Ordnance Works (PBOW) from September through October 1996 under contract to the U.S. Army Corps of Engineers Nashville District. The PBOW is an approximately 9,000-acre site near Sandusky, Ohio that was used for the manufacture of explosives during World War II. The site is currently owned by the National Aeronautics and Space Administration (NASA).

This work was conducted under the Defense Environmental Restoration Program (DERP), Formerly Used Defense Sites (FUDS) and included geophysical surveys, trenching, surface and subsurface soil sampling, and chemical analysis of soil samples. The purposes of the SIs were to gather information on possible contamination of soils at the sites caused by past U.S. Department of Defense activities. The information will be used to make initial management decisions regarding site contamination and to develop a more comprehensive sampling regiment, if necessary. This report presents summaries of field activities, findings, conclusions, and recommendations derived from the data collected during the SIs.

Reservoir No. 2 Burning Ground. Field activities conducted at 2BG included a geophysical survey to delineate the extent of the former burning ground and to determine locations for soil borings, trenching, and surface and subsurface soil sampling. The geophysical survey revealed eight major subsurface anomalies and a number of smaller anomalies. Trench and soil boring locations were selected in relation to the locations of these anomalies.

Analytical results from 2BG indicate that surficial soils contain benzo(a)pyrene, Aroclor 1260, nitroaromatic compounds, and metals at concentrations that exceed the risk-based concentrations (RBC). Subsurface soils contain nitroaromatic compounds, Aroclor 1260, and metals at concentrations that exceed the RBCs. Based on the results of the SI at 2BG, additional soil sampling is recommended to establish the extent of site contamination due to semivolatile organic compounds (SVOC), nitroaromatic compounds, polychlorinated biphenyls (PCB), and metals.

Additional Burning Ground. Field activities conducted at the ABG included a geophysical survey to delineate the extent of the former burning ground and to determine locations for soil borings, and surface and subsurface soil sampling. The geophysical survey revealed eight major

subsurface anomalies, with an extensive area of buried metallic debris in the eastern portion of the site.

Analytical results from the ABG indicate that surficial soils contain polynuclear aromatic hydrocarbons (PAH), Aroclor 1260, 2,4-dinitrotoluene (DNT), and metals at concentrations that exceed the RBCs. The only subsurface soil contaminants that exceeded RBCs were inorganic compounds. Based on the results of the SI at the ABG, additional soil sampling at the site is not recommended at this time; however, a risk assessment should be conducted to determine whether further action is needed at this site.

Wastewater Disposal Plant No. 2. Field activities conducted at WP2 included surface and subsurface soil sampling. Analytical results from this investigation indicate that both surface and subsurface soils contain PAHs, Aroclor 1260, and metals at concentrations that exceed the RBCs. Based on these results, additional soil sampling is recommended to establish the extent of site contamination by SVOCs, PCBs, and metals.

Powerhouse No. 2 Ash Pit. Field activities conducted at PH2 Ash Pit included surface and subsurface soil sampling. Analytical results from the PH2 Ash Pit indicate that surficial soils contain benzo(a)pyrene and metals at concentrations exceeding the RBCs; in addition, pesticides were detected at concentrations below the RBCs. In subsurface soils, only metals were detected at concentrations that exceed the RBCs. Based on the results of the SI at PH2 Ash Pit, a risk assessment is recommended to determine whether further action is needed at this site. Additional soil sampling is not recommended at this time.

Sitewide. Analysis of soils from sites of potential concern has shown VOCs to be present at low concentrations that do not exceed the RBCs. SVOCs were detected at all sites at concentrations that exceed the RBCs, with the highest concentrations and frequencies evident in surficial soils. The PCB isomer Aroclor 1260 was detected in surficial soils at 2BG, ABG, and WP2, and pesticides were detected at low concentrations at PH2 Ash Pit. Concentrations of nitroaromatic compounds, primarily 2,4,6-trinitrotoluene, 2,6-DNT, and 2,4-DNT, exceeded the RBCs at 2BG, but were also detected at low concentrations at ABG and WP2. Several inorganic compounds exceeded the RBCs and background concentrations in surface and subsurface soils at the four investigated sites; however, several metals that were detected in soil samples were either not analyzed for, or were not detected, in the background samples. Additional background sampling and/or evaluation is recommended to establish more comprehensive background ranges for the PBOW site.

Based on the SIs conducted at PBOW, additional sampling efforts are recommended at 2BG and WP2 to establish the extent of contamination. A risk assessment is recommended for ABG and PH2 Ash Pit to determine what additional work, if any, is necessary at these two sites. Finally, installation of one monitoring well is recommended at each of the four sites to determine the impact of soil contaminants on site groundwater quality.

1.0 Introduction

The U.S. Army is conducting studies of the environmental impact of suspected hazardous waste sites at properties previously owned by the U.S. Department of Defense (DOD). This work is being pursued by the U.S. Army Corps of Engineers (USACE) under the Defense Environmental Restoration Program (DERP) Formerly Used Defense Sites (FUDS). The former Plum Brook Ordnance Works (PBOW) located in Sandusky, Erie County, Ohio is an Army DERP FUDS project. Project management and technical oversight is provided by the USACE District Office, Nashville, Tennessee. Figure 1-1 shows the geographic location of the former PBOW site. IT Corporation (IT) performed site investigations (SI) at four segregated areas within the former PBOW during September and October 1996. The four areas that were investigated included the Reservoir No. 2 Burning Ground (2BG), Additional Burning Ground (ABG), Wastewater Disposal Plant No. 2, (WP2) and the Power House No. 2 Ash Pit (PH2 Ash Pit). This work was performed under Delivery Order 0016 of Contract No. DACA62-94-D-0030.

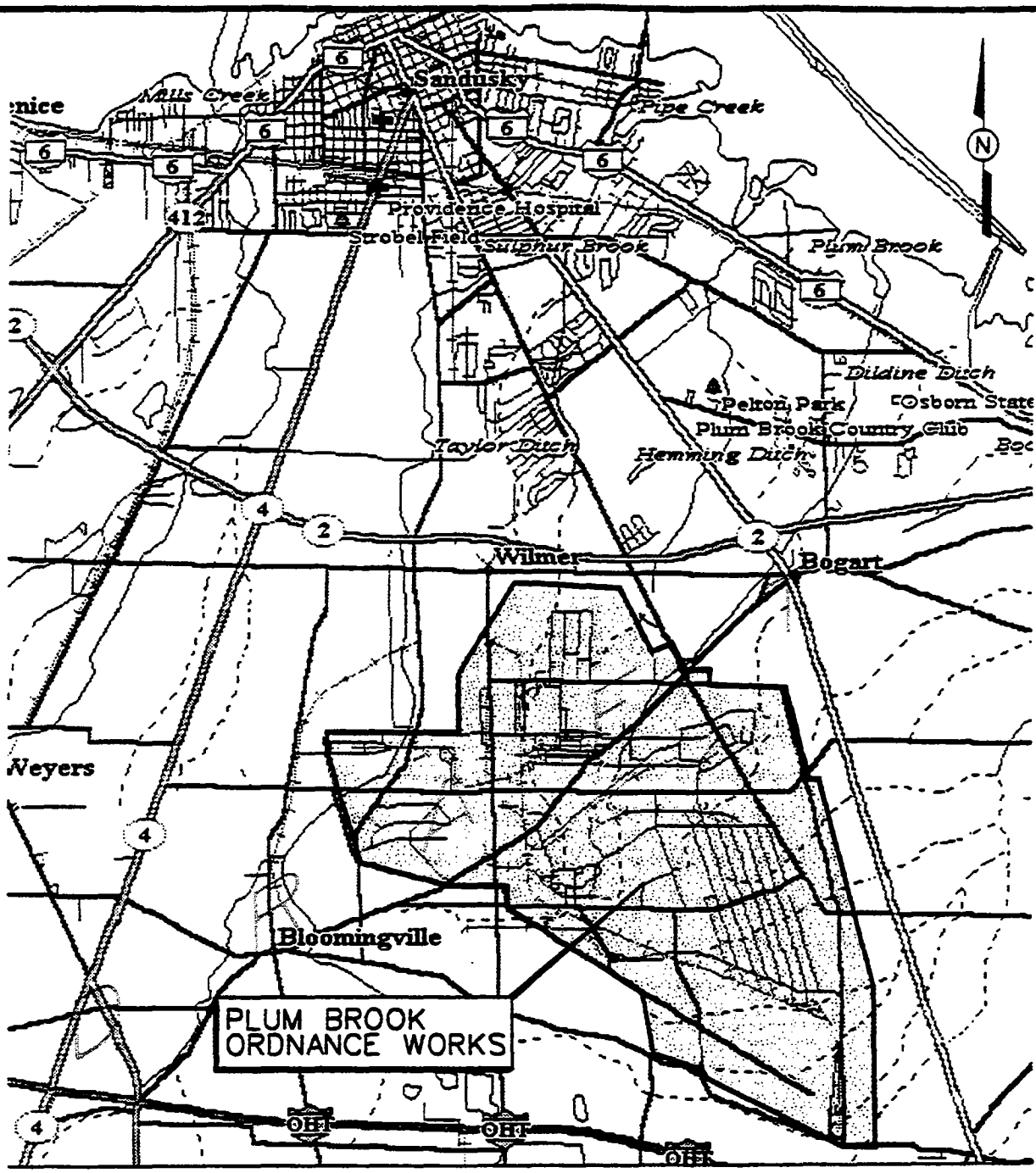
1.1 Scope of Work and Project Objectives

The scope of the SIs as specified in the statement of work (SOW) (USACE, 1995) includes preparation and completion of site-specific work plans, completion of various field investigation activities, evaluation of analytical results from samples collected during the field investigation, preparation and submittal of reports characterizing activities, conclusions, and recommendations for further actions.

Field activities completed during the SIs include geophysical surveys at 2BG and ABG, excavating four trenches at 2BG, drilling and sampling a total of 42 soil borings, land surveying, and managing investigation-derived waste (IDW). Samples collected for chemical analysis included soil and associated field quality control (QC) samples.

The general purpose of the SIs was to gather information on possible contamination of soils caused by past DOD activities. The information will be used to make initial management decisions, and, if necessary, to develop a more detailed and comprehensive sampling regiment. The specific objectives of each investigation are summarized as follows:

- ***SI of Reservoir No. 2 Burning Ground.*** Determine the location of the 2BG; determine the existence and nature of contamination in site soils; determine if contamination poses a threat to human health; and determine if further investigation or cleanup of the site is required.



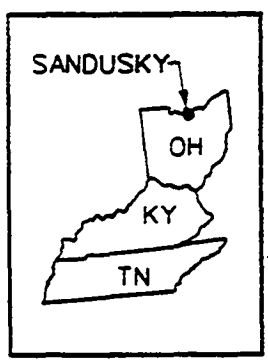


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FIGURE 1-1
VICINITY MAP

PLUM BROOK ORDNANCE WORKS
SANDUSKY, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

STARTING DATE: 6-11-96	DATE LAST REV.:	DRAFT. CHCK. BY: CET	INITIATOR: G. YU	DWG NO.: 766952ES.005
DRAWN BY: R. KNIGHT	DRAWN BY:	ENGR. CHCK. BY: G. YU	PROJ. MGR.: D. BURTON	PROJ NO.: 766952

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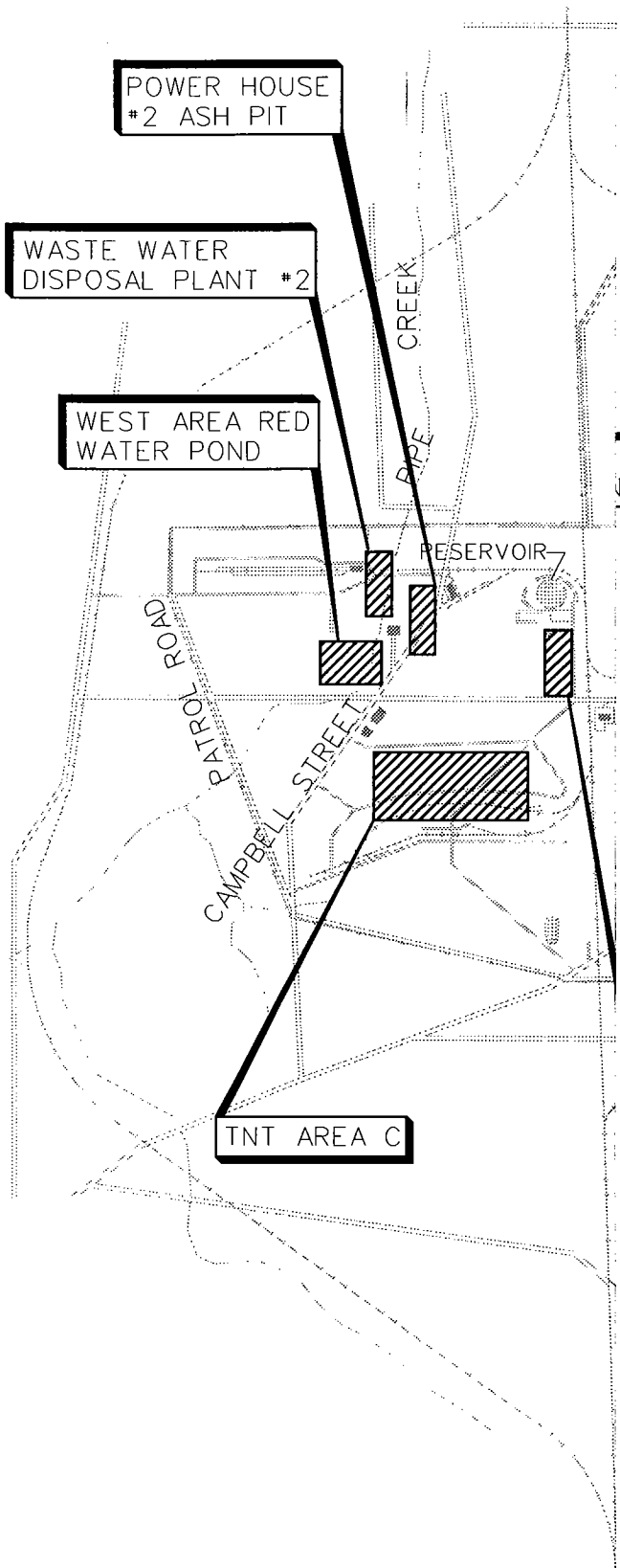

LEGEND:

- BUILDINGS
- FENCE (PBOW BOUNDARY)
- RAILROAD
- DITCH
- SURFACE POND
- INVESTIGATION AREA

FIGURE 1-2
INVESTIGATION AREAS

PLUM BROOK ORDNANCE WORKS
NASA PLUM BROOK STATION
SANDUSKY, OHIO

REFERENCE:
NASA-PLUMBROOK PBS-MSTR.DXF
FACILITIES MASTER DRAWING
NASA LEWIS RESEARCH CENTER
TITLE: HORIZONTAL AND VERTICAL CONTROL
DATED: 2/3/94 SCALE: 1" = 600"
REVISED: 11/3/95

INTERNATIONAL TECHNOLOGY CORPORATION

STARTING DATE: 04/24/97	DATE LAST REV.:	DRAFT. CHCK. BY: C. TUMLIN	INITIATOR: G. YU
DRAWN BY: R. KNIGHT	DRAWN BY:	ENGR. CHCK. BY: G. YU	PROJ. MGR.: D. BURTON
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- ***SI of the Additional Burning Ground.*** Delineate the lateral extent of the ABG; confirm the existence and nature of contamination in shallow soils at the site; determine if contamination poses a threat to human health; and determine whether further investigation of the site is required. If further investigation is required, determine which media require investigation.

- ***SI of Wastewater Disposal Plant No. 2.*** Determine the existence and nature of contamination in soils in the vicinity of the site; determine if this contamination poses a threat to human health.

- ***SI of the Power House No. 2 Ash Pit.*** Determine the existence and nature of contamination in soils at the ash pit; determine if this contamination poses a threat to human health.

1.2 Site History and Potential for Contamination

The 9,009-acre PBOW site was built in early 1941 as a manufacturing plant for 2,4,6-trinitro-toluene (TNT), dinitrotoluene (DNT), and pentolite. Production of explosives began in December 1941 and continued through World War II until 1945. It is estimated that more than 1 billion pounds of explosives were manufactured during the 4-year operating period.

After the plant was shut down, decontamination of TNT, acid, pentolite, and DNT processing lines began. This work was completed during the last quarter of 1945. The property was initially transferred to the Ordnance Department, then to the War Assets Administration after it was certified by the U.S. Army to be decontaminated. In 1949, PBOW was transferred to the General Services Administration (GSA).

National Aeronautics and Space Administration (NASA) acquired PBOW in 1963 and is presently using the site. On April 18, 1978, NASA declared approximately 2,152 acres of land as excess. The Perkins Township Board of Education acquired 46 acres of the excess land and uses this area as a bus transportation center. GSA retains the remaining acreage and currently has a use agreement with the Ohio National Guard for 604 acres of the land. NASA presently controls approximately 6,400 acres and is using the site to conduct space research as a satellite operation of NASA's Lewis Research Center (LeRC) in Cleveland, Ohio. The details of these land transactions are listed in the site management plan and can be found at the NASA Plum Brook Station (PBS).

The 2BG is located in the former PBS ball field, east of the Reservoir No. 2 between Ransom Road and Campbell Street. The WP2 is located due west of the PH2 Ash Pit on the west side of

Pipe Creek. The PH2 Ash Pit is located west of Campbell Street and east of Pipe Creek. The suspected ABG is located in the clearing north of the intersection of Fox Road and Snake Road. Locations of these investigative areas in relation to other PBOW site features are shown in Figure 1-2.

1.3 Summary of Previous Environmental Studies

Several previous environmental investigations have been conducted at PBOW and were focused on areas related to past PBOW operations. These investigations are summarized in the following subsections.

Ohio Environmental Protection Agency Preliminary Site Assessment. In 1983, the Ohio Environmental Protection Agency (OEPA) conducted a preliminary site assessment (PSA) of the PBS in response to a 1981 spill of polychlorinated biphenyls (PCB) that occurred at Building 9206 (a warehouse west of the maintenance shop). The Red Water Pond areas were also included in the PSA to assess the potential for groundwater and surface water contamination from past DOD production of explosives. The detailed results of this PSA are not available. However, four monitoring wells were known to have been installed, and groundwater monitoring was conducted around Building 9206 until 1990. The decision to discontinue groundwater monitoring at this site was made with the concurrence of the U.S. Environmental Protection Agency (EPA) (Morrison and Knudsen Corporation [MK], 1994).

Ohio Air Reserve National Guard Environmental Assessment. It was reported that the Ohio Air National Guard (OHARNG) conducted an environmental assessment (EA) of the western portion of the PBOW site in the 1980s (Dames & Moore [D&M], 1995). In 1985, OHARNG collected and analyzed sediment samples for TNT, DNT, and metals. Low levels of explosive compounds were detected in some of the samples and some detected metals were reported above the levels found in samples from Lake Erie. The EA also assembled information regarding past investigations of the West Area Red Water Ponds (WARWP), including a Battelle study in which one soil, one sediment, and one red water sample were collected from the spoil area at the WARWP. Low concentrations of explosives were detected in the soil sample. In both 1986 and 1987, surface water quality of the Pipe Creek was investigated as part of the EA and showed no indication of contamination both upstream and downstream of the WARWP.

IT Contamination Evaluation. In 1989, IT conducted a contamination evaluation under contract to USACE. The evaluation consisted of a records review, site visit, and field sampling and analysis. In addition to the installation of four monitoring wells, soil and/or surface water

samples were also collected from several areas of concern, including Pentolite Road Red Water Ponds (Waste Disposal Area No. 1), WARWP (Waste Disposal Area No. 2), Snake Road Burning Ground (Scheid Road Burning Ground), and Taylor Road Burning Ground (Rubbish Burning Ground). All soil samples were analyzed for volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), nitroaromatic compounds, nitrate, sulfate, pH, and metals. The results of this contamination evaluation indicated limited soil contamination by SVOCs at both the Snake Road Burning Ground and the Pentolite Road Red Water Ponds areas. Elevated metals, sulfate, and nitrate concentrations were detected in soils at the Pentolite Road Red Water Ponds.

H⁺GLC Snake Road Burning Ground Investigation. In 1992, H⁺GLC, under contract to NASA, conducted an SI of the Snake Road Burning Ground and the adjacent burning grounds used by NASA. The purpose of the investigation was to characterize possible groundwater and soil contamination due to the use of this area as an uncontrolled burning ground. In addition to monitoring well installation, five soil bores were placed and soil samples were collected for chemical analysis. Although no detailed analytical data are available, H⁺GLC recommended no further site characterization or remediation of the site.

Morrison Knudsen Corporation Site Inspection. In 1994, MK completed an SI of the PBS for NASA in order to perform a hazard ranking for the site. The MK investigation included review of existing environmental data and collection and analysis of soil, sediment, surface water, and groundwater samples. All samples were analyzed for organic and inorganic compounds. In addition, a selected number of samples from various media were analyzed for radioactivity. The results of the MK investigation indicated limited contamination in multiple areas of the PBOW site, some of which were previously used during PBOW operation. However, the hazard ranking score for the overall site was below the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) action level. A total of 27 surface soil and 17 subsurface soil samples (from monitoring well borehole) were collected and the analytical results showed limited contamination by VOCs, SVOCs, explosives, pesticides/PCBs, and metals, particularly in and around the red water pond areas (MK, 1994).

Dames & Moore TNT Areas Site Investigation. Between October and December 1994, D&M conducted an SI of three former TNT areas (TNT Areas A, B, and C) under contract to the USACE Nashville District. The objective of the D&M investigation was to confirm the presence of suspected contamination in soil and groundwater within the boundaries of the TNT areas, and to evaluate the necessity of additional investigation in these areas. A total of 100 soil samples

were collected from the three TNT areas at depths of less than 5 feet. Soil samples were analyzed for nitroaromatic compounds and metals. The D&M investigation indicated the presence of explosives residues in soils in all three TNT areas; the most frequently detected compound was 2,4,6-TNT. Low-level nitroaromatic compounds were also detected in overburden monitoring wells placed in TNT Areas A and B. The presence of nitroaromatic compounds at TNT Area C was not confirmed because the wells were dry at the time of sampling. However, low levels of explosives were detected in the bedrock well installed in this area.

As part of the D&M investigation, soil samples were also collected to establish soil background. Soil background data were statistically evaluated and compared to the metal concentrations in soil samples collected in the three TNT areas. Several metals, including lead, manganese, and zinc were found at concentrations above the background values. Based on the investigation results, D&M recommended a site-specific risk assessment and additional groundwater sampling in the TNT areas.

IT G-8 Burning Ground Site Investigation. During May of 1996, IT was retained by USACE to conduct an SI at the suspected G-8 burning ground, located in the southwestern corner of the PBOW. A screening geophysical survey was performed and followed by trenching and soil and sediment sampling. A total of 24 soil samples and 2 sediment samples were collected and analyzed for organic and inorganic compounds. Although explosives were not detected in soil and sediment samples, several polynuclear aromatic hydrocarbons (PAH) and two metals (arsenic and manganese) were widely detected at low concentrations in soil samples. The soil analytical data were compared to the risk-based concentrations (RBC) and were found to be significantly lower than the screening levels except for arsenic and manganese (IT, 1996a). IT recommended installation of one bedrock well in this area and no further soil or sediment sampling.

1.4 Summary of Existing Site Conditions

The former PBOW site is currently owned by the NASA and is operated as the PBS of the NASA LeRC based in Cleveland, Ohio. Most of the aerospace testing facilities built in the 1960s at the site are in standby or inactive status. The site is located approximately 4 miles south of Sandusky, Ohio and is specifically located in the Perkins, Oxford, Huron, and Milan Townships. The site is bounded on the north by Bogart Road, on the south by Mason Road, on the west by County Road 43 and on the east by U.S Highway 250. The areas surrounding PBOW is mostly agricultural and residential.

The topography of PBOW site is characterized by a fairly flat ground surface that slopes gradually northward toward Lake Erie at an average gradient of less than two percent. Elevations at the site range from 675 feet above mean sea level (msl) at the southeast edge of the site to approximately 625 feet msl in the northern portion of the installation at Bogart Road. Eleven streams exist within the site and flow toward Lake Erie. Plum Brook, Ransom Brook, and Pipe Creek are the three major streams and are being monitored by NASA PBS. The climate in north-central Ohio is typical continental and shows significant influence by Lake Erie. Mean annual precipitation is 33.90 inches and the average monthly precipitation is approximately 1.65 inches for February and 3.70 inches for the month of July.

Bedrock geology at PBOW is characterized by Devonian and Silurian carbonate and clastic rocks, generally dipping to the southeast. The thickness of glacial till or lacustrine deposit cover ranges from approximately 5 feet or less for most of the site to approximately 20 feet in the northern boarder of the site. In many locations, bedrock was exposed on the ground surface. According to the PBOW preliminary assessment (MK, 1994), some karst features are present in the carbonate rocks forming a water-bearing formation underneath the soil cover.

Public access is restricted at PBOW except during the annual deer hunting season.

2.0 Field Activities

Field activities were conducted concurrently at various sites at PBOW by IT personnel from September 23 to October 5, 1996, and continued from October 13 through October 24, 1996. Mr. Keith Peacook, the environmental coordinator for NASA PBS, acted as the project contact and approved drilling/digging permit and extended work hours during the course of the project. Mr. Ron Nabors of the OEPA visited the site on October 24, 1996.

2.1 Geophysical Surveys

IT conducted geophysical surveys using a Geonics EM-31 terrain conductivity meter, a Geometrics G-858G magnetic gradiometer, and ground-penetrating radar (GPR) at the ABG and 2BG following procedures set forth in Section 4.1 of the sampling and analysis plan (SAP) (IT, 1996b).

The purpose of the geophysical surveys at both sites was to locate and delineate the boundaries of the suspected former burning grounds and use the geophysical survey results to determine the most suitable locations for subsurface soil borings and other intrusive work. A summary of the geophysical survey is provided in Appendix A, along with site maps showing interpreted results of the geophysical surveys. This appendix also includes color-enhanced contour maps generated to illustrate the locations of any buried metallic fragments and/or areas of anomalous soil conductivity that potentially represent the burning ground. The major findings of the geophysical survey at each site are summarized in the following subsections.

Reservoir No. 2 Burning Ground. The 2BG geophysical survey was conducted in a 1.4 acre area, which is located at the former NASA ball field. The survey boundary was defined by the area that was accessible to the instruments. A total of approximately 12,500 linear feet of conductivity and in-phase magnetic data and 32 GPR profiles totaling 2,030 linear feet of data were collected. Data interpretation indicated eight major geophysical anomalies, along with a number of smaller anomalies, believed to be caused by features other than surface metals and buried pipelines. As summarized in Appendix A, most of the anomalies were interpreted as caused by buried metallic debris, which is consistent with what would be expected from a large burning pit or series of pits. Trench locations and soil boring locations were selected based on the results of the geophysical survey.

Additional Burning Ground. The ABG geophysical survey was conducted in a 5.7-acre open field north of the intersection of Fox Road and Snake Road. A total of approximately

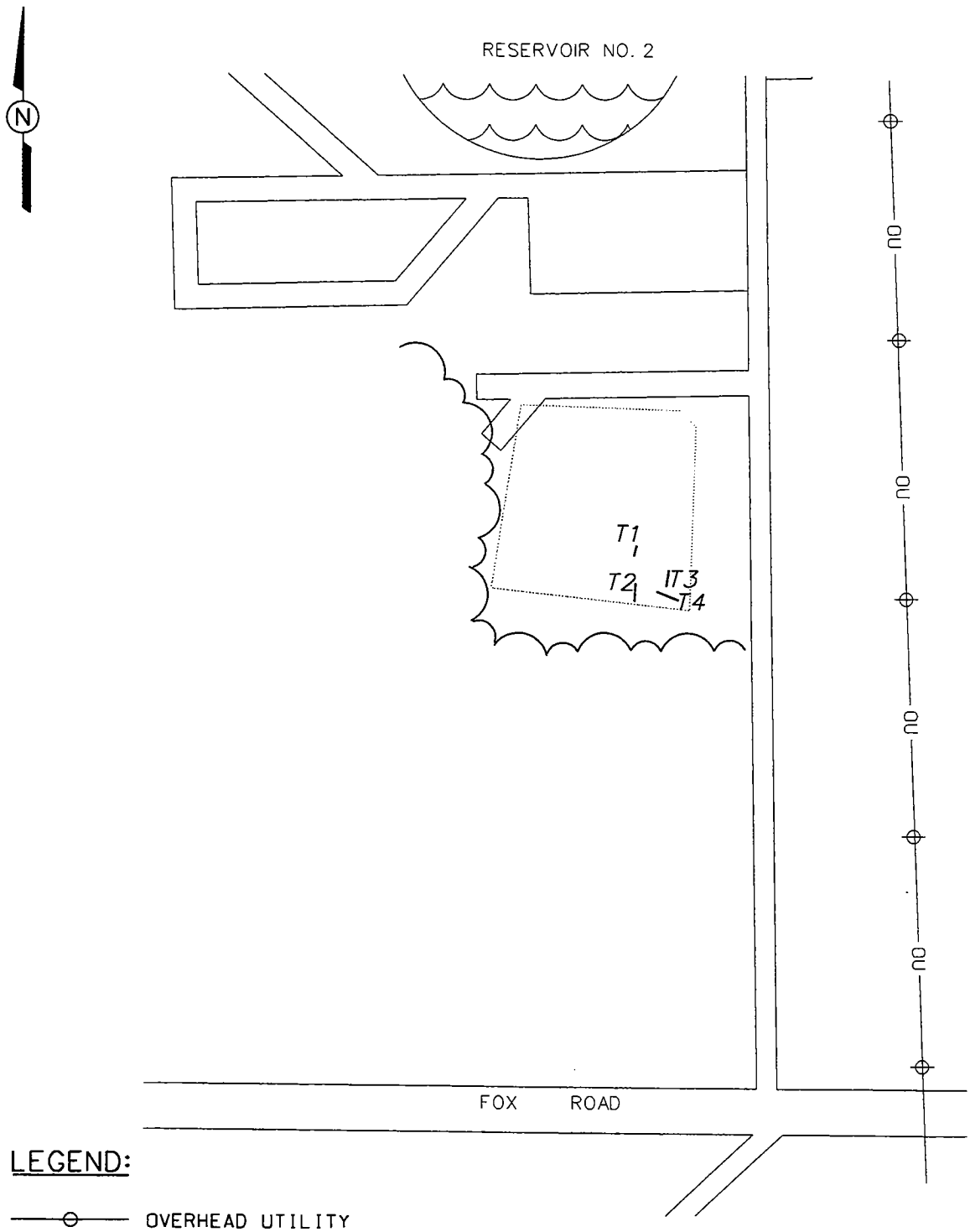
51,000 linear feet of conductivity and in-phase magnetic data and 27 GPR profiles totaling 2,145 linear feet of data were collected. Data interpretation indicated eight geophysical anomalies within the survey area. Most of the anomalies were interpreted as caused by buried metallic debris and were indicative of former burning pits. An extensive area of buried metallic debris was identified in the eastern portion of the site that trends off site to the east. Soil boring locations were selected based on the results of the geophysical survey as detailed in Appendix A.

2.2 Trenching

Four trenches were placed using a backhoe in the southwest portion of the 2BG (Figure 2-1). Trenching was not included in the SAP (IT, 1996b) for this location or any other locations during the investigation. However, because the geophysical survey results revealed an apparent metallic anomaly in this area, trenching became necessary to identify these buried objects and to ensure the safety of the field personnel during soil boring in this area. The soil profile of each trench was visually inspected by IT field geologists for variations in color, organic content, odor, and any residuals that may indicate previous use of the site. Trenches were dug to approximately 3 feet below ground surface (bgs). A large amount of metal debris was found, including rusted pipes, strapping, and plates (see photos in Appendix B). After visual inspection of soil and buried objects, trenches were backfilled and graded close to the original level. Trench locations were staked at the four corners and later surveyed. Trench dimensions, air monitoring records, and brief soil descriptions are summarized in Table 2-1.

2.3 Soil Boring and Soil Sampling

A total of 42 soil borings were placed during the field investigation. The breakdown of soil bores in each investigation area is as follows: 8 bores in 2BG; 12 in ABG; 10 in WP2, in addition to 10 screening bores; and 12 in PH2 Ash Pit. The soil boring locations in PH2 Ash Pit and WP2 were selected using a systematic grid sampling strategy so as to minimize bias and to provide complete site coverage. In both 2BG and ABG, boring locations were selected based on the geophysical anomalies identified by the geophysical surveys. Soil bores were advanced using either a stainless-steel hand auger or a drill rig. Prior to using a hand auger, undisturbed soil sample collecton for VOC samples was attempted at several locations using a slide hammer driving a core soil sampler fitted with removable retaining brass cylinder. The attempt was not successful due to the large fraction of rock fragments encountered within the sampling depth. Therefore, disturbed soil samples were collected in all locations. Disturbed soil samples were collected from soil bores at different depths following decontamination and sampling procedures set forth in the SAP (IT, 1996b). Primary soil samples were placed in the required containers, which were then labeled and kept in coolers filled with ice. Upon returning to the field office, sample containers were sealed



LEGEND:

OVERHEAD UTILITY

SURFACE POND

PRIMARY GEOPHYSICAL SURVEY GRID

TRENCH LOCATION

TREE LINE

SCALE

0 200 400 FEET

FIGURE 2-1
TRENCH LOCATIONS
SITE INVESTIGATION
RESERVOIR NO. 2 BURNING GROUND

FORMER PLUM BROOK ORDNANCE WORKS
SANDUSKY, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

STARTING DATE: 03/10/97	DATE LAST REV.:	DRAFT. CHCK. BY: R. KNIGHT	INITIATOR: G. YU	DWG. NO.:\766952ES.025
DRAWN BY: R. KNIGHT	DRAWN BY:	ENGR. CHCK. BY: G. YU	PROJ. MGR.:D. BURTON	PROJ. NO.:766952

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Table 2-1

Summary of Trench Dimensions and Soil Description
Site Investigation at Reservoir No. 2 Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

Trench Number	Date Completed	Length (feet)	Width (feet)	Depth (feet)	HNu Reading (ppm)	Bedrock Encountered	Soil Description
TR-1	10/14/96	10	3	3.3	0	NO	0-1.3 ft, soft, black very fine SILT, moist 1.3-2.2 ft, black cinder and ASH, metal objects, moist 2.2-3.3 ft, light green, medium stiff very fine grin SILT, trace sand, moist
TR-2	10/14/96	20	3	3.5	0	NO	0-0.5 ft, soft, black, sandy SILT, moist 0.5-1.2 ft, dark brown fine SAND, moist 1.2-1.7 ft, loose, black cinder and ASH, metal objects, hit water at 1.7 ft 1.7-2.1 ft, medium dense, light brown SAND, 2.1-3.5 ft, light green, very fine SILT
TR--3	10/14/96	20	3	3.5	0	NO	0-0.5 ft, soft, black fine grain SILT, moist 0.5-0.9 ft, loose, brown mottled, silt SAND 0.9-1.5 ft, black cinder and ASH, metal objects, tile fragment, moist 1.5-3.5 ft, brown, mottled fine SILT, moist
TR-4	10/14/96	20	3	3.5	0	NO	0-0.7 ft, soft, black fine sandy SILT, moist 0.7-1.4 ft, light brown mottled silty SAND metal objects, broken ceramics 1.4-2.6 ft, loose black cinder and ASH, metal debris, broken tiles 2.6-3.5 ft, light brown fine SILT, moist

using tape and placed in coolers with double-bagged ice and vermiculite. The coolers were shipped overnight to the designated off-site laboratory. A computer-generated chain of custody (COC) record was included in each shipment and the custody seal labels were placed on the coolers. The analytical parameters for soil samples included target compound list (TCL) VOCs, TCL SVOCs, target analyte list (TAL) metals, nitroaromatic compounds (excluding PH2 Ash Pit), cyanide, and PCBs. The soil samples collected from each area are summarized in Tables 2-2 through 2-5. Field quality assurance (QA)/QC samples were also collected to ensure the reliability of field sampling and decontamination procedures and materials. An evaluation of the results of the field QC samples is presented in Appendix C of this report.

During the drilling of soil bores, hazardous, toxic radiological waste boring logs were completed in the field by the IT geologist that documented all pertinent information including lithology description, depth of boring, date of boring, water table encountered, drilling equipment, and analytical parameters. A sketch showing the approximate location of the boring in relation to known site features was also presented in each log. Lithology description of the shallow soil was based on the Unified Soil Classification System. Soil boring logs are presented in Appendix D.

2.3.1 Reservoir No. 2 Burning Ground

This site is located in a large cleared area south of Reservoir No. 2 at the location of a former NASA ball field. The record review report (D&M, 1995) indicates that this area was likely used as a burning ground for TNT debris and other miscellaneous materials from 1950 to 1962. There has not been any environmental investigations of this site. During the present investigation, this area was found covered by young hardwood trees and brush with no sign of stressed vegetation or floating cinders. Soil samples were collected at this site following geophysical survey as summarized in Section 2.1. Boring locations are shown on Figure 2-2.

Surface Soil Sampling. A total of eight surface soil samples (Table 2- 2) were collected (one sample from each of the eight bores) for chemical analysis. Surface soil samples were collected with a stainless-steel hand auger from 0 to 6 inches bgs. The boring locations were selected based on geophysical survey results at or near the metallic anomalies.

Subsurface Soil Sampling. A total of 16 subsurface soil samples were collected (Table 2-2) from eight soil bores for chemical analysis. Specifically, two subsurface soil samples were collected from each borehole from 2 to 3 and 6 to 7 feet bgs using decontaminated stainless-steel

Table 2-2

Summary of Soil Samples Collected
Site Investigation at Reservoir No. 2 Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

Boring Identification	Sample Identification	Collection Date	Sampling[a] Interval (ft)	Laboratory Tracking Number
2BG-SO-01	PBOW-96-SO-2BG-SO01-1010-(0-0.5)	10/1/96	0 - 0.5	1010
	PBOW-96-SO-2BG-SO01-1020-(2-3.0)	10/1/96	2 - 3	1020
	PBOW-96-SO-2BG-SO01-1030-(6-7.0)	10/1/96	6 - 7	1030
2BG-SO-02	PBOW-96-SO-2BG-SO02-1040-(0-0.5)	10/1/96	0 - 0.5	1040
	PBOW-96-SO-2BG-SO02-1050-(2-3.0)	10/1/96	2 - 3	1050
	PBOW-96-SO-2BG-SO02-1060-(6-7.0)	10/1/96	6 - 7	1060
2BG-SO-03	PBOW-96-SO-2BG-SO03-1070-(0-0.5)	10/1/96	0 - 0.5	1070
	PBOW-96-SO-2BG-SO03-1080-(2-3.0)	10/2/96	2 - 3	1080
	PBOW-96-SO-2BG-SO03-1090-(6-7.0)	10/2/96	6 - 7	1090
2BG-SO-04	PBOW-96-SO-2BG-SO04-1100-(0-0.5)	10/1/96	0 - 0.5	1100
	PBOW-96-SO-2BG-SO04-1110-(2-3.0)	10/2/96	2 - 3	1110
	PBOW-96-SO-2BG-SO04-1120-(6-7.0)	10/2/96	6 - 7	1120
2BG-SO-05	PBOW-96-SO-2BG-SO05-1130-(0-0.5)	10/1/96	0 - 0.5	1130
	PBOW-96-SO-2BG-SO05-1140-(2-3.0)	10/2/96	2 - 3	1140
	PBOW-96-SO-2BG-SO05-1150-(6-7.0)	10/2/96	6 - 7	1150
2BG-SO-06	PBOW-96-SO-2BG-SO06-1160-(0-0.5)	10/1/96	0 - 0.5	1160
	PBOW-96-SO-2BG-SO06-1170-(2-3.0)	10/2/96	2 - 3	1170
	PBOW-96-SO-2BG-SO06-1180-(6-7.0)	10/2/96	6 - 7	1180
2BG-SO-07	PBOW-96-SO-2BG-SO07-1190-(0-0.5)	10/1/96	0 - 0.5	1190
	PBOW-96-SO-2BG-SO07-1200-(2-3.0)	10/2/96	2 - 3	1200
	PBOW-96-SO-2BG-SO07-1210-(6-7.0)	10/2/96	6 - 7	1210
2BG-SO-08	PBOW-96-SO-2BG-SO08-1220-(0-0.5)	10/1/96	0 - 0.5	1220
	PBOW-96-SO-2BG-SO08-1230-(2-3.0)	10/2/96	2 - 3	1230
	PBOW-96-SO-2BG-SO08-12400-(6-7.0)	10/2/96	6 - 7	1240

[a]Soil samples were collected with a drill rig and split spoons.

Table 2-3

Summary of Soil Samples Collected
Site Investigation at Additional Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

Boring Identification	Sample Identification	Collection Date	Sampling[a] Interval (ft)	Laboratory Tracking Number
ABG-SO-01	PBOW-96-SO-ABG-SO01-2010-(0-0.5)	10/3/96	0 - 0.5	2010
	PBOW-96-SO-ABG-SO01-2020-(1.5-2)	10/3/96	1.5 - 2	2020
ABG-SO-02	PBOW-96-SO-ABG-SO02-2030-(0-0.5)	10/3/96	0 - 0.5	2030
	PBOW-96-SO-ABG-SO02-2040-(2-3)	10/3/96	2 - 3	2040
ABG-SO-03	PBOW-96-SO-ABG-SO03-2050-(0-0.5)	10/3/96	0 - 0.5	2050
	PBOW-96-SO-ABG-SO03-2060-(2-3)	10/3/96	2 - 3	2060
ABG-SO-04	PBOW-96-SO-ABG-SO04-2070-(0-0.5)	10/3/96	0 - 0.5	2070
	PBOW-96-SO-ABG-SO04-2080-(2-3)	10/3/96	2 - 3	2080
ABG-SO-05	PBOW-96-SO-ABG-SO05-2090-(0-0.5)	10/3/96	0 - 0.5	2090
	PBOW-96-SO-ABG-SO05-2100-(2-3)	10/3/96	2 -3	2100
ABG-SO-06	PBOW-96-SO-ABG-SO06-2110-(0-0.5)	10/3/96	0 - 0.5	2110
	PBOW-96-SO-ABG-SO06-2120-(2-3)	10/3/96	2 - 3	2120
ABG-SO-07	PBOW-96-SO-ABG-SO07-2130-(0-0.5)	10/3/96	0 - 0.5	2130
	PBOW-96-SO-ABG-SO08-2140-(2-3)	10/3/96	2 - 3	2140
ABG-SO-08	PBOW-96-SO-ABG-SO08-2150-(0-0.5)	10/3/96	0 - 0.5	2150
	PBOW-96-SO-ABG-SO08-2160-(2-3)	10/3/96	2 - 3	2160
ABG-SO-09	PBOW-96-SO-ABG-SO09-2170-(0-0.5)	10/3/96	0 - 0.5	2170
	PBOW-96-SO-ABG-SO09-2180-(2-3)	10/3/96	2 - 3	2180
ABG-SO-10	PBOW-96-SO-ABG-SO09-2190-(0-0.5)	10/3/96	0 - 0.5	2190
	PBOW-96-SO-ABG-SO10-2200-(2-3)	10/3/96	2 - 3	2200
ABG-SO-11	PBOW-96-SO-ABG-SO10-2210-(0.5-1)	10/3/96	0.5 - 1	2210
	PBOW-96-SO-ABG-SO10-2220-(2-3)	10/3/96	2 - 3	2220
ABG-SO-12	PBOW-96-SO-ABG-SO11-2230-(0-0.5)	10/3/96	0 - 0.5	2230
	PBOW-96-SO-ABG-SO11-2240-(2-3)	10/3/96	2 - 3	2240

[a]Soils samples were collected with hand augers.

Table 2-4

Summary of Soil Samples Collected
Site Investigation at Wastewater Disposal Plant No. 2
Former Plum Brook Ordnance Works, Sandusky, Ohio

Boring Identification	Screening Sample Identification	Collection Date	Sampling [a] Interval (ft)	Laboratory Tracking Number	Confirmation Sample Identification	Sample Date	Sampling Interval (ft)	Laboratory Tracking Number
WP2-SO-01	PBOW-96-SS-WP2-SO01-3010-(0-0.5)	9/27/96	0 - 0.5	3010	PBOW-96-SO-WP2-SO01-3210-(0-0.5)	10/2/96	0 - 0.5	3210
	PBOW-96-SS-WP2-SO01-3020-(4-5)	9/27/96	4 - 5	3020				
WP2-SO-02	PBOW-96-SS-WP2-SO02-3030-(0-0.5)	9/27/96	0 - 0.5	3030				
	PBOW-96-SS-WP2-SO02-3040-(4-5)	9/27/96	4 - 5	3040	PBOW-96-SO-WP2-SO02-3220-(4-5)	10/2/96	4 - 5	3220
WP2-SO-03	PBOW-96-SS-WP2-SO03-3050-(0-0.5)	9/27/96	0 - 0.5	3050	PBOW-96-SO-WP2-SO03-3230-(0-0.5)	10/3/96	0 - 0.5	3230
	PBOW-96-SS-WP2-SO03-3060-(4-5)	9/27/96	4 - 5	3060				
WP2-SO-04	PBOW-96-SS-WP2-SO04-3070-(0-0.5)	9/27/96	0 - 0.5	3070				
	PBOW-96-SS-WP2-SO04-3080-(4-5)	9/27/96	4 - 5	3080	PBOW-96-SO-WP2-SO04-3240-(4-5)	10/2/96	4 - 5	3240
WP2-SO-05	PBOW-96-SS-WP2-SO05-3090-(0-0.4)	9/27/96	0 - 0.4	3090	PBOW-96-SO-WP2-SO05-3250-(0-0.5)	10/2/96	0 - 0.5	3250
	PBOW-96-SS-WP2-SO05-3100-(4-5)	9/27/96	4 - 5	3100				
WP2-SO-06	PBOW-96-SS-WP2-SO06-3110-(0-0.5)	9/27/96	0 - 0.5	3110				
	PBOW-96-SS-WP2-SO06-3120-(4-5)	9/27/96	4 - 5	3120	PBOW-96-SO-WP2-SO06-3260-(4-5)	10/2/96	4 - 5	3260
WP2-SO-07	PBOW-96-SS-WP2-SO07-3130-(0-0.5)	9/27/96	0 - 0.5	3130				
	PBOW-96-SS-WP2-SO07-3140-(4-5)	9/27/96	4 - 5	3140	PBOW-96-SO-WP2-SO07-3270-(4-5)	10/2/96	4 - 5	3270
WP2-SO-08	PBOW-96-SS-WP2-SO08-3150-(0-0.5)	9/27/96	0 - 0.5	3150	PBOW-96-SO-WP2-SO08-3280-(0-0.5)	10/2/96	0 - 0.5	3280
	PBOW-96-SS-WP2-SO08-3160-(4-5)	9/27/96	4 - 5	3160				
WP2-SO-09	PBOW-96-SS-WP2-SO09-3170-(0-0.5)	9/27/96	0 - 0.5	3170	PBOW-96-SO-WP2-SO09-3290-(0-0.5)	10/3/96	0 - 0.5	3290
	PBOW-96-SS-WP2-SO09-3180-(4-5)	9/27/96	4 - 5	3180				
WP2-SO-10	PBOW-96-SS-WP2-SO10-3190-(0-0.5)	9/27/96	0 - 0.5	3190				
	PBOW-96-SS-WP2-SO10-3200-(4-5)	9/27/96	4 - 5	3200	PBOW-96-SO-WP2-SO10-3300-(4-5)	10/2/96	4-5	3300

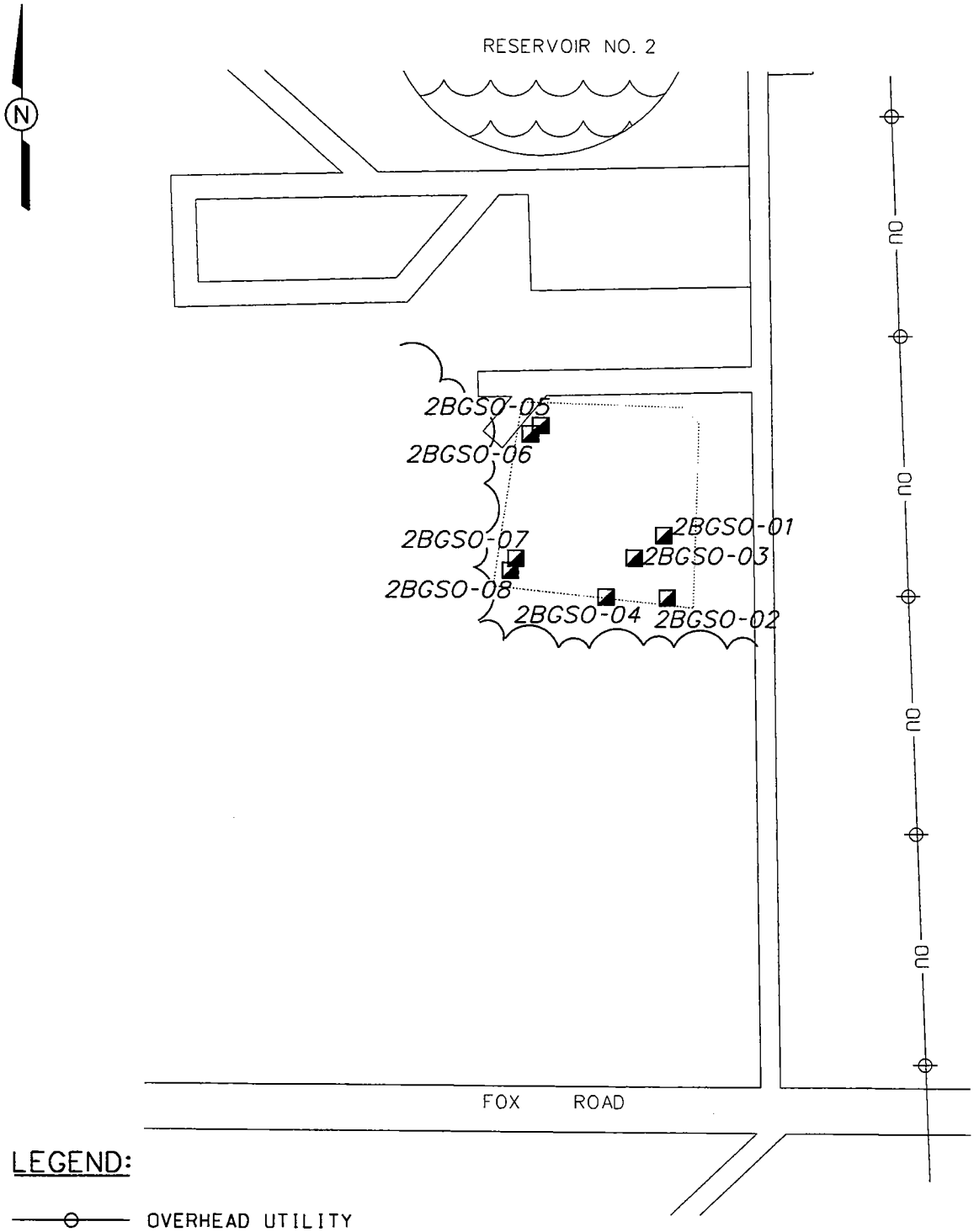
[a]Soil samples were collected with hand augers

Table 2-5

Summary of Soil Samples Collected
Site Investigation at Power House No. 2 Ash Pit
Former Plum Brook Ordnance Works, Sandusky, Ohio

Boring Identification	Sample Identification	Collection Date	Sampling[a] Interval (ft)	Laboratory Tracking Number
PH2-SO-01	PBOW-96-SO-PH2-SO01-4010-(0-0.5)	9/28/96	0 - 0.5	4010
	PBOW-96-SO-PH2-SO01-4020-(2-3)	9/28/96	2 - 3	4020
PH2-SO-02	PBOW-96-SO-PH2-SO01-4030-(0-0.5)	9/28/96	0 - 0.5	4030
	PBOW-96-SO-PH2-SO01-4040-(2-3)	9/28/96	2 - 3	4040
PH2-SO-03	PBOW-96-SO-PH2-SO01-4050-(0-0.5)	9/28/96	0 - 0.5	4050
	PBOW-96-SO-PH2-SO01-4060-(2-3)	9/28/96	2 - 3	4060
PH2-SO-04	PBOW-96-SO-PH2-SO01-4070-(0-0.5)	9/28/96	0 - 0.5	4070
	PBOW-96-SO-PH2-SO01-4080-(2-3)	9/28/96	2 - 3	4080
PH2-SO-05	PBOW-96-SO-PH2-SO01-4090-(0-0.5)	9/28/96	0 - 0.5	4090
	PBOW-96-SO-PH2-SO01-4100-(2-3)	9/28/96	2 - 3	4100
PH2-SO-06	PBOW-96-SO-PH2-SO01-4110-(0-0.5)	9/28/96	0 - 0.5	4110
	PBOW-96-SO-PH2-SO01-4120-(2-3)	9/28/96	2 - 3	4120
PH2-SO-07	PBOW-96-SO-PH2-SO01-4130-(0-0.5)	9/28/96	0 - 0.5	4130
	PBOW-96-SO-PH2-SO01-4140-(2-3)	9/28/96	2 - 3	4140
PH2-SO-08	PBOW-96-SO-PH2-SO01-4150-(0-0.5)	9/28/96	0 - 0.5	4150
	PBOW-96-SO-PH2-SO01-4160-(2-3)	9/28/96	2 - 3	4160
PH2-SO-09	PBOW-96-SO-PH2-SO01-4170-(0-0.5)	9/29/96	0 - 0.5	4170
	PBOW-96-SO-PH2-SO01-4180-(2-3)	9/29/96	2 - 3	4180
PH2-SO-10	PBOW-96-SO-PH2-SO01-4190-(0-0.5)	9/29/96	0 - 0.5	4190
	PBOW-96-SO-PH2-SO01-4200-(2-3)	9/29/96	2 - 3	4200
PH2-SO-11	PBOW-96-SO-PH2-SO01-4210-(0-0.5)	9/29/96	0 - 0.5	4210
	PBOW-96-SO-PH2-SO01-4220-(2-3)	9/29/96	2 - 3	4220
PH2-SO-12	PBOW-96-SO-PH2-SO01-4230-(0-0.5)	9/29/96	0 - 0.5	4230
	PBOW-96-SO-PH2-SO01-4240-(2-3)	9/29/96	2 - 3	4240

[a]Soil samples were collected with hand augers



LEGEND:

OVERHEAD UTILITY

SURFACE POND

PRIMARY GEOPHYSICAL SURVEY GRID

SOIL BORING (2BGSO-01)

TREE LINE

SCALE

0 200 400 FEET

FIGURE 2-2
SOIL BORING LOCATIONS
SITE INVESTIGATION
RESERVOIR NO. 2 BURNING GROUND

FORMER PLUM BROOK ORDNANCE WORKS
SANDUSKY, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

STARTING DATE: 03/10/97	DATE LAST REV.:	DRAFT. CHCK. BY: R. KNIGHT	INITIATOR: G. YU	DWG. NO.:\766952ES.046
DRAWN BY: R. KNIGHT	DRAWN BY:	ENGR. CHCK. BY: G. YU	PROJ. MGR.:D. BURTON	PROJ. NO.:766952

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split spoons driven by a truck-mounted drill rig. Bedrock was not encountered in any of the boring locations during drilling.

2.3.2 Additional Burning Ground

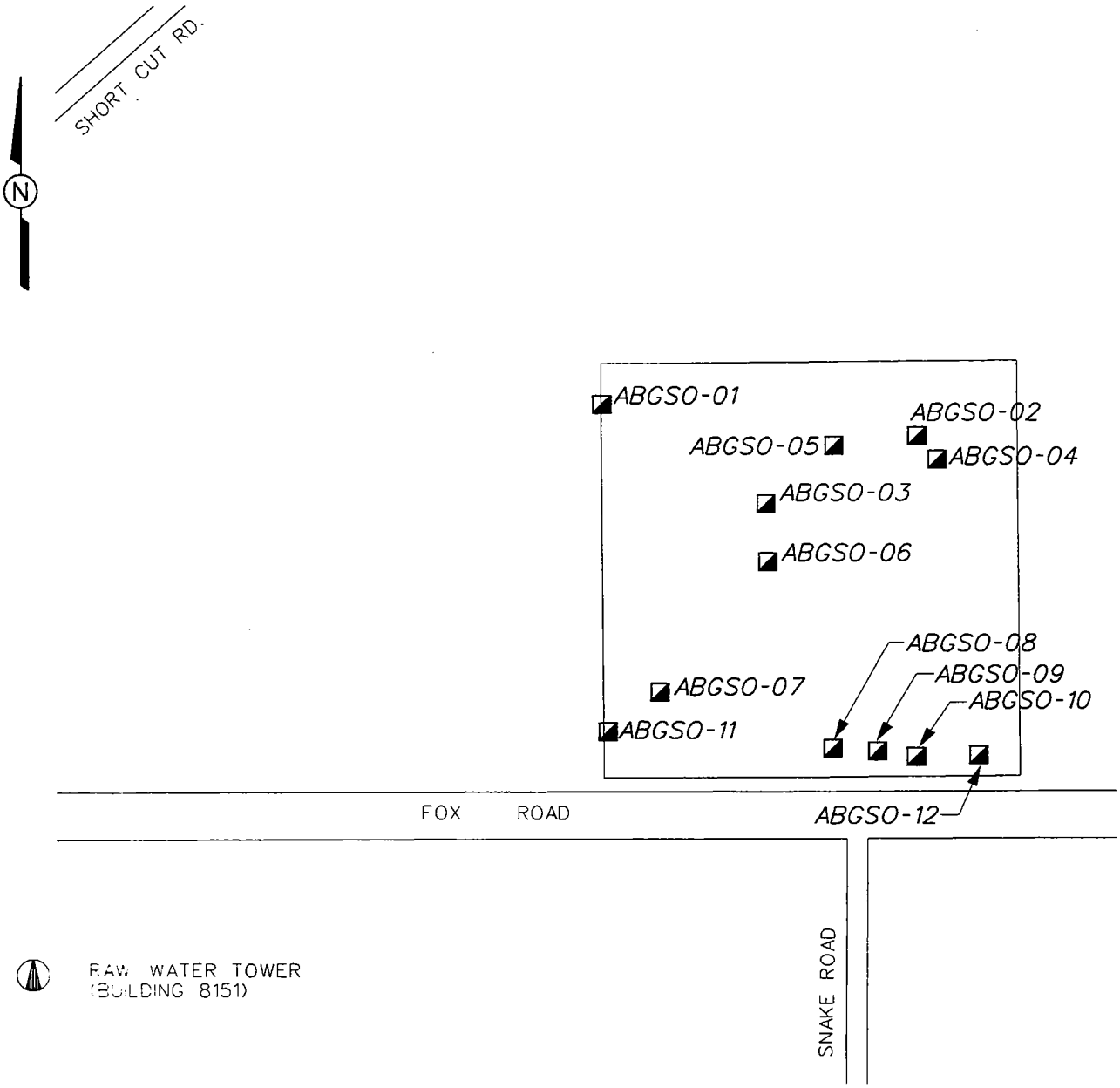
The additional suspected burning ground is located north of the intersection of Fox Road and Snake Road in an open flat area as observed during this investigation. Several patches of black cinders were found on the ground surface within the area investigated. Prior to the present investigation, there had been no environmental sampling at this area. Soil samples were collected from 12 boring locations at this site as shown on Figure 2-3, following the geophysical survey as summarized in Section 2.1. Four concrete pads, which appear to be the base for fuel pumps (Figure A-6, Appendix A), were found in the southwest portion of the site, while a large concrete slab was found just outside of the western boundary of the study area. However, the geophysical survey did not show any evidence of underground storage tanks. These site features are indicative of the multiple uses of the site in the past, in addition to the reported use as a burning ground.

Surface Soil Sampling. A total of 12 surface soil samples were collected (Table 2-3), with one sample from each of the 12 boreholes for chemical analysis. Surface soil samples were collected with a stainless-steel hand auger from 0 to 6 inches bgs. Since no previous soil sampling was conducted in this area, the boring locations were selected based on geophysical survey results at the metallic anomalies or at areas where apparent burning residual (cinders) was observed.

Subsurface Soil Sampling A total of 12 subsurface soil samples were collected (Table 2-3) from 12 soil boreholes for chemical analysis. Specifically, subsurface soil samples were collected with a stainless-steel hand auger from 2 to 3 feet bgs.

2.3.3 Wastewater Disposal Plant No. 2

According to historical drawings, this site is located due west of the PH2 Ash Pit on the opposite side of Pipe Creek. This site was used for the disposal of red water created during the production of TNT. The red water was thickened by evaporation, and the thickened liquor was later incinerated (USACE, 1995). During the present investigation, the WP2 site was found to be a rugged open field with increasing density of young trees and brush toward Pipe Creek. Considerable amounts of demolition debris (steel and concrete) and some smashed drums were observed scattered from the center of the investigative site to the west bank of Pipe Creek. A warning sign indicating possible asbestos contamination was placed at the entrance to the site. The site was



LEGEND:

- RAILROAD
- GEOPHYSICAL SURVEY GRID
- WATER TOWER
- SOIL BORING (ABGSO-01)

SCALE

0 200 400 FEET

FIGURE 2-3
SOIL BORING LOCATIONS
SITE INVESTIGATION, ADDITIONAL BURNING GROUND

FORMER PLUM BROOK ORDNANCE WORKS
SANDUSKY, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

STARTING DATE: 03/10/97	DATE LAST REV.:	DRAFT. CHCK. BY: R. KNIGHT	INITIATOR: G. YU	DWG. NO.:\766952ES.027
DRAWN BY: R. KNIGHT	DRAWN BY:	ENGR. CHCK. BY: G. YU	PROJ. MGR.:D. BURTON	PROJ. NO.:766952

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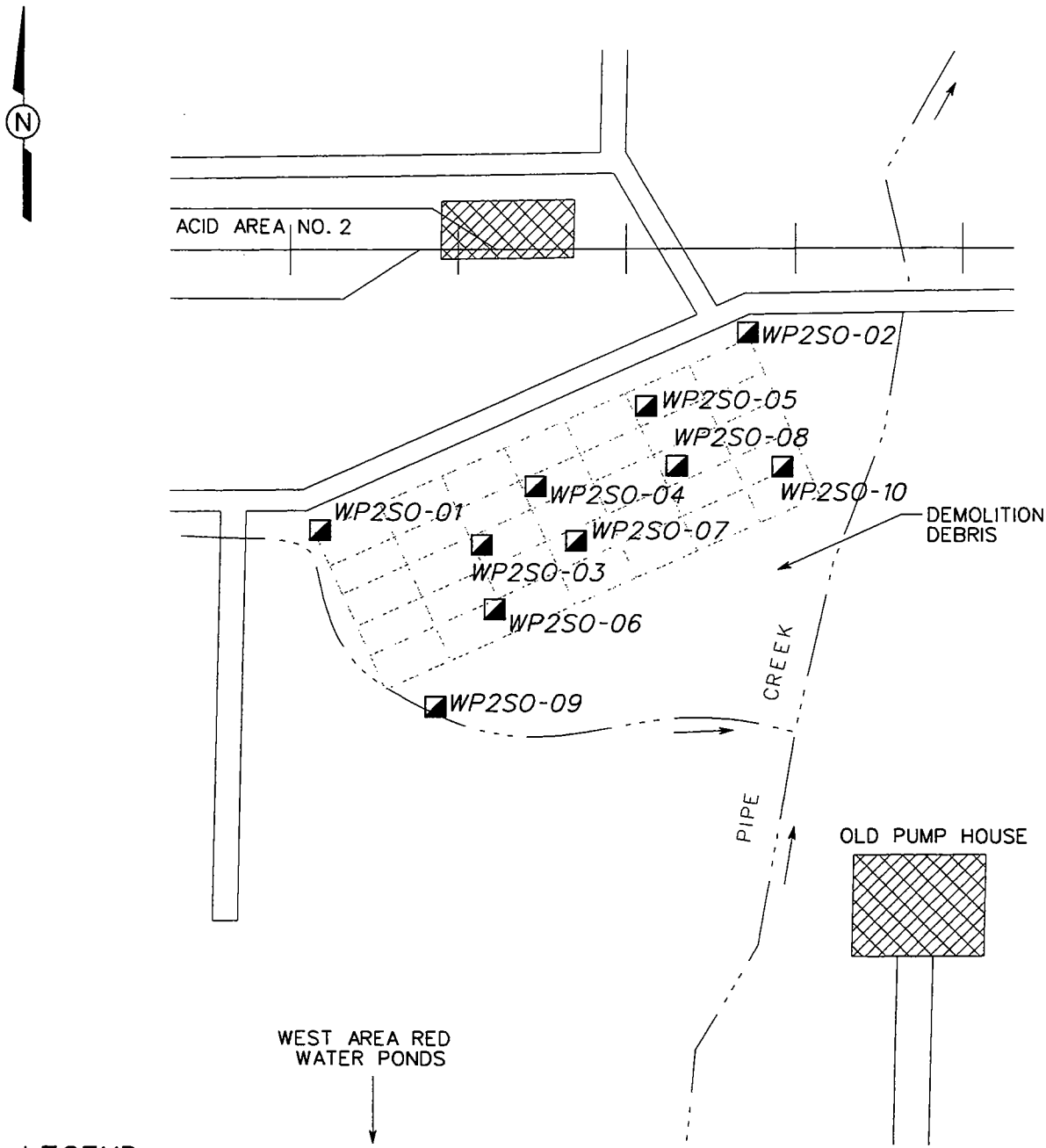
also believed to be the "Waste Disposal Area 2A" as identified in the preliminary assessment conducted by Science Applications International Corporation in 1991 (MK, 1994). During the 1993 MK site inspection, three soil boreholes were placed in this area, with two (SS03 and 04) in locations with stained soil and one (SS05) in the small gully next to Pipe Creek. The analytical results indicated the presence of pesticides, several SVOCs, and metals. Nitroaromatic compounds were also analyzed, but were reported as nondetects. A total of 20 screening soil and 10 confirmation soil samples were collected from 10 boring locations as shown in Figure 2-4.

Screening Soil Sampling. A total of 20 field screening soil samples (Table 2-4) were collected, from ten boring locations selected based on a systematic sampling grid. The purpose of collecting screening samples was to acquire background information on explosive residues in soil and to locate possible hot spots for placing subsequent boreholes. At each screening sample location, one sample was collected from the depth interval of approximately 0 to 0.5 foot and the other from 4 to 5 feet. Screening samples were collected and handled in the same manner as the primary samples and were qualitatively screened for nitroaromatics (coloration) by Quanterra Environmental Services for 24-hour turnaround. Screening samples were collected and shipped on Friday, September 27, 1996 and the screening results were received on Monday, September 30, 1996. The screening results did not show the presence of nitroaromatic compounds in any of the soil samples.

Confirmation Soil Sampling. A total of ten confirmation soil samples (Table 2-4) were collected with one sample from each of the ten boreholes for chemical analyses, including TCL VOCs, TCL SVOCs, TAL metals, nitroaromatic compounds, cyanide, and pesticides/PCBs. Since screening results indicated no hot spots, the confirmation soil samples were collected, using a stainless-steel hand auger, from near the ten boring locations previously used for the collection of screening samples. The sampling depth was randomly determined for the confirmation samples, at either 0 to 6 inches or 4 to 5 feet bgs.

2.3.4 Power House No. 2 Ash Pit

The site is located west of Campbell Street in an area that appears to be an old surface impoundment. Historical drawings indicate that the surface impoundment was rectangular in shape, measuring approximately 400 feet long by 200 feet wide, and was surrounded by a earthen embankment (USACE, 1995). Ash from coal fired boilers was reportedly dumped into the ash pit through a pipeline. During this investigation, the bermed area was observed and black to dark



LEGEND:

BUILDINGS

RAILROAD

DITCH

SOIL BORING (WP2SO-01) (INCLUDING SOIL SCREENING SAMPLES)

SCALE

0 200 400 FEET

FIGURE 2-4
SOIL BORING LOCATIONS
SITE INVESTIGATION, WASTE WATER DISPOSAL PLANT NO.2

FORMER PLUM BROOK ORDNANCE WORKS
SANDUSKY, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

DWG. NO.:766952ES.024
PROJ. NO.:766952
INITIATOR: G. YU
PROJ. MGR.:D. BURTON
DRAFT. CHCK. BY: R. KNIGHT
ENGR. CHCK. BY: G. YU
DATE LAST REV.:
DRAWN BY:
STARTING DATE: 03/10/97
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brown cinders were found within the bermed area at depths up to 4 feet. Environmental sampling has not been conducted prior to the present investigation.

Surface Soil Sampling. A total of 12 surface soil samples were collected (Table 2-5), with one sample from each of the 12 boreholes for chemical analysis. Surface soil samples were collected with a stainless-steel hand auger from 0 to 6 inches into native soil. The boring locations were selected based on a grid system and are shown in Figure 2-5.

Subsurface Soil Sampling. The same number of subsurface soil samples were collected from the 12 soil boreholes (Table 2-5) for chemical analysis. Specifically, subsurface soil samples were collected with a stainless-steel hand auger from 2 to 3 feet into native soil (approximately 3 to 4 feet bgs). The sampling area was an old ash pit receiving discharge from the nearby powerhouse. The layer of ash in the pit (black or dark brown) is generally 1 to 2 feet in thickness. However, the ash layer is greater than 4 feet near the tail end of the 6-inch steel drain pipe in the center of the pit. The steel drain pipe appears to be in good shape and is 144 feet long as measured off Campbell Street to the tail end (8 feet per section by 18 sections). Bedrock was not encountered in any of the boring locations.

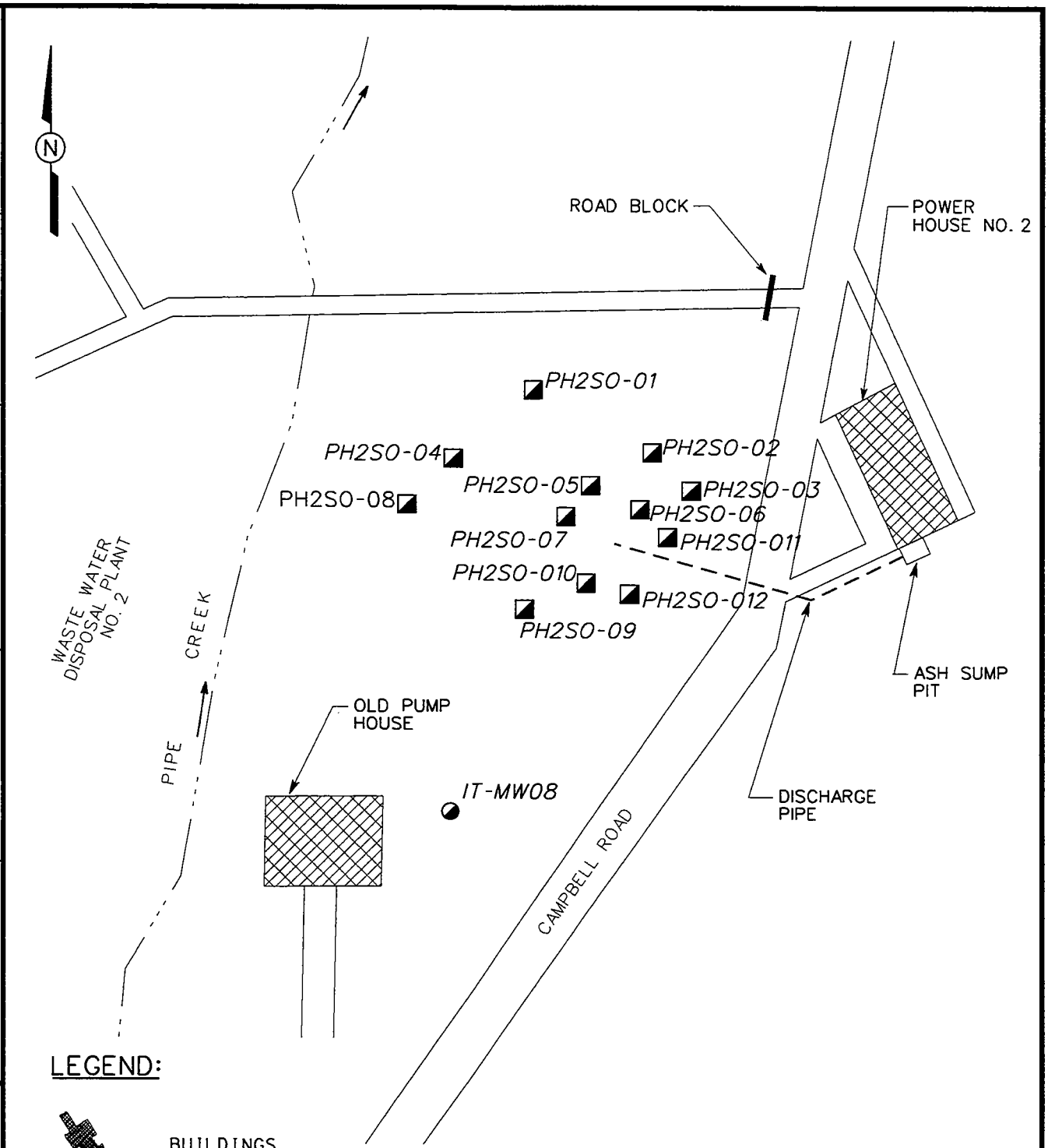
Soil samples collected from PH2 Ash Pit were analyzed for the same parameters as at other sites, except that nitroaromatic compounds were excluded.

2.4 Investigation-Derived Wastes

IDW generated during the SIs at PBOW include decontamination water and disposable personnel protective equipment. These IDW were double-bagged and disposed of in the on-site dumpster in accordance with the procedures described in Chapter 7.0 of the SAP (IT, 1996b). Approximately 25 gallons of decontamination water collected in a 55-gallon drum was transported to, and disposed of in, the designated outside disposal area located at the Pentolite Road Red Water Pond, south of Pentolite Road (Figure 1-2). This disposal area was selected and used previously for disposition of soil cuttings and decontamination water generated during D&M 1994 field activities. No soil cuttings were generated during boring and sampling.

2.5 Land Surveying

The land survey at the investigation sites was conducted in late October 1996 by a registered professional land surveyor and included trench locations, geophysical survey boundaries, and soil boring locations. Horizontal coordinates were surveyed to the nearest 1.0 foot and referenced to



LEGEND:

BUILDINGS

DITCH

01 SOIL BORING (PH2SO-01)

MONITORING WELL (OVERBURDEN)

SCALE

0 200 400 FEET

FIGURE 2-5
SOIL BORING LOCATIONS
SITE INVESTIGATION
POWER HOUSE NO. 2 ASH PIT

FORMER PLUM BROOK ORDNANCE WORKS
SANDUSKY, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

STARTING DATE: 03/10/97 | DATE LAST REV.: | DRAFT. CHCK. BY: R. KNIGHT | INITIATOR: G. YU | DWG. NO.:\766952ES.026
DRAWN BY: R. KNIGHT | DRAWN BY: | ENGR. CHCK. BY: G. YU | PROJ. MGR.:D. BURTON | PROJ. NO.:766952

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both the Ohio State Plane Coordinate System and the NASA PBS coordinate system. Vertical coordinates (surface elevation) were surveyed to the nearest 0.01 foot and referenced to the 1929 National Geodetic Vertical Datum. Land survey data referenced to NASA PBS coordinate system were utilized in generating site maps and figures included in this report. The complete survey data based on two survey coordinate systems are presented in Appendix E.

2.6 Decontamination Procedures

Decontamination of sampling equipment was performed in accordance with the procedures prescribed in Section 4.4.3 of the SAP (IT, 1996b). Specifically, sampling equipment including hand augers, spoons, and pans were decontaminated according to the following procedures:

- Rinse with potable water obtained from the PBS fire station.
- Wash and scrub using a brush with nonphosphatic detergent.
- Rinse with potable water
- Rinse with deionized water (American Society for Testing and Materials [ASTM] Type II).
- Rinse with methanol followed by a hexane rinse.
- Final rinse with deionized water (ASTM Type II). The rinse volume was at least five times of the volume of methanol used.
- Air dry.
- Wrap in aluminum foil for transport to sampling locations.

2.7 Variances/Nonconformances

For the purpose of this investigation, variances are defined as necessary changes to the standard operating procedures employed in the field or office activities and modification of original scope of work as specified by the SAP (IT, 1996b) and the quality assurance project plan (QAPP) (IT, 1996c). Variances do not significantly affect the quality of the data or process being changed. However, nonconformances are defined as malfunctions, deficiencies, or deviations that may render the quality of information or data unacceptable or indeterminate.

Nonconformances did not occur during the SIs.

Two variance logs were recorded during the recent investigation. The first variance concerned the collection of disturbed soil samples for VOC analysis. The original SAP called for the collection of undisturbed soil samples using a core soil sampler fitted with a removable retaining cylinder. However, due to the large amount of limestone/shale fragments in the shallow soil zone, undisturbed soil samples could not be collected. Instead, the conventional hand auger was used at ABG, PH2 Ash Pit, and WP2 to collect disturbed soil samples for VOC analysis. At 2BG, disturbed soil samples were collected using split spoons.

The second variance log recorded during the SIs concerned adding four trenches at 2BG. Trenching was not originally included in the SAP (IT, 1996b). However, geophysical survey results indicated several areas of apparent metallic anomalies in the southeast portion of the site, and it was possible that some metal debris were buried there. After consultation with the USACE-Nashville District, four exploratory trenches were placed in areas exhibiting the anomaly in an attempt to identify the buried objects and to ensure the safety of site workers performing intrusive sampling.

3.0 Analytical Program

All samples for chemical analysis were analyzed by Quanterra Environmental Services in Knoxville, Tennessee. A data quality evaluation (DQE) report was prepared by the IT project chemist and is provided in Appendix C. Data validation was performed by an independent third party contractor and is presented in Appendix F. The laboratory analytical data are summarized in Appendix G.

3.1 Analytical Parameters and Methodologies

Chemical analyses for the SIs were performed in accordance with guidelines in the EPA document entitled *Test Methods for Evaluating Solid Waste, Physical and Chemical Methods (SW-846)* (EPA, 1986). Methods used for analysis by the laboratory are shown in Table 3-1. All analytical data were reported in EPA Level IV Contract Laboratory Program (CLP)-like data packages and were in compliance with the EPA definitive data requirements. The regulatory compound/analyte list reported was the TCL for organics and the TAL for inorganics as defined by the most recent CLP SOW. These data packages have been reviewed for completeness, accuracy, and representativeness as prescribed in the QAPP (IT, 1996c). All analytical data presented in this report were validated and blank corrected. All samples were submitted to the laboratory accompanied by an analysis request (AR)/COC form. The AR portion of the form provides project specific analytical specifications and quality control instruction to the laboratories. A formal COC record was included as part of the document, ensuring documentation of custody for sample transportation, storage, and eventual disposition by the laboratory. Copies of all custody documentation are included in the data packages submitted. An assessment of the analytical data with regard to the project-specific objectives is presented in Appendix C (the DQE report). In the DQE, all elements of data evaluation were compiled and used to determine the usability and overall applicability of the resulting data. Evaluation of the data using the specific data quality objectives established for the project resulted in the determination that the data set is valid and of sufficient quality to meet the objectives of the investigation. There were no significant problems observed that would adversely affect the application of the data or the success of the overall investigation.

3.2 Blank Correction

As part of the overall data validation process, the analytical data generated by the SIs were evaluated using results of associated field blanks, trip blanks, equipment rinsates, and laboratory method blanks. The method blank results reported with the analytical data were evaluated for

Table 3-1

Summary of Analytical Methods for Soil Samples
Site Investigations
Former Plum Brook Ordnance Works, Sandusky, Ohio

Analytical Parameters	Soil Analytical Method
TCL[a] Volatile Organic Compounds	EPA SW-846[b]
TCL Semivolatile Organic Compounds	EPA SW-846 3540/8270B
TAL[c] Metals	EPA SW-846 3050A/6010A 7060A/7471A/7740
Pesticides/Polychlorinated biphenyls	EPA SW-846 8081
Total Cyanide	EPA SW-846 9010A
Nitroaromatic Compounds	EPA SW-846 8330

[a]TCL - Target compound list.

[b]SW-846 - EPA *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd Edition*, September 1986 and subsequent revisions (Revision 1, December 1990, Update I, July 1992, and Update II, September 1994)

[c]TAL - Target analyte list. Metals include Ag, Al, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, Tl, V, Zn, As, Hg, and Se.

high readings characteristic of background or process contamination. There were no significant concentrations detected in the designated blank samples that indicate any analytical process out of control or that require further corrective action. The analytical data presented in this report were blank corrected as a part of the data validation process.

3.3 Screening Criteria

Validated soil analytical data were evaluated using the RBCs derived from the EPA Region III table (EPA, 1996). RBCs are media-specific contaminant levels used to eliminate selected contaminants from further consideration. The RBCs are calculated using toxicity data and standard risk-assessment exposure scenarios to produce concentrations at fixed levels of risk. The RBCs correspond to either a hazard quotient of 0.1 or a lifetime cancer risk of 10^{-6}, whichever occurs at a lower concentration. The cancer risk of 10^{-6} reflects the lower end of the target risk range as defined in the National Contingency Plan (EPA, 1990). Chemicals present in environmental media at concentrations below the RBCs will not contribute significantly to total site risk. RBCs are provided in the Region III tables for water, air, fish tissue, and soil. The soils are further divided into industrial and residential soils. Although public access to the PBOW is currently restricted and use of the site will likely remain nonresidential in nature, the residential soil RBCs were used to screen site soils. This approach was selected so as to provide a conservative basis for the use of the data as well as for the decision-making process regarding site risk should future land use be changed.

4.0 Analytical Results

Forty-two discrete soil samples were collected from various sites and submitted for laboratory analysis. The soil samples were analyzed for VOCs, SVOCs, metals, pesticides/PCBs, and total cyanide. Nitroaromatic compounds were also analyzed for in all soil samples, excluding those collected from PH2 Ash Pit. Analytical results from the recent SIs at the four segregated areas are summarized in the following sections. The DQE summary, data validation summary, and laboratory sample summary data packages are provided in Appendices C, F, and G, respectively.

4.1 Reservoir No. 2 Burning Ground

A total of 24 soil samples were collected within the 2BG area, with 3 discrete samples from each of the 8 boring locations. The soil samples were obtained from depths of 0 to 0.5 foot (surface soil), 2 to 3 feet, and 6 to 7 feet, respectively. Bedrock was not encountered in this area during the advancement of the soil borings. The following paragraphs discuss the detected constituents in site soils, while Figure 4-1 presents those constituents detected exceeding RBCs.

4.1.1 Volatile Organic Compounds

Surface Soil. VOCs were not detected in any surface soil samples collected, as shown in Table 4-1.

Subsurface Soil. Four VOCs were detected in subsurface soils at various depths in selected locations at the 2BG area (Table 4-1), including 2-butanone, acetone, toluene, and total xylenes. However, none of the detected VOCs exceeded in the respective RBCs.

4.1.2 Semivolatile Organic Compounds

Surface Soil. Fourteen SVOCs were detected in surface soil samples at selected locations (Table 4-1). Of these, the most frequently detected were 2,4-DNT and 2,6-DNT. Two borings (2BGSO-07 and 2BGSO-08) contained the largest set of SVOCs in surficial soils. Three of the detected SVOCs exceeded the RBC. Benzo(a)pyrene exceeded the RBC of 88 micrograms per kilogram (µg/kg) in the surficial samples collected from 2BGSO-07 and 2BGSO-08, but was not detected in any of the remaining surface samples; 2,4-DNT exceeded the RBC of 940 µg/kg in 2BGSO-01, -02, -03, -07, and -08, with the highest detected concentration of 13,000 µg/kg in

DWG. NO.: \7ou552es.031 | PROJ. NO.: 766952
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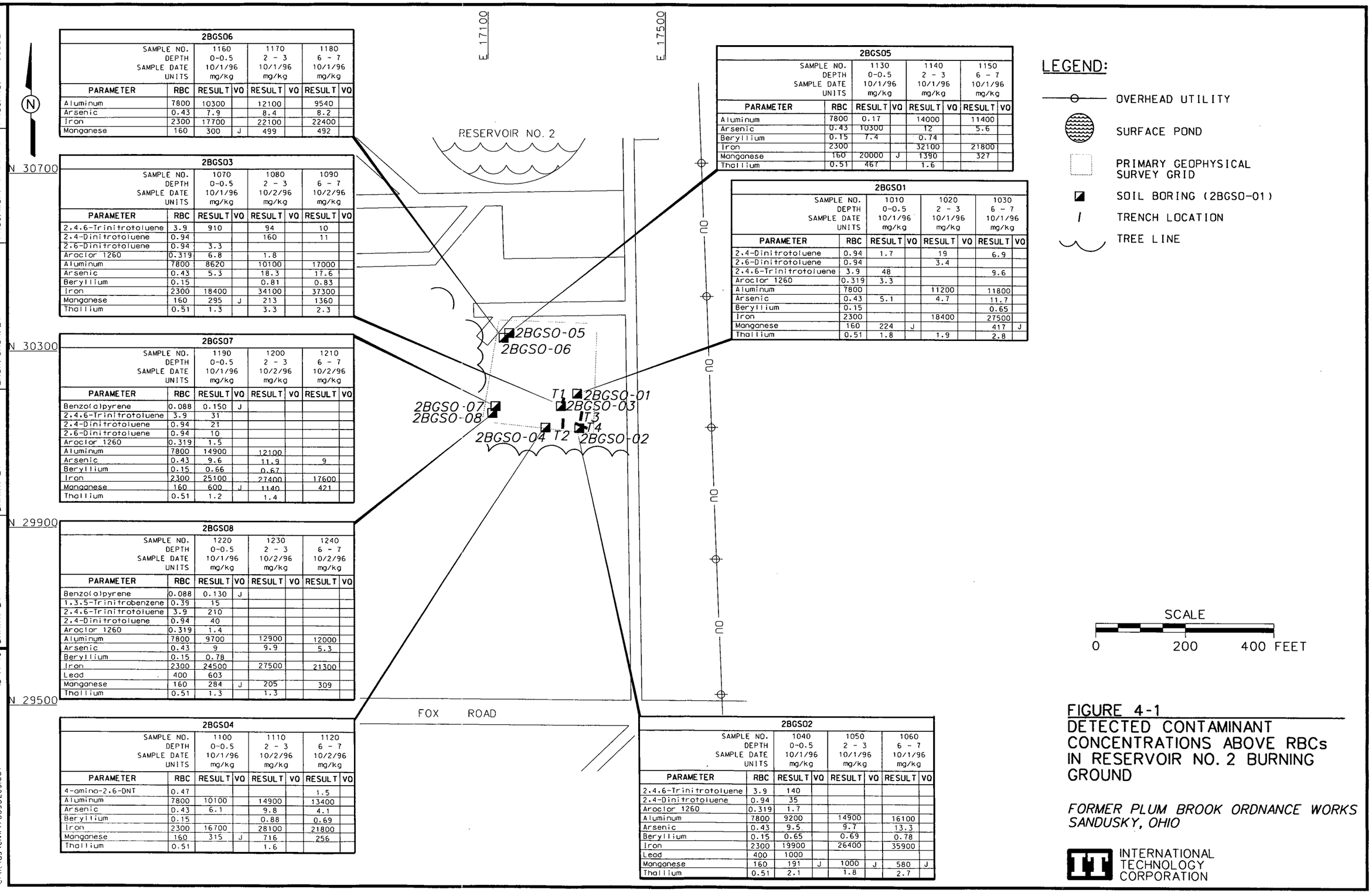


2BGSO6

SAMPLE NO.		1160		1170		1180	
DEPTH		0-0.5		2 - 3		6 - 7	
SAMPLE DATE		10/1/96		10/1/96		10/1/96	
UNITS		mg/kg		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ	RESULT	VQ
Aluminum	7800	10300		12100		9540	
Arsenic	0.43	7.9		8.4		8.2	
Iron	2300	17700		22100		22400	
Manganese	160	300	J	499		492	

2BGSO3

SAMPLE NO.		1070		1080		1090	
DEPTH		0-0.5		2 - 3		6 - 7	
SAMPLE DATE		10/1/96		10/2/96		10/2/96	
UNITS		mg/kg		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ	RESULT	VQ
2.4.6-Trinitrotoluene	3.9	910		94		10	
2.4-Dinitrotoluene	0.94			160		11	
2.6-Dinitrotoluene	0.94	3.3					
Aroclor 1260	0.319	6.8		1.8			
Aluminum	7800	8620		10100		17000	
Arsenic	0.43	5.3		18.3		17.6	
Beryllium	0.15			0.81		0.83	
Iron	2300	18400		34100		37300	
Manganese	160	295	J	213		1360	
Thallium	0.51	1.3		3.3		2.3	

2BGSO7

SAMPLE NO.		1190		1200		1210	
DEPTH		0-0.5		2 - 3		6 - 7	
SAMPLE DATE		10/1/96		10/2/96		10/2/96	
UNITS		mg/kg		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ	RESULT	VQ
Benzo(a)pyrene	0.088	0.150	J				
2.4.6-Trinitrotoluene	3.9	31					
2.4-Dinitrotoluene	0.94	21					
2.6-Dinitrotoluene	0.94	10					
Aroclor 1260	0.319	1.5					
Aluminum	7800	14900		12100			
Arsenic	0.43	9.6		11.9		9	
Beryllium	0.15	0.66		0.67			
Iron	2300	25100		27400		17600	
Manganese	160	600	J	1140		421	
Thallium	0.51	1.2		1.4			

2BGSO8

SAMPLE NO.		1220		1230		1240	
DEPTH		0-0.5		2 - 3		6 - 7	
SAMPLE DATE		10/1/96		10/2/96		10/2/96	
UNITS		mg/kg		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ	RESULT	VQ
Benzo(a)pyrene	0.088	0.130	J				
1.3.5-Trinitrobenzene	0.39	15					
2.4.6-Trinitrotoluene	3.9	210					
2.4-Dinitrotoluene	0.94	40					
Aroclor 1260	0.319	1.4					
Aluminum	7800	9700		12900		12000	
Arsenic	0.43	9		9.9		5.3	
Beryllium	0.15	0.78					
Iron	2300	24500		27500		21300	
Lead	400	603					
Manganese	160	284	J	205		309	
Thallium	0.51	1.3		1.3			

2BGSO4

SAMPLE NO.		1100		1110		1120	
DEPTH		0-0.5		2 - 3		6 - 7	
SAMPLE DATE		10/1/96		10/2/96		10/2/96	
UNITS		mg/kg		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ	RESULT	VQ
4-amino-2.6-DNT	0.47					1.5	
Aluminum	7800	10100		14900		13400	
Arsenic	0.43	6.1		9.8		4.1	
Beryllium	0.15			0.88		0.69	
Iron	2300	16700		28100		21800	
Manganese	160	315	J	716		256	
Thallium	0.51			1.6			

2BGSO5

SAMPLE NO.		1130		1140		1150	
DEPTH		0-0.5		2 - 3		6 - 7	
SAMPLE DATE		10/1/96		10/1/96		10/1/96	
UNITS		mg/kg		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ	RESULT	VQ
Aluminum	7800	0.17		14000		11400	
Arsenic	0.43	10300		12		5.6	
Beryllium	0.15	7.4		0.74			
Iron	2300			32100		21800	
Manganese	160	20000	J	1390		327	
Thallium	0.51	467		1.6			

2BGSO1

SAMPLE NO.		1010		1020		1030	
DEPTH		0-0.5		2 - 3		6 - 7	
SAMPLE DATE		10/1/96		10/1/96		10/1/96	
UNITS		mg/kg		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ	RESULT	VQ
2.4-Dinitrotoluene	0.94	1.7		19		6.9	
2.6-Dinitrotoluene	0.94			3.4			
2.4.6-Trinitrotoluene	3.9	48				9.6	
Aroclor 1260	0.319	3.3					
Aluminum	7800			11200		11800	
Arsenic	0.43	5.1		4.7		11.7	
Beryllium	0.15					0.65	
Iron	2300			18400		27500	
Manganese	160	224	J			417	J
Thallium	0.51	1.8		1.9		2.8	

2BGSO2

SAMPLE NO.		1040		1050		1060	
DEPTH		0-0.5		2 - 3		6 - 7	
SAMPLE DATE		10/1/96		10/1/96		10/1/96	
UNITS		mg/kg		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ	RESULT	VQ
2.4.6-Trinitrotoluene	3.9	140					
2.4-Dinitrotoluene	0.94	35					
Aroclor 1260	0.319	1.7					
Aluminum	7800	9200		14900		16100	
Arsenic	0.43	9.5		9.7		13.3	
Beryllium	0.15	0.65		0.69		0.78	
Iron	2300	19900		26400		35900	
Lead	400	1000					
Manganese	160	191	J	1000	J	580	J
Thallium	0.51	2.1		1.8		2.7	

FIGURE 4-1
DETECTED CONTAMINANT CONCENTRATIONS ABOVE RBCs IN RESERVOIR NO. 2 BURNING GROUND

FORMER PLUM BROOK ORDNANCE WORKS
SANDUSKY, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

Table 4-1

Summary of Organic and Cyanide Analytical Results in Surface and Subsurface Soils
Site Investigation at Reservoir No. 2 Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

	Sample Location:	2BGSO-01			2BGSO-02			2BGSO-03			2BGSO-04		
	Sample Number:	1010	1020	1030	1040	1050	1060	1070	1080	1090	1100	1110	1120
	Sample Depth (feet):	0-0.5	2 - 3	6 - 7	0-0.5	2 - 3	6 - 7	0-0.5	2 - 3	6 - 7	0-0.5	2 - 3	6 - 7
	Sample Date:	10/1/96	10/1/96	10/1/96	10/1/96	10/1/96	10/1/96	10/1/96	10/2/96	10/2/96	10/1/96	10/2/96	10/2/96
Parameter	**RBC[a]**												
Volatile Organic Compounds (µg/kg)													
2-Butanone	4.70E+06		54 J[b]										
Acetone	7.80E+05		300 J			200 J			90			18 J	290
Toluene	1.60E+06								3.2				20 J
Xylene (total)	1.60E+07												11 J
Semivolatile Organic Compounds (µg/kg)													
Anthracene	2.30E+06							55 J					
Benzo(a)anthracene	880												
Benzo(a)pyrene	88												
Benzo(b)fluoranthene	880												
Benzo(g,h,i)perylene	2.30E+05[c]												
Benzo(k)fluoranthene	8.80E+03												
bis(2-Ethylhexyl)phthalate	4.60E+04						60 J				61 J		
Chrysene	8.80E+04							64 J					
2,4-Dinitrotoluene	940[d]	1,700	19,000	2,900	1,000			6,100	6,400	120 J	64 J		
2,6-Dinitrotoluene	940[d]	810	3,400	500	290 J			3,300	680				
Fluoranthene	3.10E+05	56 J						91 J					
Indeno(1,2,3-cd)pyrene	880												
Phenanthrene	2.30E+06[e]												
Pyrene	2.30E+05	44 J						77 J					
Nitroaromatics (µg/kg)													
1,3,5 -Trinitrobenzene	390												
2,4,6 - Trinitrotoluene	3900[f]	48,000	3,600	9,600	140,000		800	910,000	94,000	10,000			340
2,4 - Dinitrotoluene	940[d]		4,500	6,900	35,000				160,000	11,000			
2,6 - Dinitrotoluene	940[d]												
4-Amino-2,6-dinitrotoluene	470[g]												1,500
Pesticides/PCBs (µg/kg)													
Aroclor 1260	319	3,300			1,700		60	6,800	1,800	53	80		
Cyanide (µg/kg)													
Cyanide, total	1.6E+05[h]												

Table 4-1

Summary of Organic and Cyanide Analytical Results in Surface and Subsurface Soils
Site Investigation at Reservoir No. 2 Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

	Sample Location:	2BGSO-05			2BGSO-06			2BGSO-07			2BGSO-08		
	Sample Number:	1130	1140	1150	1160	1170	1180	1190	1200	1210	1220	1230	1240
	Sample Depth (feet):	0-0.5	2 - 3	6 - 7	0-0.5	2 - 3	6 - 7	0-0.5	2 - 3	6 - 7	0-0.5	2 - 3	6 - 7
	Sample Date:	1/10/96	1/10/96	1/10/96	1/10/96	1/10/96	1/10/96	1/10/96	2/10/96	2/10/96	1/10/96	2/10/96	2/10/96
Parameter	**RBC[a]**												
Volatile Organic Compounds (µg/kg)													
2-Butanone	4.70E+06												
Acetone	7.80E+05		4.6 J[b]	43 J								17 J	
Toluene	1.60E+06					1.5 J						1.9 J	1.6 J
Xylene (total)	1.60E+07												
Semivolatile Organic Compounds (µg/kg)													
Anthracene	2.30E+06										55 J		
Benzo(a)anthracene	880										63 J		
Benzo(a)pyrene	88							150 J			130 J		
Benzo(b)fluoranthene	880							180 J			820 J		
Benzo(g,h,i)perylene	2.30E+05[c]							95 J			200 J		
Benzo(k)fluoranthene	8.80E+03										430 J		
bis(2-Ethylhexyl)phthalate	4.60E+04												
Chrysene	8.80E+04							85 J			120 J		
2,4-Dinitrotoluene	940[d]	160 J						1,500			13,000		
2,6-Dinitrotoluene	940[d]	65 J						630			7,700		
Fluoranthene	3.10E+05							110 J			160 J		
Indeno(1,2,3-cd)pyrene	880							74 J					
Phenanthrene	2.30E+06[e]							55 J					
Pyrene	2.30E+05							95 J			120 J		
Nitroaromatics (µg/kg)													
1,3,5 -Trinitrobenzene	390										15,000		
2,4,6 -Trinitrotoluene	3900[f]	500						31,000			210,000		
2,4 - Dinitrotoluene	940[d]							21,000			40,000		
2,6 - Dinitrotoluene	940[d]							10,000					
4-Amino-2,6-dinitrotoluene	470[g]												
Pesticides/PCBs (µg/kg)													
Aroclor 1260	319	170						1,500			1,400		
Cyanide (µg/kg)													
Cyanide, total	1.6E+05[h]										1,000		

[a]Risk-based concentration for residential soil taken from EPA, 1997, *Risk-Based Concentration Table*, 14 March, EPA Region III, Philadelphia, Pennsylvania, on-line, unless otherwise noted; adjusted to reflect a cancer risk of 1E-6 and noncancer hazard index of 0.1 to provide additional protection for exposure to multiple chemicals or media.

[b]J qualifer. Analyte present. Reported value may not be accurate or precise.

[c]Based on the value for free cyanide.

[d]Based on the more conservative cancer-based RBC for dinitrotoluene mixture.

[e]Based on the noncancer effects of anthracene, a structurally similar member of the same chemical class.

[f]Based on the oral RfD of 5E-4 milligram/kilogram (mg/kg)-day (EPA, 1997, Integrated Risk Information System [IRIS], On-line Environmental Criteria and Assessment Office, Cincinnati, OH) and the EPA (1997) methodology.

[g]Based on the oral RfD of 6E-5 mg/kg-day (EPA, 1993, Risk Assessment Issue Paper for: Derivation of Oral RfD for 2-Amino-4,6-Dinitrotoluene (CASRN 35572-78-2) and 4-amino-*2,6-Dinitrotoluene (CASRN 19406-51-0) By Analogy to 2,4,6-Trinitrotoluene SystemicToxicity Assessment,* National Center for Environmental Assessment, Cincinnati, OH, February 23) and the U.S. EPA (1997) methodology.

[h]Based on value for free cyanide.

Note 1: 19,000 Concentration exceeds RBC.

Note 2: Blank cells indicate that compound was analyzed for but was not detected.

2BGSO-08; 2,6-DNT exceeded the RBC of 940 µg/kg in 2BGSO-03 and 2BGSO-08 at detected concentration of 3,300 and 7,700 µg/kg, respectively.

Subsurface Soil. A smaller suite of SVOCs were detected in subsurface soil samples as compared to the surface soils (Table 4-1). The detected SVOCs in the subsurface soils included two common nitroaromatic compounds, 2,4-DNT and 2,6-DNT, but these were limited to subsurface samples from 2BGSO-01 and 2BGSO-03. Of these DNT detections, the samples from 2 to 3 feet and 6 to 7 feet in 2BGSO-01 and from 2 to 3 feet in 2BGSO-3 exhibited detections exceeding the RBC. The only other detected SVOC in subsurface soils was bis(2-ethylhexyl)phthalate (6 to 7 feet in 2BGSO-02), but the concentrations did not exceed the RBC.

4.1.3 Pesticides and PCBs

Pesticides were not detected in any soil samples collected within the investigation area. However, the PCB isomer Aroclor 1260 was detected in all boring locations except 2BGSO-06. The majority of detections (seven out of ten) were found in surface soils. Only two boring locations (2BGSO-02 and -03) exhibited this PCB in the subsurface soils. The Aroclor 1260 RBC of 319 µg/kg was exceeded in surface soils from all boring locations except 2BGOSO-04, 2BGSO-05, and 2BGOSO-06. Only the 2-to-3-foot sample in 2BGOSO-03 contained Aroclor 1260 at a concentration that exceeded the RBC in subsurface soils. The detected concentrations of Aroclor 1260 ranged from 53 µg/kg (6 to 7 feet) to the maximum of 6,800 µg/kg (0 to 0.5 foot), both in 2BGSO-03.

4.1.4 Total Cyanide

The only detection of cyanide in the study area (1,000 µg/kg) was in the surficial soil sample collected from 2BGSO-08. The detected concentration was much lower than the corresponding RBC of 160,000 µg/kg. Other boring locations showed no detection of cyanide in soils.

4.1.5 Nitroaromatic Compounds

A total of five nitroaromatic compounds were identified at 2BG under the nitroaromatic analysis (Table 4-1). 1,3,5-TNB was detected only in the surface soil sample from 2BGSO-08, at a concentration of 15,000 µg/kg. This exceeds the RBC of 390 µg/kg. 2,4,6-TNT was detected in surface samples from six borings (2BGSO-01, -02, -03, -05, -07, and -08), and exceeded the RBC of 3,900 µg/kg in all but 2BGSO-05. TNT was also detected in subsurface soil samples from four borings (2BGOSO-01, -02, -03, and -04), and exceeded the RBC in 2BGSO-01 (6 to 7 feet) and 2BGSO-03 (2 to 3 feet and 6 to 7 feet). 2,4-DNT was detected in surface samples from 2BGSO-

02, -07, and -08, and exceeded the RBC in each case; subsurface detections of this DNT isomer were limited to both samples from 2BGSO-01 and -03; the RBC was exceeded in both samples. 2,6-DNT was detected only in the surface sample collected at 2BGSO-07, and exceeded the RBC of 7,800 µg/kg, while 4-amino-2,6-DNT was detected at a concentration greater than the RBC (470 µg/kg) only in the 6- to 7-foot sample from 2BGSO-04.

4.1.6 Metals

Surface Soil. A total of 18 metals were detected in surface soil samples, excluding the nutritionally essential elements calcium, magnesium, sodium, and potassium. Of the metals detected in surficial soils, aluminum, arsenic, barium, chromium, copper, iron, lead, manganese, mercury, nickel, thallium, and zinc were present in all soil samples, while other metals detected less frequently included beryllium (3/8), cadmium (2/8), cobalt (7/8), selenium (6/8), silver (1/8), and thallium (5/8). Table 4-2 presents the maximum and minimum detected metal concentrations for surface and subsurface soil samples collected from this area. As shown in this table, the maximum concentrations of nine metals were found in surface soils at 2BGSO-07; six metals exhibited the maximum concentrations in surface soils at 2BGSO-02, and two metals showed maximum detection in surface soils at 2BGSO-08. Of the detected metals in surface soils, seven exceeded the RBC in at least one of the eight samples, including aluminum, arsenic, beryllium, iron, lead, manganese, and thallium (Table 4-3).

Subsurface Soil. All metals detected in surface soils were also present in subsurface soils. Of the metals detected in subsurface soils, aluminum, arsenic, barium, chromium, cobalt, copper, iron, lead, manganese, nickel, thallium, and zinc were found in all samples. Other metals that were detected less frequently included beryllium (9/16), cadmium (1/16), mercury (2/16), selenium (4/16), silver (1/16), and thallium (10/16). Table 4-2 presents the maximum and minimum detected metal concentrations for both surface and subsurface soil samples collected from this area. As shown in this table, the maximum concentrations of 15 out of the 18 metals in subsurface soil samples were found at 2BGSO-03. Soil borings 2BGSO-01, -04, and -05 each had one maximum metal detection. Of the metals detected in subsurface soils, 6 exceeded the RBC in at least 1 of the 16 samples. These included aluminum, arsenic, beryllium, iron, manganese, and thallium.

Table 4-2

Summary of Minimum and Maximum Metal Concentrations in Soils
Site Investigation at Reservoir No. 2 Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

Metals	Frequency of Detection		Minimum Detected Concentration				Maximum Detected Concentration			
	Surface Soil	Subsurface Soil	Surface Soil		Subsurface Soil		Surface Soil		Subsurface Soil	
			ppm	location	ppm	location	ppm	location	ppm	location
Aluminum	8/8	16/16	6870	2BGSO-01	6100	2BGSO-07	14900	2BGSO-07	17000	2BGSO-03
Arsenic	8/8	16/16	5.1	2BGSO-01	4.1	2BGSO-04	9.6	2BGSO-07	18.3	2BGSO-03
Barium	8/8	16/16	67.6	2BGSO-06	39.3	2BGSO-07	212	2BGSO-07	140	2BGSO-03
Beryllium	3/8	9/16	0.65	2BGSO-02	0.65	2BGSO-01	0.78	2BGSO-08	0.88	2BGSO-04
Cadmium	2/8	1/16	0.65	2BGSO-07	0.84	2BGSO-03	0.78	2BGSO-08	0.84	2BGSO-03
Chromium	8/8	16/16	11.8	2BGSO-01	10.5	2BGSO-07	24.3	2BGSO-07	24.8	2BGSO-03
Cobalt	7/8	16/16	6.4	2BGSO-04	6.5	2BGSO-05	16.4	2BGSO-07	21.3	2BGSO-03
Copper	8/8	16/16	15.8	2BGSO-06	11.7	2BGSO-01	124	2BGSO-08	172	2BGSO-03
Iron	8/8	16/16	15500	2BGSO-01	17600	2BGSO-07	25100	2BGSO-07	37300	2BGSO-03
Lead	8/8	16/16	39.6	2BGSO-04	10.8	2BGSO-06	1000	2BGSO-02	232	2BGSO-03
Manganese	8/8	16/16	191	2BGSO-02	157	2BGSO-01	600	2BGSO-07	1390	2BGSO-05
Mercury	8/8	2/16	0.044	2BGSO-06	0.058	2BGSO-08	0.18	2BGSO-02	0.12	2BGSO-03
Nickel	8/8	16/16	15.8	2BGSO-04	17.1	2BGSO-07/01	28.5	2BGSO-02	49.5	2BGSO-03
Selenium	6/8	4/16	0.68	2BGSO-01	0.57	2BGSO-07	1	2BGSO-02	1.2	2BGSO-03
Silver	1/8	1/16	1.2	2BGSO-02	1.3	2BGSO-01	1.2	2BGSO-02	1.3	2BGSO-01
Thallium	5/8	10/16	1.2	2BGSO-07	1.3	2BGSO-08	2.1	2BGSO-02	3.3	2BGSO-03
Vanadium	8/8	16/16	18.4	2BGSO-01	20	2BGSO-07	30	2BGSO-07	34.3	2BGSO-03
Zinc	8/8	16/16	55.2	2BGSO-04	52.9	2BGSO-07	445	2BGSO-07	270	2BGSO-03

Table 4-3

Summary of Metal Analytical Results in Surface and Subsurface Soils
Site Investigation at Reservoir No. 2 Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

Sample Location:		2BGSO-01			2BGSO-02			2BGSO-03			2BGSO-04		
Sample Number:		1010	1020	1030	1040	1050	1060	1070	1080	1090	1100	1110	1120
Sample Depth (feet):		0-0.5	2 - 3	6 - 7	0-0.5	2 - 3	6 - 7	0-0.5	2 - 3	6 - 7	0-0.5	2 - 3	6 - 7
Sample Date:		10/1/96	10/1/96	10/1/96	10/1/96	10/1/96	10/1/96	10/1/96	10/2/96	10/2/96	10/1/96	10/2/96	10/2/96
Parameter	RBC[a]												
Metals (mg/kg)													
Aluminum	7,800	6780	**11200**	**11800**	**9200**	**14900**	**16100**	**8620**	**10100**	**17000**	**10100**	**14900**	**13400**
Arsenic (as carcinogen)	0.43	**5.1**	**4.7**	**11.7**	**9.5**	**9.7**	**13.3**	**5.3**	**18.3**	**17.6**	**6.1**	**9.8**	**4.1**
Barium	550	73.4	75	86.9	170	111	84.4	156	118	140	70.3	116	91
Beryllium	0.15			**0.65**	**0.65**	**0.69**	**0.78**		**0.81**	**0.83**		**0.88**	**0.69**
Cadmium	3.9								0.84				
Chromium	39[b]	11.8	14.7	19.8	20.1	18.5	22.6	18.2	19.2 J[c]	24.8 J	12.8	20 J	21 J
Cobalt	470		8.1	13.9	9.2	13.5	14.2	10.6	15.5	21.2	6.4	16.2	10.8
Copper	310	23.1	11.7	22	60	18.2	31.1	47.4	172	37.7	17.6	34.8	24.5
Iron	2,300	15500	**18400**	**27500**	**19900**	**26400**	**35900**	**18400**	**34100**	**37300**	**16700**	**28100**	**21800**
Lead	400[d]	165	13.8	21.4	**1000**	16.2	13.3	391	232	31.4	39.6	21.4	14.2
Manganese	160	**224 J**	157 J	**417 J**	**191 J**	**1000 J**	**580 J**	**295 J**	**213**	**1360**	**315 J**	**716**	**256**
Mercury (inorganic)	2.3	0.078			0.18			0.17	0.12		0.047		
Nickel	160	16.4	17.1	29.1	38.5	23.7	43	33.8	49.5	45.7	15.8	34.5	32.3
Selenium	39	0.68			1	0.62	0.63	0.76	1.2		0.76		
Silver	39			1.3	1.2								
Thallium	0.51[e]	**1.8**	**1.9**	**2.8**	**2.1**	**1.8**	**2.7**	**1.3**	**3.3**	**2.3**		**1.6**	
Vanadium	55	18.4	23.5	29.1	27.2	29.2	28.1	20	20.5 J	34.3 J	22.1	32.9 J	23.7 J
Zinc	2,300	80.9	61.3	63.1	267	83.1	84.1	141	270	93.5	55.2	78	79.3

Table 4-3

Summary of Metal Analytical Results in Surface and Subsurface Soils
Site Investigation at Reservoir No. 2 Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

	Sample Location:	2BGSO-05			2BGSO-06			2BGSO-07			2BGSO-08		
	Sample Number:	1130	1140	1150	1160	1170	1180	1190	1200	1210	1220	1230	1240
	Sample Depth (feet):	0-0.5	2 - 3	6 - 7	0-0.5	2 - 3	6 - 7	0-0.5	2 - 3	6 - 7	0-0.5	2 - 3	6 - 7
	Sample Date:	10/1/96	10/1/96	10/1/96	10/1/96	10/1/96	10/1/96	10/1/96	10/2/96	10/2/96	10/1/96	10/2/96	10/2/96
Parameter	RBC[a]												
Metals (mg/kg)													
Aluminum	7,800	**10300**	**14000**	**11400**	**10300**	**12100**	**9540**	**14900**	**12100**	6100	**9700**	**12900**	**12000**
Arsenic (as carcinogen)	0.43	**7.4**	**12**	**5.6**	**7.9**	**8.4**	**8.2**	**9.6**	**11.9**	**9**	**9**	**9.9**	**5.3**
Barium	550	80.9	138	55.5	67.6	70.9	63.9	212	108	39.3	204	68.7	66.7
Beryllium	0.15		**0.74**					**0.66**	**0.67**		**0.78**		
Cadmium	3.9							0.65			0.78		
Chromium	39[b]	15.3	20.2 J	17.6 J	14.8	17.6 J	14.8 J	24.3	17 J	10.5 J	21.1	19.2 J	17.8 J
Cobalt	470	9.5	19.3	6.5	9	9.9	10.2	16.4	19.4	7	12.4	9.1	8.1
Copper	310	23.7	32.2	25.7	15.8	23.4	24.8	104	30.6	19.4	124	26.3	25.6
Iron	2,300	**20000**	**32100**	**21800**	**17700**	**22100**	**22400**	**25100**	**27400**	**17600**	**24500**	**27500**	**21300**
Lead	400[d]	83.3	13.7	14.6	189	10.8	12	351	19.5	11.8	**603**	13.3	21.2
Manganese	160	**467 J**	**1390**	**327**	**300 J**	**499**	**492**	**600 J**	**1140**	**421**	**284 J**	**205**	**309**
Mercury (inorganic)	2.3	0.067			0.044			0.15			0.14		0.058
Nickel	160	18	48.3	24.2	18	25.8	25.7	33.1	40.9	17.1	35.7	24.3	20
Selenium	39							0.99	0.57		0.95		
Silver	39												
Thallium	0.51[e]		**1.6**					**1.2**	**1.4**		**1.3**	**1.3**	
Vanadium	55	23.4	28.7 J	27.3 J	22.2	31 J	23.4 J	30	28 J	20 J	26.3	28.7 J	26.8 J
Zinc	2,300	79.4	76.4	66.3	57.3	59.5	61	445	70.2	52.9	349	67.7	66.1

[a]Risk-based concentration for residential soil taken from EPA, 1997, *Risk-Based Concentration Table*, 14 March, EPA Region III, Philadelphia, PA, on-line, unless otherwise noted; adjust to reflect a cancer risk of 1E-6 and noncancer hazard index of 0.1 to provide additional protection for exposure to multiple chemicals or media.

[b]Based on the value for chromium (VI).

[c]J qualifier. Analyte present. Reported value may not be accurate or precise.

[d]Highest level in soil to which children may be regularly exposed for which exposure reduction is not recommended (EPA, 1994, "Guidance on Residential Lead-Based Paint, Lead-Contaminated Dust, and Lead-Contaminated Soil," Memorandum from Lynn R. Goldman, Assistant Administrator, to EPA Regional Directors, dated July 14).

[e]RBC for thallium sulfate multiplied by 0.81 to adjust for differences in molecular weight.

Note 1: **11200** Concentration exceeds RBC.
Note 2: Blank cells indicate that compound was analyzed for but was not detected.

4.2 Additional Burning Ground

A total of 24 soil samples were collected within the ABG area, with 2 discrete samples from each of the 12 boring locations. The soil samples were obtained from depths of 0 to 0.5 foot (surface soil) and 2 to 3 feet, respectively. Bedrock was not encountered in this area during the advancement of the soil boring. The following sections discuss the analytical results from soil samples collected at the ABG, while Figure 4-2 presents the detected constituents exceeding RBCs.

4.2.1 Volatile Organic Compounds

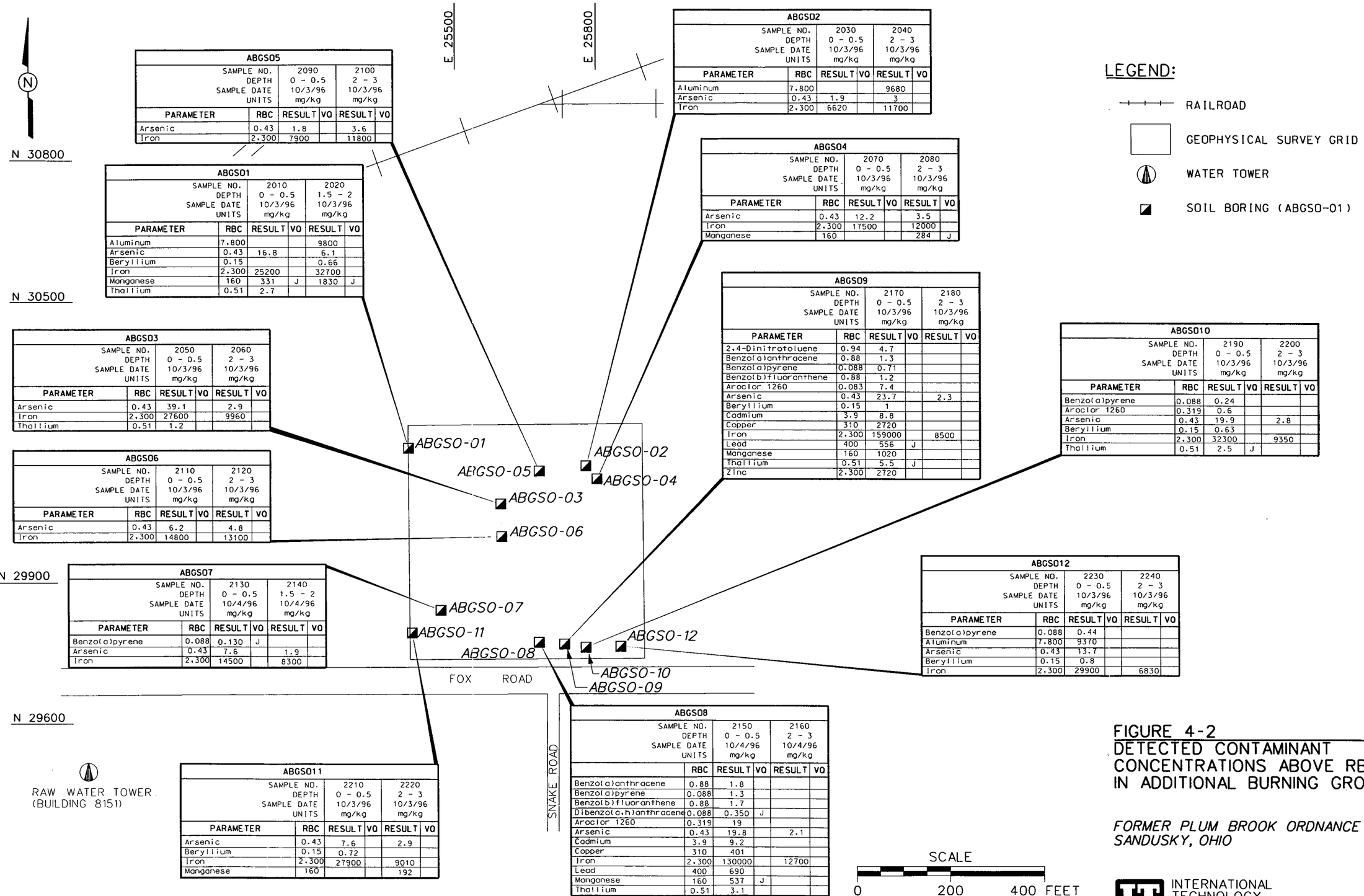
Surface Soil. Two VOCs (acetone and methylene chloride) were present in selected surface soil samples (Table 4-4). However, neither of the VOCs detected in surface soils exceeded the respective RBCs.

Subsurface Soil. Five VOCs were detected in subsurface soil samples (Table 4-4). Acetone was found in three boring locations (ABGSO-06, -08, and -11), and four other VOCs (1,1-dichloroethene, benzene, chlorobenzene, and trichloroethene) were detected only in subsurface soils from ABGSO-11. These compounds did not exceed the respective RBCs, nor were they found in any surface soil samples collected from the same area.

4.2.2 Semivolatile Organic Compounds

Surface Soil. Of the SVOCs detected in surface soils at the ABG, the majority are PAHs and their degradation products. These compounds were detected in most of the surface samples, and included all boring locations except ABGSO-02, -05, and -06 where no SVOCs were reported (Table 4-4). Of the 22 detected SVOCs in surface soils, only 5 (benzo[a]anthracene, benzo[a]-pyrene, benzo[b]fluoranthene, 2,4-DNT, and dibenzo[a,h]anthracene) exceeded the respective RBCs. Benzo(a)anthracene and benzo(b)fluoranthene exceeded the RBCs in surface soils from ABGSO-08 and -09, while benzo(a)pyrene exceeded the RBC in ABGSO-07, -08, -09, -10, and -12. Dibenzo(a,h)anthracene exceeded the RBC of 88 µg/kg in the surficial soil sample from ABGSO-08. 2,4-DNT exceeded the RBC of 940 µg/kg in the surficial soil sample from ABGSO-09.

Subsurface Soil. Subsurface soils contained a much smaller set of SVOCs than surface soils. Only three SVOCs (bis[2-ethylhexyl]phthalate, fluoranthene, and pyrene) were detected in 4 of



ABGSO5

SAMPLE NO.		2090		2100	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		10/3/96		10/3/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Arsenic	0.43	1.8		3.6	
Iron	2,300	7900		11800	

ABGSO1

SAMPLE NO.		2010		2020	
DEPTH		0 - 0.5		1.5 - 2	
SAMPLE DATE		10/3/96		10/3/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Aluminum	7,800			9800	
Arsenic	0.43	16.8		6.1	
Beryllium	0.15			0.66	
Iron	2,300	25200		32700	
Manganese	160	331	J	1830	J
Thallium	0.51	2.7			

ABGSO3

SAMPLE NO.		2050		2060	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		10/3/96		10/3/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Arsenic	0.43	39.1		2.9	
Iron	2,300	27600		9960	
Thallium	0.51	1.2			

ABGSO6

SAMPLE NO.		2110		2120	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		10/3/96		10/3/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Arsenic	0.43	6.2		4.8	
Iron	2,300	14800		13100	

ABGSO7

SAMPLE NO.		2130		2140	
DEPTH		0 - 0.5		1.5 - 2	
SAMPLE DATE		10/4/96		10/4/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Benzo(a)pyrene	0.088	0.130	J		
Arsenic	0.43	7.6		1.9	
Iron	2,300	14500		8300	

ABGSO11

SAMPLE NO.		2210		2220	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		10/3/96		10/3/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Arsenic	0.43	7.6		2.9	
Beryllium	0.15	0.72			
Iron	2,300	27900		9010	
Manganese	160			192	

ABGSO2

SAMPLE NO.		2030		2040	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		10/3/96		10/3/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Aluminum	7,800			9680	
Arsenic	0.43	1.9		3	
Iron	2,300	6620		11700	

ABGSO4

SAMPLE NO.		2070		2080	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		10/3/96		10/3/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Arsenic	0.43	12.2		3.5	
Iron	2,300	17500		12000	
Manganese	160			284	J

ABGSO9

SAMPLE NO.		2170		2180	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		10/3/96		10/3/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
2,4-Dinitrotoluene	0.94	4.7			
Benzo(a)anthracene	0.88	1.3			
Benzo(a)pyrene	0.088	0.71			
Benzo(b)fluoranthene	0.88	1.2			
Aroclor 1260	0.083	7.4			
Arsenic	0.43	23.7		2.3	
Beryllium	0.15	1			
Cadmium	3.9	8.8			
Copper	310	2720			
Iron	2,300	159000		8500	
Lead	400	556	J		
Manganese	160	1020			
Thallium	0.51	5.5	J		
Zinc	2,300	2720			

ABGSO10

SAMPLE NO.		2190		2200	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		10/3/96		10/3/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Benzo(a)pyrene	0.088	0.24			
Aroclor 1260	0.319	0.6			
Arsenic	0.43	19.9		2.8	
Beryllium	0.15	0.63			
Iron	2,300	32300		9350	
Thallium	0.51	2.5	J		

ABGSO12

SAMPLE NO.		2230		2240	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		10/3/96		10/3/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Benzo(a)pyrene	0.088	0.44			
Aluminum	7,800	9370			
Arsenic	0.43	13.7			
Beryllium	0.15	0.8			
Iron	2,300	29900		6830	

ABGSO8

SAMPLE NO.		2150		2160	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		10/4/96		10/4/96	
UNITS		mg/kg		mg/kg	
	RBC	RESULT	VQ	RESULT	VQ
Benzo(a)anthracene	0.88	1.8			
Benzo(a)pyrene	0.088	1.3			
Benzo(b)fluoranthene	0.88	1.7			
Dibenzo(a,h)anthracene	0.088	0.350	J		
Aroclor 1260	0.319	19			
Arsenic	0.43	19.8		2.1	
Cadmium	3.9	9.2			
Copper	310	401			
Iron	2,300	130000		12700	
Lead	400	690			
Manganese	160	537	J		
Thallium	0.51	3.1			

FIGURE 4-2
DETECTED CONTAMINANT CONCENTRATIONS ABOVE RBCs IN ADDITIONAL BURNING GROUND

FORMER PLUM BROOK ORDNANCE WORKS
SANDUSKY, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

DWG. NO.: 766952es.029
PROJ. NO.: 766952
INITIATOR: G. YU
PROJ. MGR.: D. BURTON
DRAFT. CHCK. BY: R. KNIGHT
ENGR. CHCK. BY: G. YU
DATE LAST REV.:
DRAWN BY:
STARTING DATE: 03/13/97
DRAWN BY: R. KNIGHT
18 DEC 97 13:54:17
rvanderg
c:\ntgas\civil\766952es.029

Table 4-4

Summary of Organic and Cyanide Analytical Results in Surface and Subsurface Soils
Site Investigation at Additional Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

	Sample Location:	ABGSO-01		ABGSO-02		ABGSO-03		ABGSO-04		ABGSO-05		ABGSO-06	
	Sample Number:	2010	2020	2030	2040	2050	2060	2070	2080	2090	2100	2110	2120
	Sample Depth (feet):	0 - 0.5	1.5 - 2	0 - 0.5	2 - 3	0 - 0.5	2 - 3	0 - 0.5	2 - 3	0 - 0.5	2 - 3	0 - 0.5	2 - 3
	Sample Date:	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96
Parameter	RBC[a]												
Volatile Organic Compounds (µg/kg)													
1,1-Dchloroethene	1.10E+03												
Acetone	7.80E+05					76 J[b]							110 J
Benzene	2.20E+04												
Chlorobenzene	1.60E+05												
Methylene chloride	8.50E+04												
Trichloroethene	5.80E+04												
Semivolatile Organic Compounds (µg/kg)													
Anthracene	2.30E+06												
Acenaphthene	4.70E+05												
Acenaphthylene	4.70E+05[c]												
Benzo(a)anthracene	880							91 J					
Benzo(a)pyrene	88							72 J					
Benzo(b)fluoranthene	880							110 J					
Benzo(g,h,i)perylene	2.30E+05[d]							56 J					
Benzo(k)fluoranthene	8,800												
bis(2-Ethylhexyl)phthalat	4.60E+04					61 J							
Carbazole	3.20E+04												
Chrysene	8.80E+04	65 J				190 J		110 J					
Dibenz(a,h)anthracene	88												
Dibenzofuran	3.10E+04												
Di-n-butyl phthalate	7.80E+05												
2,4-Dinitrotoluene	940[e]												
Fluoranthene	3.10E+05	95 J				110 J		160 J					64 J
Fluorene	3.10E+05												
Indeno(1,2,3-cd)pyrene	880							56 J					
2-Methylnaphthalene	3.10E+05[f]	85 J				67 J							
Naphthalene	3.10E+05												
Phenanthrene	2.30E+06[g]	60 J				110 J		92 J					
Pyrene	2.30E+05	75 J				110 J		110 J					54 J
Nitroaromatics (µg/kg)													
2,4,6-Trinitrotoluene	3900[h]							370					
2,4-Dinitrotoluene	940[e]												
HMX	3.90E+05												
Pesticides/PCBs (µg/kg)													
Aroclor 1260	319					110		250					
Cyanide (µg/kg)													
Cyanide compounds were all below detection limits.													

Table 4-4

Summary of Organic and Cyanide Analytical Results in Surface and Subsurface Soils
Site Investigation at Additional Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

	Sample Location:	ABGSO-07		ABGSO-08		ABGSO-09		ABGSO-10		ABGSO-11		ABGSO-12	
	Sample Number:	2130	2140	2150	2160	2170	2180	2190	2200	2210	2220	2230	2240
	Sample Depth (feet):	0 - 0.5	1.5 - 2	0 - 0.5	2 - 3	0 - 0.5	2 - 3	0 - 0.5	2 - 3	0 - 0.5	2 - 3	0 - 0.5	2 - 3
	Sample Date:	10/4/96	10/4/96	10/4/96	10/4/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96
Parameter	RBC[a]												
Volatile Organic Compounds (µg/kg)													
1,1-Dchloroethene	1.10E+03										1.7 J		
Acetone	7.80E+05				50	74 J		73 J			22 J	77 J	
Benzene	2.20E+04										2.5 J		
Chlorobenzene	1.60E+05										2.5 J		
Methylene chloride	8.50E+04	3.5 J											
Trichloroethene	5.80E+04										2.4 J		
Semivolatile Organic Compounds (µg/kg)													
Anthracene	2.30E+06	43 J		570		500						150 J	
Acenaphthene	4.70E+05			200 J									
Acenaphthylene	4.70E+05[c]	56 J		130 J		310 J		86 J		39 J			
Benzo(a)anthracene	880	130 J		1,800		1,300		390		83 J		510	
Benzo(a)pyrene	88	130 J		1,300		710		240 J		72 J		440	
Benzo(b)fluoranthene	880	150 J		1,700		1,200		510		91 J		600	
Benzo(g,h,i)perylene	2.30E+05[d]	90 J		710		460							
Benzo(k)fluoranthene	8,800	140 J		1,300		740		240 J				540	
bis(2-Ethylhexyl)phthalate	4.60E+04			71 J					63 J	54 J	57 J	87 J	100 J
Carbazole	3.20E+04			740		170 J							
Chrysene	8.80E+04	140 J		1,800		1,100		360 J		110 J		570	
Dibenz(a,h)anthracene	88			350 J								62 J	
Dibenzofuran	3.10E+04			130 J									
Di-n-butyl phthalate	7.80E+05					58 J							
2,4-Dinitrotoluene	940[e]			150 J		1,800							
Fluoranthene	3.10E+05	240 J		4,500		2,400		480		150 J		860	
Fluorene	3.10E+05			260 J		87 J							
Indeno(1,2,3-cd)pyrene	880	81 J		820									
2-Methylnaphthalene	3.10E+05[f]			85 J		69 J		64 J		51 J			
Naphthalene	3.10E+05			66 J									
Phenanthrene	2.30E+06[g]	120 J		3,000		1,100		310 J		86 J		310 J	
Pyrene	2.30E+05	180 J		2,900		1,700		400		120 J		660	
Nitroaromatics (µg/kg)													
2,4,6 -Trinitrotoluene	3900[h]	280		600		2,000							
2,4-Dinitrotoluene	940[e]			660		4,700							
HMX	3.90E+05						1,000		1,500				
Pesticides/PCBs (µg/kg)													
Aroclor 1260	319			19,000		7,400		600				180	
Cyanide (µg/kg)													
Cyanide compounds were all below detection limits.													

Table 4-4

Summary of Organic and Cyanide Analytical Results in Surface and Subsurface Soils
Site Investigation at Additional Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

[a]Risk-based concentration for residential soil taken from EPA, 1997, *Risk-Based Concentration Table*, 14 March, EPA Region III, Philadelphia, Pennsylvania, on-line, unless otherwise noted; adjusted to reflect a cancer risk of 1E-6 and noncancer hazard index of 0.1 to provide additional protection for exposure to multiple chemicals or media.
[b]J qualifier. Analyte present. Reported value may not be accurate or precise.
[c]Based on the noncancer effects of acenaphthene, a structurally similar member of the same chemical class.
[d]Based on the noncancer effects of pyrene, a structurally similar member of the same chemical class.
[e]Based on the more conservative cancer-based RBC for dinitrotoluene mixture.
[f]Based on the oral RfD of 4E-2 mg/kg-day (EPA, 1996, *Risk Assessment Issue Paper for: Feasibility of RfD Derivation for 2-Methylnaphthalene (CASRN 91-57-6)*, National Center for Environmental Assessment, Cincinnati, Ohio, February 27) and the EPA (1997) methodology.
[g]Based on the noncancer effects of anthracene, a structurally similar member of the same chemical class.
[h]Based on the oral RfD of 5E-4 mg/kg-day (EPA, 1997, Integrated Risk Information System [IRIS], On-line Environmental Criteria and Assessment Office, Cincinnati, Ohio) and the EPA (1997) methodology.

Note 1: 1800 Concentration exceeds or equals RBC.
Note 2: Blank cells indicate that compound was analyzed for but was not detected.

the 12 subsurface soil samples collected. None of the SVOCs detected in subsurface soils exceeded the respective RBCs.

4.2.3 Pesticides and PCBs

Pesticides were not detected in any soil samples collected within the ABG investigation area. However, the PCB isomer Aroclor 1260 was detected in surface soils from 6 of the 12 boring locations (Table 4-4). The detected concentrations of Aroclor 1260 in these surface soil samples (ABGSO-08, -09, and -10) exceeded the RBC of 319 µg/kg in each case.

4.2.4 Total Cyanide

Total cyanide was not detected in any soil sample collected within the investigation area.

4.2.5 Nitroaromatic Compounds

Three nitroaromatic compounds, 2,4,6-TNT, 2,4-DNT, and HMX, were detected in surface and/or subsurface soils from five boring locations (ABGSO-04, -07, -08, -09, and -10). However, only one of the detected nitroaromatic compounds (2,4-DNT) exceeded the respective RBC in the subsurface soil sample from ABGSO-09 (Table 4-4).

4.2.6 Metals

Surface Soil. A total of 18 metals were detected in surface soil samples, excluding the nutritionally essential elements calcium, magnesium, sodium, and potassium. Of the metals detected in surface soils, aluminum, arsenic, chromium, iron, lead, manganese, nickel, and zinc were found in all samples. Other metals that were detected less frequently included barium (11/12), beryllium (4/12), cadmium (4/12), cobalt (6/12), copper (11/12), mercury (7/12), selenium (8/12), silver (1/12), thallium (6/12), and vanadium (10/12). Table 4-5 presents the maximum and minimum detected metal concentrations for surface and subsurface soil samples collected from this area. As shown in this table, the maximum concentrations of 10 of the 18 metals were found at ABGSO-09. The soil samples from ABGSO-03, -08, -12 each exhibited two metals at the maximum concentrations, while ABGSO-10 and -11 each had one metal detected at the maximum concentration. Of the inorganic compounds detected in surface soils, nine exceeded the respective RBCs in at least 1 of the 12 samples (Table 4-6), including aluminum (ABGSO-12), arsenic (all surface samples), beryllium (ABGSO-09, -10, -11, and -12), cadmium (ABGSO-08 and -09), copper (ABGSO-08 and -09), iron (all samples), lead (ABGSO-08 and -

Table 4-5

Summary of Minimum and Maximum Metal Concentrations in Soils
Site Investigation at Additional Burn Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

Metals	Frequency of Detection		Minimum Detected Concentration				Maximum Detected Concentration			
	Surface Soil	Subsurface Soil	Surface Soil		Subsurface Soil		Surface Soil		Subsurface Soil	
			mg/kg	location	mg/kg	location	mg/kg	location	mg/kg	location
Aluminum	12/12	12/12	3670	ABGSO-03/07	2650	ABGSO-10	9370	ABGSO-12	9800	ABGSO-01
Arsenic	12/12	11/12	1.8	ABGSO-05	1.9	ABGSO-07	39.1	ABGSO-03	6.1	ABGSO-01
Barium	11/12	5/12	24.4	ABGSO-05	24.8	ABGSO-12	98.6	ABGSO-11	111	ABGSO-01
Beryllium	4/12	1/12	0.63	ABGSO-10	0.66	ABGSO-01	1	ABGSO-09	0.66	ABGSO-01
Cadmium	4/12	0/12	0.71	ABGSO-12			9.2	ABGSO-09		
Chromium	12/12	12/12	4.8	ABGSO-02	6	ABGSO-10	40.3	ABGSO-08	12.7	ABGSO-01
Cobalt	6/12	7/12	6.4	ABGSO-04	5.8	ABGSO-11	17.4	ABGSO-09	8.3	ABGSO-01
Copper	11/12	9/12	3.2	ABGSO-02	3.8	ABGSO-07/10	2720	ABGSO-09	24.2	ABGSO-06
Iron	12/12	12/12	6620	ABGSO-02	6830	ABGSO-12	159000	ABGSO-09	32700	ABGSO-01
Lead	12/12	12/12	5	ABGSO-05	3.3	ABGSO-12	690	ABGSO-09	54.8	ABGSO-06
Manganese	12/12	12/12	38.3	ABGSO-06	55.7	ABGSO-12	1020	ABGSO-08	1830	ABGSO-01
Mercury	7/12	1/12	0.043	ABGSO-04	0.12	ABGSO-06	1.2	ABGSO-09	0.12	ABGSO-06
Nickel	12/12	12/12	5.4	ABGSO-05	6.9	ABGSO-11	117	ABGSO-09	20.7	ABGSO-01
Selenium	8/12	0/12	0.61	ABGSO-11			1.2	ABGSO-03		
Silver	1/12	0/12	1.2	ABGSO-10			1.2	ABGSO-10		
Thallium	6/12	0/12	1.5	ABGSO-12			5.5	ABGSO-09		
Vanadium	10/12	12/12	8.7	ABGSO-02	14.6	ABGSO-10	22.2	ABGSO-12	30.6	ABGSO-01
Zinc	12/12	12/12	20.1	ABGSO-05	17.6	ABGSO-11	2720	ABGSO-09	105	ABGSO-06

Shading - Not sampled.

Table 4-6

Summary of Metal Analytical Results in Surface and Subsurface Soils
Site Investigation at Additional Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

	Sample Location:	ABGSO-01		ABGSO-02		ABGSO-03		ABGSO-04		ABGSO-05		ABGSO-06	
	Sample Number:	2010	2020	2030	2040	2050	2060	2070	2080	2090	2100	2110	2120
	Sample Depth (feet):	0-0.5	1.5 - 2	0-0.5	2 - 3	0-0.5	2 - 3	0-0.5	2 - 3	0-0.5	2 - 3	0 - 0.5	2 - 3
	Sample Date:	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96
Parameter	RBC[a]												
Metals (mg/kg)													
Aluminum	7,800	5700	**9800**	5370	**9680**	3670	4220	4410	5590	7700	4840	5310	6330
Arsenic (as carcinogen)	0.43	**16.8**	**6.1**	**1.9**	**3**	**39.1**	**2.9**	**12.2**	**3.5**	**1.8**	**3.6**	**6.2**	**4.8**
Barium	550	46.5	111	24.9		41		30.9		24.4			61.5
Beryllium	0.15		**0.66**										
Cadmium	3.9												
Chromium	39[b]	7.6	12.7	4.8	10	6.4	8	5.9	7.8	7.1	9.7	8.4	10.6
Cobalt	470	12.5	8.3		6.8			6.4	7.4				
Copper	310	37.2	9.6	3.2		32.2	9.9	32.9	4.6		6.1	10.8	24.2
Iron	2,300	**25200**	**32700**	**6620**	**11700**	**27600**	**9960**	**17500**	**12000**	**7900**	**11800**	**14800**	**13100**
Lead	400[c]	26.8	11.6	9.8	4.9	39	3.5	61.3	4.7	5	5.3	7.9	54.8
Manganese	160	**331 J[d]**	**1830 J**	114 J	59.1 J	53.4 J	76.5 J	127 J	**284 J**	51.6 J	151 J	38.3 J	155 J
Mercury (inorganic)	2.3	0.047				0.046		0.043					0.12
Nickel	160	25.7	20.7	5.7	7	17.7	9.5	15.3	8.1	5.4	8.6	9.2	13
Selenium	39	0.84				1.2		0.63					
Silver	39												
Thallium	0.51[e]	**2.7**				**1.2**							
Vanadium	55	13.7	30.6	8.7	22.1	10.9	14.9	11.5	16.7	13.8	16.7	19.2	19.6
Zinc	2,300	37.2	51.7	28.1	18.7	22	31.3	53.1	19.1	20.1	24.9	24.8	105

Tab. 4-6

Summary of Metal Analytical Results in Surface and Subsurface Soils
Site Investigation at Additional Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

	Sample Location:	ABGSO-07		ABGSO-08		ABGSO-09		ABGSO-10		ABGSO-11		ABGSO-12	
	Sample Number:	2130	2140	2150	2160	2170	2180	2190	2200	2210	2220	2230	2240
	Sample Depth (feet):	0-0.5	2 - 3	0-0.5	2 - 3	0-0.5	2 - 3	0-0.5	2 - 3	0-0.5	2 - 3	0 - 0.5	2 - 3
	Sample Date:	01/4/96	01/4/96	01/4/96	01/4/96	01/4/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96
Parameter	RBC[a]												
Metals (mg/kg)													
Aluminum	7,800	3670	6180	4600	7250	6020	4160	4260	2650	6610	4970	**9370**	5670
Arsenic (as carcinogen)	0.43	**7.6**	**1.9**	**19.8**	**2.1**	**23.7**	**2.3**	**19.9**	**2.8**	**7.6**	**2.9**	**13.7**	
Barium	550	42.5	28.6	60.3	31.1	71.6		38.2		98.6		49.6	24.8
Beryllium	0.15					**1**		**0.63**		**0.72**		**0.8**	
Cadmium	3.9			**9.2**		**8.8**		0.72				0.71	
Chromium	39[b]	5.9	9.4	25.6	9.6	40.3	8.4	6.7	6	8.8	7.2	11.4	9.2
Cobalt	470			7.3	7.5	17.4			6.7	8.4	5.8	15.4	6.9
Copper	310	17.3	3.8	**401**	9.1	**2720**		169	3.8	37.2	3.9	101	
Iron	2,300	**14500**	**8300**	**130000**	**12700**	**159000**	**8500**	**32300**	**9350**	**27900**	**9010**	**29900**	**6830**
Lead	400[c]	35.4	3.7	**690**	6.8	**556 J**	3.8 J	213 J	5.7 J	64.3 J	3.4 J	142 J	3.3 J
Manganese	160	137 J	139 J	**537 J**	77.6 J	**1020**	70	54.8	57.6	145	**192**	158	55.7
Mercury (inorganic)	2.3			0.46		1.2		0.2				0.066	
Nickel	160	13.4	7.2	81.9	8.1	117	7	25.1	12	23.3	6.9	33.6	9.5
Selenium	39			1.1		0.93		1.8		0.61		1.1	
Silver	39							1.2					
Thallium	0.51[e]			**3.1**		**5.5 J**		**2.5 J**				1.5 J	
Vanadium	55	10.7	18.4		22.4		19.8	14.4	14.6	13.5	15.6	22.2	19.5
Zinc	2,300	41.1	19.2	430	26.9	**2720**	18.4	143	18.6	48	17.6	105	19.3

[a]Risk-based concentration for residential soil taken from EPA, 1997, *Risk-Based Concentration Table*, 14 March, EPA Region III, Philadelphia, PA, on-line, unless otherwise noted; ad to reflect a cancer risk of 1E-6 and noncancer hazard index of 0.1 to provide additional protection for exposure to multiple chemicals or media.

[b]Based on the value for chromium (VI).

[c]Highest level in soil to which children may be regularly exposed for which exposure reduction is not recommended (EPA, 1994, "Guidance on Residential Lead-Based Paint, Lead-Contaminated Dust, and Lead-Contaminated Soil," Memorandum from Lynn R. Goldman, Assistant Administrator, to EPA Regional Directors, dated July 14).

[d]J qualifier. Analyte present. Reported value may not be accurate or precise.

[e]RBC for thallium sulfate multiplied by 0.81 to adjust for differences in molecular weight.

Note 1: **9800** Concentration exceeds RBC.

Note 2: Blank cells indicate that compound was analyzed for but was not detected.

09), manganese ABGSO-01, -08, and -09), thallium (ABGSO-01, -03, -08, -09, and -10), and zinc (ABGSO-09).

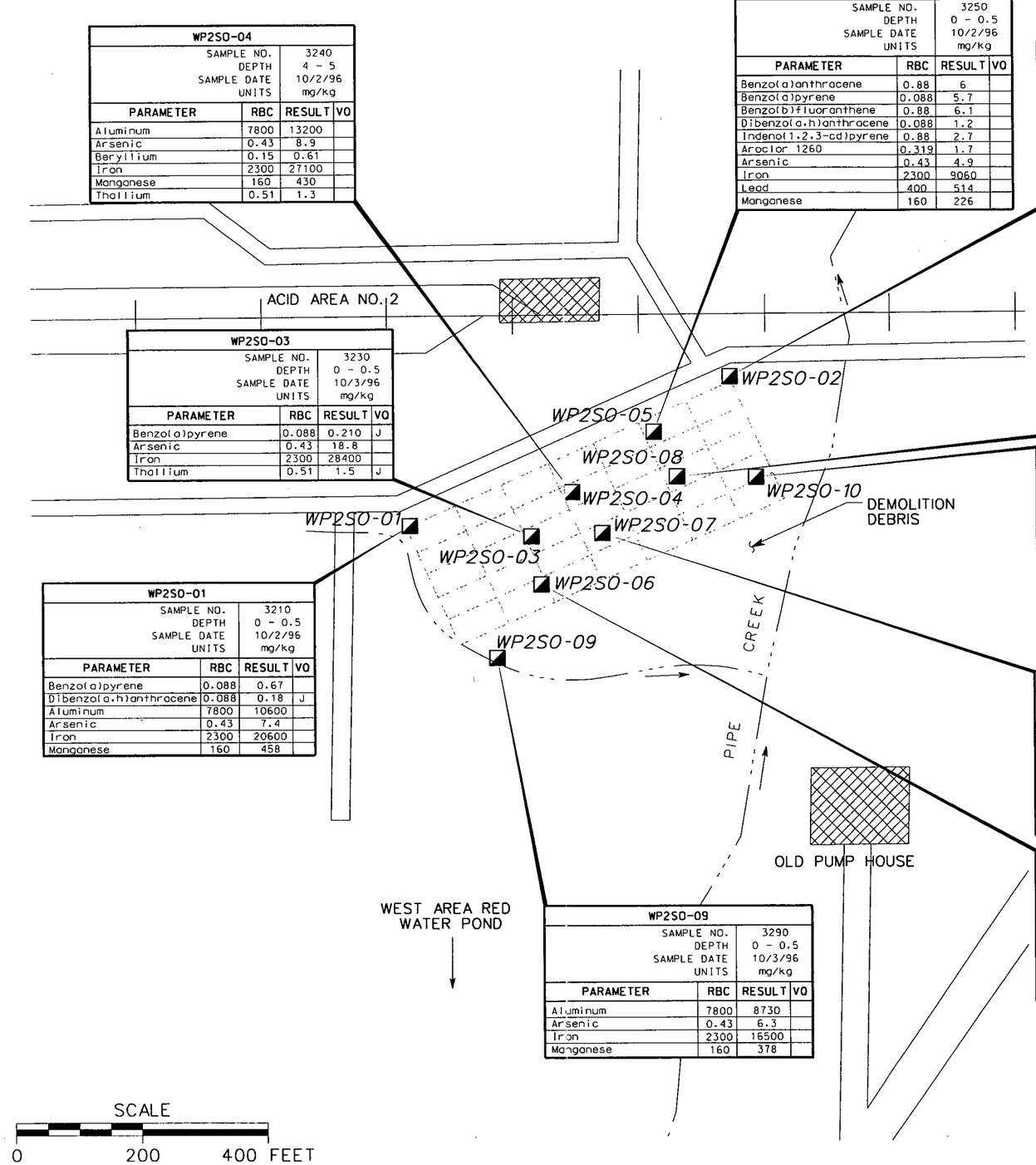
Subsurface Soil. Fourteen metals were detected in subsurface soils. Eight of these (aluminum, chromium, iron, lead, manganese, nickel, vanadium, and zinc) were found in all subsurface soil samples. Other metals that were detected less frequently included arsenic (11/12), barium (5/12), beryllium (1/12), cobalt (7/12), copper (9/12), and mercury (1/12). Several metals that were identified in surface soils (cadmium, selenium, silver, and thallium) were absent in the subsurface soils. Table 4-5 presents the maximum and minimum detected metal concentrations for both surface and subsurface soil samples collected from this area. As shown in this table, the maximum concentrations of 10 of the 14 metals in subsurface soil samples were found consistently at ABGSO-01, while the remaining 4 metals were found in ABGSO-06. Of the detected inorganic compounds in subsurface soils, five exceeded the respective RBC in at least one subsurface sample (Table 4-6). These include aluminum (ABGSO-01 and -02), arsenic (all except ABGSO-12), beryllium (ABGSO-01), iron (all samples), and manganese (ABGSO-01, -04, and -11).

4.3 Wastewater Disposal Plant No. 2

A total of 20 screening soil samples and 10 confirmation samples (5 surface and 5 subsurface samples) were collected within the WP2 area. The screening soil samples were obtained from depths of 0 to 0.5 feet (surface soil) and 4 to 5 feet (subsurface) at each of ten boring locations and were qualitatively tested for nitroaromatic compounds. The testing results indicated no apparent soil contamination with respect to nitroaromatic compounds. Ten soil confirmation samples were subsequently collected from boring locations adjacent to where the screening samples were taken at randomly selected depth intervals. Bedrock was not encountered in this area during the advancement of the soil borings. The following sections summarize the results of the confirmation sampling. Figure 4-3 presents detected constituents at concentrations exceeding the RBCs.

4.3.1 Volatile Organic Compounds

Surface Soil. Acetone was the only VOC detected in any of the five surface soil samples at a concentration of 54 µg/kg (WP2SO-03), which is well below the established RBC.



WP2SO-04

SAMPLE NO.	3240
DEPTH	4 - 5
SAMPLE DATE	10/2/96
UNITS	mg/kg

PARAMETER	RBC	RESULT	VQ
Aluminum	7800	13200	
Arsenic	0.43	8.9	
Beryllium	0.15	0.61	
Iron	2300	27100	
Manganese	160	430	
Thallium	0.51	1.3	

WP2SO-05

SAMPLE NO.	3250
DEPTH	0 - 0.5
SAMPLE DATE	10/2/96
UNITS	mg/kg

PARAMETER	RBC	RESULT	VQ
Benzo(a)anthracene	0.88	6	
Benzo(a)pyrene	0.088	5.7	
Benzo(b)fluoranthene	0.88	6.1	
Dibenzo(a,h)anthracene	0.088	1.2	
Indeno(1,2,3-cd)pyrene	0.88	2.7	
Aroclor 1260	0.319	1.7	
Arsenic	0.43	4.9	
Iron	2300	9060	
Lead	400	514	
Manganese	160	226	

WP2SO-02

SAMPLE NO.	3220
DEPTH	4 - 5
SAMPLE DATE	10/2/96
UNITS	mg/kg

PARAMETER	RBC	RESULT	VQ
Aluminum	7800	14600	
Arsenic	0.43	9.3	
Beryllium	0.15	0.76	
Iron	2300	29600	
Manganese	160	473	

WP2SO-03

SAMPLE NO.	3230
DEPTH	0 - 0.5
SAMPLE DATE	10/3/96
UNITS	mg/kg

PARAMETER	RBC	RESULT	VQ
Benzo(a)pyrene	0.088	0.210	J
Arsenic	0.43	18.8	
Iron	2300	28400	
Thallium	0.51	1.5	J

WP2SO-08

SAMPLE NO.	3280
DEPTH	0 - 0.5
SAMPLE DATE	10/2/96
UNITS	mg/kg

PARAMETER	RBC	RESULT	VQ
Benzo(a)anthracene	0.88	2.9	
Benzo(a)pyrene	0.088	2	
Benzo(b)fluoranthene	0.88	2.5	
Dibenzo(a,h)anthracene	0.088	0.57	
Indeno(1,2,3-cd)pyrene	0.88	1.2	
Aroclor 1260	0.319	0.48	
Arsenic	0.43	6.7	
Iron	2300	17000	
Manganese	160	314	J

WP2SO-10

SAMPLE NO.	3300
DEPTH	4 - 5
SAMPLE DATE	10/2/96
UNITS	mg/kg

PARAMETER	RBC	RESULT	VQ
Benzo(a)pyrene	0.088	0.83	
Benzo(b)fluoranthene	0.88	1.3	
Dibenzo(a,h)anthracene	0.088	0.230	J
Aroclor 1260	0.319	5.8	
Antimony	3.1	106	J
Arsenic	0.43	7.9	
Iron	2300	19200	
Lead	400	2870	
Manganese	160	309	J

WP2SO-01

SAMPLE NO.	3210
DEPTH	0 - 0.5
SAMPLE DATE	10/2/96
UNITS	mg/kg

PARAMETER	RBC	RESULT	VQ
Benzo(a)pyrene	0.088	0.67	
Dibenzo(a,h)anthracene	0.088	0.18	J
Aluminum	7800	10600	
Arsenic	0.43	7.4	
Iron	2300	20600	
Manganese	160	458	

WP2SO-07

SAMPLE NO.	3270
DEPTH	4 - 5
SAMPLE DATE	10/2/96
UNITS	mg/kg

PARAMETER	RBC	RESULT	VQ
Aluminum	7800	13700	
Arsenic	0.43	10.1	
Beryllium	0.15	0.67	
Iron	2300	24900	
Manganese	160	598	J

WP2SO-06

SAMPLE NO.	3260
DEPTH	4 - 5
SAMPLE DATE	10/2/96
UNITS	mg/kg

PARAMETER	RBC	RESULT	VQ
Aluminum	7800	9050	
Arsenic	0.43	9.1	
Iron	2300	21300	
Manganese	160	437	

WP2SO-09

SAMPLE NO.	3290
DEPTH	0 - 0.5
SAMPLE DATE	10/3/96
UNITS	mg/kg

PARAMETER	RBC	RESULT	VQ
Aluminum	7800	8730	
Arsenic	0.43	6.3	
Iron	2300	16500	
Manganese	160	378	

LEGEND:

- BUILDINGS
- RAILROAD
- DITCH
- SOIL BORING (WP2SO-01) (INCLUDING SOIL SCREENING SAMPLES)

FIGURE 4-3
DETECTED CONTAMINANT CONCENTRATIONS ABOVE RBCs IN WASTE WATER DISPOSAL PLANT NO.2

FORMER PLUM BROOK ORDNANCE WORKS
SANDUSKY, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

DWG. NO.:...\766952es.034 | PROJ. NO.:766952
INITIATOR: G. YU | PROJ. MGR.:D. BURTON
DRAFT. CHCK. BY: R. KNIGHT | ENGR. CHCK. BY: G. YU
DATE LAST REV.: | DRAWN BY:
STARTING DATE: 03/13/97 | DRAWN BY: R. KNIGHT
17 DEC 97 15:53:26
rvanderg
c:\it\ds\civil\766952es.034

Subsurface Soil. Acetone was detected at concentrations that were well below the RBC (Table 4-7) in two of the five subsurface soil samples. Other VOCs were not detected in subsurface soils at WP2.

4.3.2 Semivolatile Organic Compounds

Surface Soil. At least 1 of the 21 SVOCs were detected in all but one (WP2SO-09) of the five surface soil samples collected at WP2 (Table 4-7). The majority of the detected SVOCs are PAHs and their degradation products. Five of the detected SVOCs exceeded the respective RBC in at least two of the surface samples, including benzo(a)anthracene (WP2SO-05 and -08), benzo(a)pyrene (WP2SO-01, -03, -05, and -08), benzo(b)fluoranthene (WP2SO-05 and -08), dibenzo(a,h)anthracene (WP2SO-01, -05, and -08), and indeno(1,2,3-cd)pyrene (WP2SO-05 and -08).

Subsurface Soil. A total of 16 SVOCs were detected in the subsurface soils in two of the five sampled locations. Of these SVOCs, only bis(2-ethylhexyl)phthalate was present in both WP2SO-07 and -10. The remaining 15 detected SVOCs were found exclusively in ABGSO-10, where benzo(a)pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene exceeded the RBCs. None of the remaining SVOCs detected in subsurface soils exceeded the respective RBC.

4.3.3 Pesticides and PCBs

Pesticides were not detected in any soil samples collected within the investigation area. However, the PCB isomer Aroclor 1260 was detected at concentrations that exceeded the RBC of 319 µg/kg (Table 4-7) in two surface soil samples (WP2SO-05 and -08) and one subsurface soil sample (WP2SO-10).

4.3.4 Total Cyanide

Total cyanide was not detected in any soil samples collected within the investigation area.

4.3.5 Nitroaromatic Compounds

Two nitroaromatic compounds were detected in one surface sample (WP2SO-05) and one subsurface sample (WP2SO-10). However, the detected concentrations of 2,4-DNT and 4-amino-2,6-DNT in these two samples were below the respective RBCs.

Table 4-7

Summary of Organic and Cyanide Analytical Results in Surface and Subsurface Soils
Site Investigation at Wastewater Disposal Plant No. 2
Former Plum Brook Ordnance Works, Sandusky, Ohio

Confirmation Sample Location:		WP2SO-01	WP2SO-02	WP2SO-03	WP2SO-04	WP2SO-05	WP2SO-06	WP2SO-07	WP2SO-08	WP2SO-09	WP2SO-10
Confirmation Sample Number:		3210	3220	3230	3240	3250	3260	3270	3280	3290	3300
Confirmation Sample Depth (feet):		0 - 0.5	4 - 5	0 - 0.5	4 - 5	0 - 0.5	4 - 5	4 - 5	0 - 0.5	0 - 0.5	4 - 5
Sample Date:		10/2/96	10/2/96	10/3/96	10/2/96	10/2/96	10/2/96	10/2/96	10/2/96	10/3/96	10/2/96
Parameter	RBC[a]										
Volatile Organic Compounds (µg/kg)											
Acetone	7.80E+05			54 J[b]	4.2 J			6.5 J			
Semivolatile Organic Compounds (µg/kg)											
Anthracene	2.30E+06	220 J		74 J		2300			1100		230 J
Acenaphthene	4.70E+05					160 J			70 J		
Acenaphthylene	4.70E+05[c]	250 J		69 J		2500			960		150 J
Benzo(a)anthracene	880	760		250 J		6000			2900		810
Benzo(a)pyrene	88	670		210 J		5700			2000		830
Benzo(b)fluoranthene	880	740		180 J		6100			2500		1300
Benzo(g,h,i)perylene	2.30E+05[d]	350 J				2700			1200		550
Benzo(k)fluoranthene	8.80E+03	580		240 J		2100			1800		1100
bis(2-Ethylhexyl)phthalate	4.60E+04							56 J	67 J		64 J
Carbazole	3.20E+04					540			460 J		270 J
Chrysene	8.80E+04	710		250 J		5300			2000		930
Dibenz(a,h)anthracene	88	180 J		61 J		1200			570		230 J
Dibenzofuran	3.10E+04					170 J			81 J		
2,4-Dinitrotoluene	940[e]					83 J					160 J
Fluoranthene	3.10E+05	1400		400		11000			5200		1100
Fluorene	3.10E+05					490			250 J		
Indeno(1,2,3-cd)pyrene	880	370 J				2700			1200		520
2-Methylnaphthalene	3.10E+05[f]			140 J							
Naphthaler 1	3.10E+05			50 J							
Phenanthrene	2.30E+06[g]	480		160 J		5500			2500		360 J
Pyrene	2.30E+05	980		290 J		8000			3800		1100
Nitroaromatics (µg/kg)											
2,4-Dinitrotoluene	940[e]					510					490
4-amino-2,6-Dinitrotoluene	470[h]					260					300
Pesticides/PCBs (µg/kg)											
Aroclor 1260	319	110				1700			480		5800
Cyanide (µg/kg)											
Cyanide compounds were all below detection limits.											

Table 4-7

Summary of Organic and Cyanide Analytical Results in Surface and Subsurface Soils
Site Investigation at Wastewater Disposal Plant No. 2
Former Plum Brook Ordnance Works, Sandusky, Ohio

[a]Risk-based concentration for residential soil taken from EPA, 1997, *Risk-Based Concentration Table*, 14 March, EPA Region III, Philadelphia, PA, on-line, unless otherwise noted; adjusted to reflect a cancer risk of 1E-6 and noncancer hazard index of 0.1 to provide additional protection for exposure to multiple chemicals or media.

[b]J qualifier. Analyte present. Reported value may not be accurate or precise.

[c]Based on the noncancer effects of acenaphthene, a structurally similar member of the same chemical class.

[d]Based on the noncancer effects of pyrene, a structurally similar member of the same chemical class.

[e]Based on the more conservative cancer-based RBC for dinitrotoluene mixture.

[f]Based on the oral RfD of 4E-2 mg/kg-day (EPA, 1996, *Risk Assessment Issue Paper for: Feasibility of RfD Derivation for 2-Methylnaphthalene (CASRN 91-57-6)*, National Center for Environmental Assessment, Cincinnati, OH, February 27) and the EPA (1997) methodology.

[g]Based on the noncancer effects of anthracene, a structurally similar member of the same chemical class.

[h]Based on the oral RfD of 6E-5 mg/kg-day (EPA, 1993, *Risk Assessment Issue Paper for: Derivation of Oral RfD for 2-Amino-4,6-Dinitrotoluene (CASRN 35572-78-2) and 4-amino-2,6-Dinitrotoluene CASRN 19406-51-0) By Analogy to 2,4,6-Trinitrotoluene Systemic Toxicity Assessment*, National Center for Environmental Assessment, Cincinnati, OH, February 23) and the EPA (1997) methodology.

Note 1: 6000 Concentration exceeds RBC.

Note 2: Blank cells indicate that compound was analyzed for but was not detected.

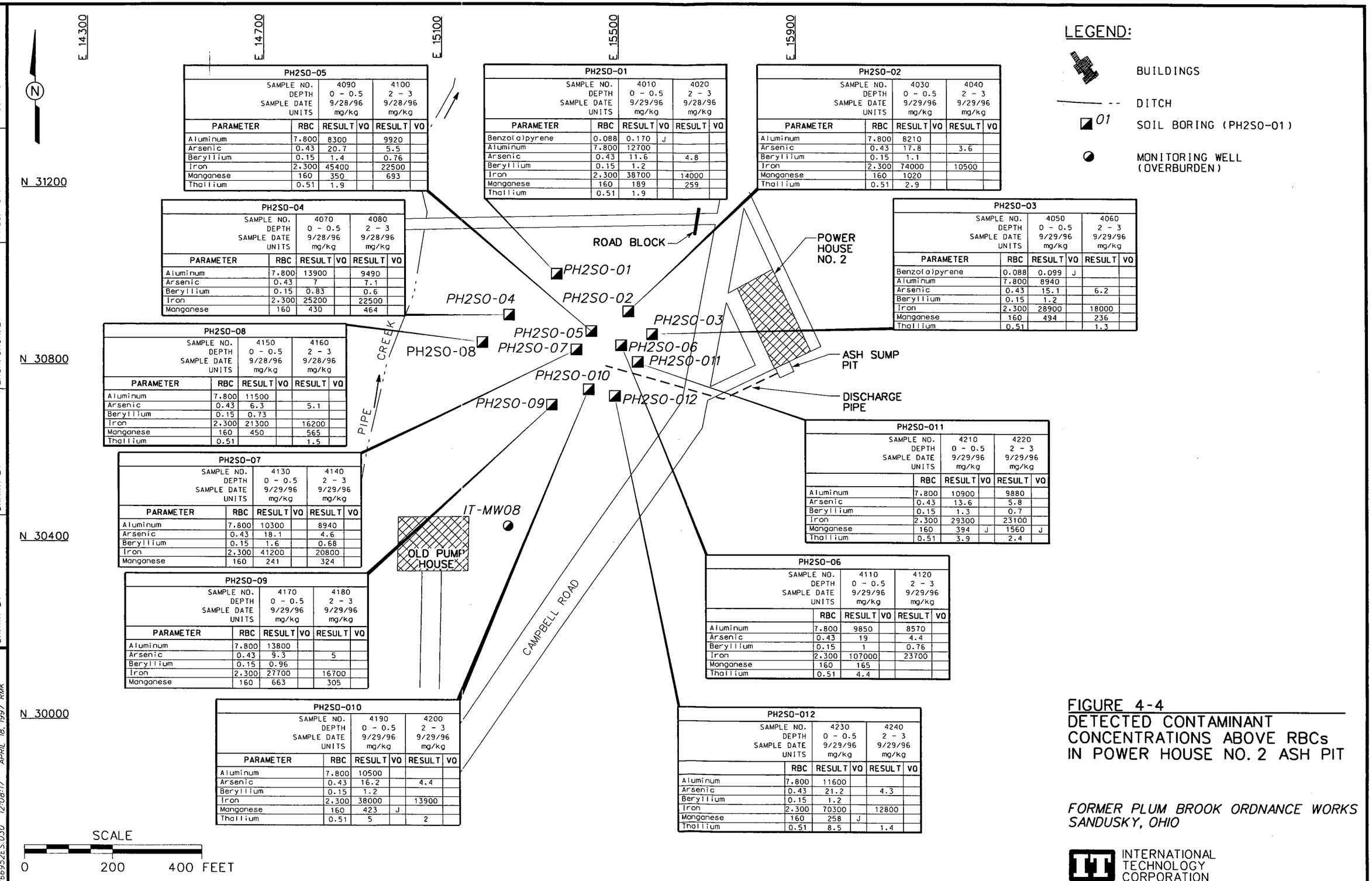
4.3.6 Metals

Surface Soil. Surface soil samples were collected from five boreholes for inorganic chemical analysis. A total of 14 metals were detected in surface soil samples, excluding the nutritionally essential elements calcium, magnesium, sodium, and potassium. Of the metals detected in surface soils, aluminum, arsenic, barium, chromium, copper, iron, lead, manganese, nickel, vanadium, and zinc were found in all samples. Other metals that were detected less frequently included cobalt (2/5), mercury (3/5), and thallium (1/5). Table 4-8 presents the maximum and minimum detected metal concentrations for surface and subsurface soil samples collected from this area. Of the detected inorganic compounds, six exceeded the respective RBCs in surface soils (Table 4-9), including aluminum (WP2SO-01 and -09), arsenic (all samples), iron (all samples), lead (WP2SO-05), manganese (WP2SO-01, -05, -08, and -09), and thallium (WP2SO-03).

Subsurface Soil. A total of 18 metals were found in subsurface soil samples collected at WP2 area. Of these metals, aluminum, arsenic, barium, chromium, copper, iron, lead, manganese, nickel, vanadium, and zinc were found in all subsurface samples. Other metals that were detected less frequently included antimony (1/5), beryllium (3/5), cadmium (1/5), cobalt (4/5), mercury (1/5), silver (2/5), and thallium (2/5). Table 4-8 presents the maximum and minimum detected metal concentrations for surface and subsurface soil samples collected from this area. As shown in this table, the maximum concentrations of 16 of the 18 metals detected were found in the subsurface soils. Of the detected inorganic compounds in subsurface soils, eight exceeded the RBCs in at least one of the five samples (Table 4-9). They were aluminum (WP2SO-02, -04, -06, and -07), antimony (WP2SO-10), arsenic (all samples), beryllium (WP2SO-02, -04, and -07), iron (all samples), lead (WP2SO-10), manganese (all samples), and thallium (WP2SO-04).

4.4 Power House No. 2 Ash Pit

A total of 24 soil samples were collected within the PH2 Ash Pit area, with 2 discrete samples from each of the 12 boring locations. The soil samples were obtained from depths of 0 to 0.5 foot (surface soil) and 2 to 3 feet (subsurface soil), respectively. Bedrock was not encountered in this area during the advancement of soil borings. The following sections discuss analytical results from the soils collected at PH2 Ash Pit, while Figure 4-4 presents the analytical results exceeding RBCs.



PH2SO-05

SAMPLE NO.		4090		4100	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		9/28/96		9/28/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Aluminum	7.800	8300		9920	
Arsenic	0.43	20.7		5.5	
Beryllium	0.15	1.4		0.76	
Iron	2.300	45400		22500	
Manganese	160	350		693	
Thallium	0.51	1.9			

PH2SO-01

SAMPLE NO.		4010		4020	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		9/29/96		9/28/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Benzo(a)pyrene	0.088	0.170	J		
Aluminum	7.800	12700			
Arsenic	0.43	11.6		4.8	
Beryllium	0.15	1.2			
Iron	2.300	38700		14000	
Manganese	160	189		259	
Thallium	0.51	1.9			

PH2SO-02

SAMPLE NO.		4030		4040	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		9/29/96		9/29/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Aluminum	7.800	8210			
Arsenic	0.43	17.8		3.6	
Beryllium	0.15	1.1			
Iron	2.300	74000		10500	
Manganese	160	1020			
Thallium	0.51	2.9			

PH2SO-04

SAMPLE NO.		4070		4080	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		9/28/96		9/28/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Aluminum	7.800	13900		9490	
Arsenic	0.43	7		7.1	
Beryllium	0.15	0.83		0.6	
Iron	2.300	25200		22500	
Manganese	160	430		464	

PH2SO-03

SAMPLE NO.		4050		4060	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		9/29/96		9/29/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Benzo(a)pyrene	0.088	0.099	J		
Aluminum	7.800	8940			
Arsenic	0.43	15.1		6.2	
Beryllium	0.15	1.2			
Iron	2.300	28900		18000	
Manganese	160	494		236	
Thallium	0.51			1.3	

PH2SO-08

SAMPLE NO.		4150		4160	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		9/28/96		9/28/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Aluminum	7.800	11500			
Arsenic	0.43	6.3		5.1	
Beryllium	0.15	0.73			
Iron	2.300	21300		16200	
Manganese	160	450		565	
Thallium	0.51			1.5	

PH2SO-07

SAMPLE NO.		4130		4140	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		9/29/96		9/29/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Aluminum	7.800	10300		8940	
Arsenic	0.43	18.1		4.6	
Beryllium	0.15	1.6		0.68	
Iron	2.300	41200		20800	
Manganese	160	241		324	

PH2SO-09

SAMPLE NO.		4170		4180	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		9/29/96		9/29/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Aluminum	7.800	13800			
Arsenic	0.43	9.3		5	
Beryllium	0.15	0.96			
Iron	2.300	27700		16700	
Manganese	160	663		305	

PH2SO-010

SAMPLE NO.		4190		4200	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		9/29/96		9/29/96	
UNITS		mg/kg		mg/kg	
PARAMETER	RBC	RESULT	VQ	RESULT	VQ
Aluminum	7.800	10500			
Arsenic	0.43	16.2		4.4	
Beryllium	0.15	1.2			
Iron	2.300	38000		13900	
Manganese	160	423	J		
Thallium	0.51	5		2	

PH2SO-011

SAMPLE NO.		4210		4220	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		9/29/96		9/29/96	
UNITS		mg/kg		mg/kg	
	RBC	RESULT	VQ	RESULT	VQ
Aluminum	7.800	10900		9880	
Arsenic	0.43	13.6		5.8	
Beryllium	0.15	1.3		0.7	
Iron	2.300	29300		23100	
Manganese	160	394	J	1560	J
Thallium	0.51	3.9		2.4	

PH2SO-06

SAMPLE NO.		4110		4120	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		9/29/96		9/29/96	
UNITS		mg/kg		mg/kg	
	RBC	RESULT	VQ	RESULT	VQ
Aluminum	7.800	9850		8570	
Arsenic	0.43	19		4.4	
Beryllium	0.15	1		0.76	
Iron	2.300	107000		23700	
Manganese	160	165			
Thallium	0.51	4.4			

PH2SO-012

SAMPLE NO.		4230		4240	
DEPTH		0 - 0.5		2 - 3	
SAMPLE DATE		9/29/96		9/29/96	
UNITS		mg/kg		mg/kg	
	RBC	RESULT	VQ	RESULT	VQ
Aluminum	7.800	11600			
Arsenic	0.43	21.2		4.3	
Beryllium	0.15	1.2			
Iron	2.300	70300		12800	
Manganese	160	258	J		
Thallium	0.51	8.5		1.4	

FIGURE 4-4
DETECTED CONTAMINANT CONCENTRATIONS ABOVE RBCs IN POWER HOUSE NO. 2 ASH PIT

FORMER PLUM BROOK ORDNANCE WORKS
SANDUSKY, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

STARTING DATE: 03/13/97 | DATE LAST REV.: | DRAFT. CHCK. BY: R. KNIGHT | ENGR. CHCK. BY: G. YU | DWG. NO.: 766952ES.030
DRAWN BY: R. KNIGHT | DRAWN BY: | INITIATOR: G. YU | PROJ. MGR.: D. BURTON | PROJ. NO.: 766952
766952ES.030 12:08:17 APRIL 18, 1997 RWK

Table 4-8

Summary of Minimum and Maximum Metal Concentrations in Soils
Site Investigation at Wastewater Disposal Plant No. 2
Former Plum Brook Ordnance Works, Sandusky, Ohio

Metals	Frequency of Detection	Minimum Detected Concentration		Maximum Detected Concentration	
		ppm	Location/Depth	ppm	Location/Depth
Aluminum	10/10	3610	WP2SO-05, 0-0.5 ft	14600	WP2SO-02, 4-5 ft
Antimony	1/10	106	WP2SO-10, 4-5 ft	106	WP2SO-10, 4-5 ft
Arsenic	10/10	4.9	WP2SO-05, 0-0.5 ft	18.8	WP2SO-03, 0-0.5 ft
Barium	10/10	35.6	WP2SO-05, 0-0.5 ft	87	WP2SO-10, 4-5 ft
Beryllium	3/10	0.61	WP2SO-04, 4-5 ft	0.76	WP2SO-02, 4-5 ft
Cadmium	1/10	0.71	WP2SO-10, 4-5 ft	0.71	WP2SO-10, 4-5 ft
Chromium	10/10	8.6	WP2SO-03, 0-0.5 ft	20.7	WP2SO-02, 4-5 ft
Cobalt	6/10	6.5	WP2SO-03, 0-0.5 ft	13	WP2SO-04, 4-5 ft
Copper	10/10	14	WP2SO-09, 0-0.5 ft	40.8	WP2SO-10, 4-5 ft
Iron	10/10	9060	WP2SO-05, 0-0.5 ft	29600	WP2SO-02, 4-5 ft
Lead	10/10	11.6	WP2SO-07, 4-5 ft	2870	WP2SO-10, 4-5 ft
Manganese	10/10	96.3	WP2SO-03, 0-0.5 ft	598	WP2SO-07, 4-5 ft
Mercury	4/10	0.11	WP2SO-01, 0-0.5 ft	1.4	WP2SO-10, 4-5 ft
Nickel	10/10	9.1	WP2SO-05, 0-0.5 ft	32.2	WP2SO-07, 4-5 ft
Silver	2/10	1.2	WP2SO-02, 4-5 ft	1.4	WP2SO-04, 4-5 ft
Thallium	3/10	1.2	WP2SO-07, 4-5 ft	1.5	WP2SO-03, 0-0.5 ft
Vanadium	10/10	11.5	WP2SO-03, 0-0.5 ft	35.9	WP2SO-07, 4-5 ft
Zinc	10/10	52.2	WP2SO-09, 0-0.5 ft	141	WP2SO-10, 4-5 ft

Table 4-9

Summary of Metal Analytical Results in Surface and Subsurface Soils
Site Investigation at Wastewater Disposal Plant No. 2
Former Plum Brook Ordnance Works, Sandusky, Ohio

	Confirmation Sample Location:	WP2SO-01	WP2SO-02	WP2SO-03	WP2SO-04	WP2SO-05	WP2SO-06	WP2SO-07	WP2SO-08	WP2SO-09	WP2SO-10
	Confirmation Sample Number:	3210	3220	3230	3240	3250	3260	3270	3280	3290	3300
	Confirmation Sample Depth (feet):	0-0.5	4 - 5	0-0.5	4 - 5	0-0.5	4 - 5	4 - 5	0-0.5	0-0.5	4 - 5
	Sample Date:	10/2/96	10/2/96	10/3/96	10/2/96	10/2/96	10/2/96	10/2/96	10/2/96	10/3/96	10/3/96
Parameter	RBC[a]										
Metals (mg/kg)											
Aluminum	7,800	**10600**	**14600**	5680	**13200**	3610	**9050**	**13700**	7470	**8730**	6270
Antimony	3.1										**106 J[b]**
Arsenic (as carcinogen)	0.43	**7.4**	**9.3**	**18.8**	**8.9**	**4.9**	**9.1**	**10.1**	**6.7**	**6.3**	**7.9**
Barium	550	64.7	51.4	40.7	81.8	35.6	45.3	65.9	44.9	50.3	87
Beryllium	0.15		**0.76**		**0.61**			**0.67**			
Cadmium	3.9										0.71
Chromium	39[c]	14.7 J	20.7 J	8.6	19.5 J	9.3 J	14.9 J	19.3	17.4	12	18.9
Cobalt	470	9.8	9.6	6.5	13		6.7	11.8			
Copper	310	19.1	22.7	35.1	23.4	16	22.4	23.1	17.2	14	40.8
Iron	2,300	**20600**	**29600**	**28400**	**27100**	**9060**	**21300**	**24900**	**17000**	**16500**	**19200**
Lead	400[d]	27.1	12.8	21.7 J	18.1	**514**	12.6	11.6	113	12.5 J	**2870**
Manganese	160	**458**	**473**	96.3	**430**	**226**	**437**	**598 J**	**314 J**	**378**	**309 J**
Mercury (inorganic)	2.3	0.11				0.29			0.19		1.4
Nickel	160	23.6	26.6	19.4	28.9	9.1	23.1	32.2	18.9	16.6	23.2
Silver	39		1.2		1.4						
Thallium	0.51[e]			**1.5 J**	**1.3**			1.2			
Vanadium	55	22.5 J	34.7 J	11.5	22.8 J	15.7 J	22.3 J	35.9	21.9	22.8	20.4
Zinc	2,300	69.8	64.4	59.3	81.4	74	59.9	62.4	125	52.2	141

[a]Risk-based concentration for residential soil taken from EPA, 1997, *Risk-Based Concentration Table*, 14 March, EPA Region III, Philadelphia, PA, on-line, unless otherwise noted; adjusted to reflect a cancer risk of 1E-6 and noncancer hazard index of 0.1 to provide additional protection for exposure to multiple chemicals or media.

[b]J qualifier. Analyte present. Reported value may not be accurate or precise.

[c]Based on the value for chromium (VI).

[d]Highest level in soil to which children may be regularly exposed for which exposure reduction is not recommended (EPA, 1994, "Guidance on Residential Lead-Based Paint, Lead-Contaminated Dust, and Lead-Contaminated Soil," Memorandum from Lynn R. Goldman, Assistant Administrator, to EPA Regional Directors, dated July 14).

[e]RBC for thallium sulfate multiplied by 0.81 to adjust for differences in molecular weight.

Note 1: **10600** Concentration exceeds RBC.
Note 2: Blank cells indicate that compound was analyzed for but was not detected.

4.4.1 Volatile Organic Compounds

Surface Soil. Three VOCs were detected in surface soil samples (Table 4-10), including acetone, methylene chloride, and toluene. However, none of the detected VOCs exceeded the respective RBCs in surface soils.

Subsurface Soil. Four VOCs were each detected in one subsurface soil sample, including acetone, bromomethane, toluene, and total xylene. As with surface soils, none of the detected VOCs in subsurface samples exceeded the RBCs.

4.4.2 Semivolatile Organic Compounds

Surface Soil. Fourteen SVOCs were detected in at least one of six surface soil samples collected within the PH2 Ash Pit area. SVOCs were not detected in surface soils from PH2SO-04, PH2SO-05, PH2SO-06, PH2SO-07, PH2SO-08, or PH2SO-12 (Table 4-10). The largest suites of SVOCs were detected in PH2SO-01 (12/14) and -03 (6/12), which also exhibited the only SVOC detected at a concentration exceeding the RBC (benzo(a)pyrene).

Subsurface Soil. Two SVOCs were each detected in one subsurface soil sample within the PH2 Ash Pit area (Table 4-10), including bis(2-ethylhexyl)phthalate (PH2SO-11) and di-n-butyl phthalate (PH2SO-12). However, neither of the detected SVOCs in subsurface soils exceeded the respective RBC.

4.4.3 Pesticides and PCBs

PCBs were not detected in surface or subsurface soils within the PH2 Ash Pit area. However, three pesticides (4,4'-dichlorodiphenyldichloroethene, 4,4'-dichlorodiphenyltrichloroethane, and methoxychlor) were detected in surface soils (Table 4-10). None of the reported pesticides exceeded the respective RBCs. Pesticides were not detected in any subsurface soils.

4.4.4 Total Cyanide

Total cyanide was only detected in three surface soil locations within the PH2 Ash Pit area (PH2SO-07, -09, and -10). The detected cyanide concentrations are all below the established RBC.

Table 4-10

Summary of Organic and Cyanide Analytical Results in Surface and Subsurface Soils
Site Investigation at Power House No. 2 Ash Pit
Former Plum Brook Ordnance Works, Sandusky, Ohio

	Sample Location:	PH2SO-01		PH2SO-02		PH2SO-03		PH2SO-04		PH2SO-05		PH2SO-06	
	Sample Number:	4010	4020	4030	4040	4050	4060	4070	4080	4090	4100	4110	4120
	Sample Depth (feet):	0 - 0.5	2 - 3	0 - 0.5	2 - 3	0 - 0.5	2 - 3	0 - 0.5	2 - 3	0 - 0.5	2 - 3	0 - 0.5	2 - 3
	Sample Date:	9/29/96	9/28/96	9/29/96	9/29/96	9/29/96	9/29/96	9/28/96	9/28/96	9/28/96	9/28/96	9/29/96	9/29/96
Parameter	RBC[a]												
Volatile Organic Compounds (µg/kg)													
Acetone	7.80E+05							120 J			120	42 J	
Bromomethane	1.10E+04												
Methylene chloride	8.50E+04									52 J			
Toluene	1.60E+06					18 J	11						
Xylene (total)	1.60E+07						6.5						
Semivolatile Organic Compounds (µg/kg)													
Anthracene	6.30E+06	58 J[b]											
Acenaphthylene	4.70E+05[c]	110 J											
Benzo(a)anthracene	880	130 J				76 J							
Benzo(a)pyrene	88	170 J				99 J							
Benzo(b)fluoranthene	880	160 J											
Benzo(g,h,i)perylene	2.30E+5[d]	130 J											
Benzo(k)fluoranthene	8.80E+03	230 J											
bis(2-Ethylhexyl)phthalate	4.60E+04												
Chrysene	8.80E+04	160 J				98 J							
di-n-butyl phthalate	7.80E+05												
Fluoranthene	3.10E+05	300 J		70 J		180 J							
indeno(1,2,3-cd)pyrene	880	120 J											
Phenanthrene	2.30E+6[e]	100 J				63 J							
Pyrene	2.30E+05	250 J		59 J		150 J							
Pesticides/PCBs (µg/kg)													
4,4' - DDE	1,900	7.4								3.4			
4,4' - DDT	1,900	6.3								3.6		2.6	
Methoxychlor	39,000			6.1		6.5							
Cyanide (µg/kg)													
Cyanide, total	1.60E+05[f]												

Table 4-10

Summary of Organic and Cyanide Analytical Results in Surface and Subsurfae Soils
Site investigation at Power House No. 2 Ash Pit
Former Plum Brook Ordnance Works, Sandusky, Ohio

	Sample Location:	PH2SO-07		PH2SO-08		PH2SO-09		PH2SO-10		PH2SO-11		PH2SO-12	
	Sample Number:	4130	4140	4150	4160	4170	4180	4190	4200	4210	4220	4230	4240
	Sample Depth (feet):	0 - 0.5	2 - 3	0 - 0.5	2 - 3	0 - 0.5	2 - 3	0 - 0.5	2 - 3	0 - 0.5	2 - 3	0 - 0.5	2 - 3
	Sample Date:	29/9/96	29/9/96	28/9/96	28/9/96	29/9/96	29/9/96	29/9/96	29/9/96	29/9/96	29/9/96	29/9/96	29/9/96
Parameter	RBC[a]												
Volatile Organic Compounds (µg/kg)													
Acetone	7.80E+05												
Bromomethane	1.10E+04				1.1 J								
Methylene chloride	8.50E+04												
Toluene	1.60E+06												
Xylene (total)	1.60E+07												
Semivolatile Organic Compounds (µg/kg)													
Anthracene	6.30E+06												
Acenaphthylene	4.70E+05[c]												
Benzo(a)anthracene	880												
Benzo(a)pyrene	88												
Benzo(b)fluoranthene	880												
Benzo(g,h,i)perylene	2.30E+5[d]												
Benzo(k)fluoranthene	8.80E+03												
bis(2-Ethylhexyl)phthalate	4.60E+04							95 J			66 J		
Chrysene	8.80E+04												
di-n-butyl phthalate	7.80E+05									170 J			66 J
Fluoranthene	3.10E+05					79 J				83 J			
indeno(1,2,3-cd)pyrene	880												
Phenanthrene	2.30E+6[e]												
Pyrene	2.30E+05					52 J				67 J			
Pesticides/PCBs (µg/kg)													
4,4' - DDE	1,900	7.1		2.4		5.8		3.9		3.4			
4,4' - DDT	1,900	7.1		3.5		5.7		4.1		3.3			
Methoxychlor	39,000												
Cyanide (µg/kg)													
Cyanide, total	1.60E+05[f]	930				710		890					

Table 4-10

Summary of Organic and Cyanide Analytical Results in Surface and Subsurfae Soils
Site investigation at Power House No. 2 Ash Pit
Former Plum Brook Ordnance Works, Sandusky, Ohio

[a]Risk-based concentration for residential soil taken from EPA, 1997, *Risk-Based Concentration Table*, 14 March, EPA Region III, Philadelphia, PA, on-line, unless otherwise noted; adjusted to reflect a cancer risk of 1E-6 and noncancer hazard index of 0.1 to provide additional protection for exposure to multiple chemicals or media.
[b]J qualifier. Analyte present. Reported value may not be accurate or precise.
[c]Based on the noncancer effects of acenaphthene, a structurally similar member of the same chemical class.
[d]Based on the noncancer effects of pyrene, a structurally similar member of the same chemical class.
[e]Based on the noncancer effects of anthracene, a structurally similar member of the same chemical class.
[f]Based on the value for free cyanide.

Note 1: 170 Concentration exceeds RBC.
Note 2: Blank cells indicate that compound was analyzed for but was not detected.

4.4.5 Metals

Surface Soil. A total of 18 metals were present in surface soils at the PH2 Ash Pit area. Of these, aluminum, arsenic, barium, beryllium, chromium, cobalt, copper, iron, lead, manganese, nickel, vanadium, and zinc were found in all samples. Other metals that were detected less frequently included cadmium (2/12), mercury (9/12), selenium (11/12), silver (3/12), and thallium (9/12). Table 4-11 presents the maximum and minimum detected metal concentrations for surface soil samples collected within this area. Of the detected inorganic compounds in surface soils, six exceeded the RBCs in at least seven samples (Table 4-12). These were aluminum (all samples), arsenic (all samples), beryllium (all samples), iron (all samples), manganese (all samples), and thallium (PH2SO-01, -02, -05, -06, -10, -11, and -12).

Subsurface Soil. A total of 17 metals were present in subsurface soils at the PH2 Ash Pit area. Among the detected metals, aluminum, arsenic, barium, chromium, cobalt, copper, iron, lead, manganese, nickel, vanadium, and zinc were found in all surface soil samples. Other metals that were detected less frequently included beryllium (5/12), mercury (1/12), selenium (2/12), silver (2/12), and thallium (3/12). Table 4-11 presents the maximum and minimum detected metal concentrations for surface soil samples collected within this area. Of the detected inorganic compounds in subsurface soils, six exceeded the RBCs in at least five samples (Table 4-12), including aluminum (PH2SO-04, -05, -06, -07, and -11), arsenic (all samples), beryllium (PH2SO-04, -05, -06, -07, and -11), iron (all samples), manganese (PH2SO-01, -03, -04, -05, -07, -08, -09, and -11), and thallium (PH2SO-03, -08, -10, -11, and -12).

Table 4-11

Summary of Minimum and Maximum Metal Concentrations in Soils
Site Investigation at Power House No. 2 Ash Pit
Former Plum Brook Ordnance Works, Sandusky, Ohio

Metals	Frequency of Detection		Minimum Detected Concentration				Maximum Detected Concentration			
	Surface Soil	Subsurface Soil	Surface Soil		Subsurface Soil		Surface Soil		Subsurface Soil	
			ppm	location	ppm	location	ppm	location	ppm	location
Aluminum	12/12	12/12	8210	PH2SO-02	3520	PH2SO-02	13900	PH2SO-04	9920	PH2SO-05
Arsenic	12/12	12/12	6.3	PH2SO-08	3.6	PH2SO-02	21.2	PH2SO-12	7.1	PH2SO-04
Barium	12/12	12/12	74.3	PH2SO-08	29.9	PH2SO-02	141	PH2SO-02/07	90.3	PH2SO-11
Beryllium	12/12	5/12	0.73	PH2SO-08	0.6	PH2SO-04	1.6	PH2SO-07	0.76	PH2SO-05/06
Cadmium	2/12	0/12	1.1	PH2SO-02			1.4	PH2SO-05		
Chromium	12/12	12/12	1.9	PH2SO-06	6.1	PH2SO-02	17.7	PH2SO-04	14.2	PH2SO-04
Cobalt	12/12	12/12	9.4	PH2SO-12	5.6	PH2SO-12	19	PH2SO-02	24.7	PH2SO-11
Copper	12/12	12/12	16.8	PH2SO-08	8.3	PH2SO-02	38.6	PH2SO-06	24.7	PH2SO-07
Iron	12/12	12/12	21300	PH2SO-08	10500	PH2SO-02	107000	PH2SO-06	23700	PH2SO-06
Lead	12/12	12/12	11.7	PH2SO-12	6.1	PH2SO-02	32.2	PH2SO-01	15.1	PH2SO-11
Manganese	12/12	12/12	165	PH2SO-06	82.1	PH2SO-12	1020	PH2SO-02	1560	PH2SO-11
Mercury	9/12	1/12	0.045	PH2SO-08	0.039	PH2SO-12	0.14	PH2SO-11	0.039	PH2SO-12
Nickel	12/12	12/12	21.4	PH2SO-12	13.8	PH2SO-12	41.9	PH2SO-01	35.2	PH2SO-11
Selenium	11/12	2/12	0.65	PH2SO-04	0.64	PH2SO-06	2.6	PH2SO-12	0.81	PH2SO-11
Silver	3/12	2/12	1.6	PH2SO-04	1.2	PH2SO-05	2	PH2SO-02	1.6	PH2SO-04
Thallium	9/12	3/12	1.3	PH2SO-03	1.4	PH2SO-12	8.5	PH2SO-12	2.4	PH2SO-11
Vanadium	12/12	12/12	8.8	PH2SO-02	7.5	PH2SO-02	24.9	PH2SO-04	21.1	PH2SO-04
Zinc	12/12	12/12	45.7	PH2SO-06	35.3	PH2SO-02	127	PH2SO-01	78.5	PH2SO-05

Shading - Not sampled.

Table 4-12

Summary of Metal Analytical Results in Surface and Subsurface Soils
Site Investigation at Power House No. 2 Ash Pit
Former Plum Brook Ordnance Works, Sandusky, Ohio

	Sample Location:	PH2SO-01		PH2SO-02		PH2SO-03		PH2SO-04		PH2SO-05		PH2SO-06	
	Sample Number:	4010	4020	4030	4040	4050	4060	4070	4080	4090	4100	4110	4120
	Sample Depth (feet):	0-0.5	1.5 - 2	0-0.5	2 - 3	0-0.5	2 - 3	0-0.5	2 - 3	0-0.5	2 - 3	0 - 0.5	2 - 3
	Sample Date:	9/28/96	9/28/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96	10/3/96
Parameter	RBC[a]												
Metals (mg/kg)													
Aluminum	7,800	**12700**	5880	**8210**	3520	**8940**	6580	**13900**	**9490**	**8300**	**9920**	**9850**	**8570**
Arsenic (as carcinogen)	0.43	**11.6**	**4.8**	**17.8**	**3.6**	**15.1**	**6.2**	**7**	**7.1**	**20.7**	**5.5**	**19**	**4.4**
Barium	550	85.3	40.3	141	29.9	108	60	90.2	59.4	133	82.9	121	73
Beryllium	0.15	**1.2**		**1.1**		**1.2**		**0.83**	**0.6**	**1.4**	**0.76**	**1**	**0.76**
Cadmium	3.9			1.1						1.4			
Chromium	39[b]	16.2	8.9	7.5	6.1	12.5	10.2	17.7	14.2	9.9	13.4	1.9	11.6
Cobalt	470	15.1	10.7	19	8.5	16.5	13.4	16.4	15.2	13.8	19.6	15.4	12.3
Copper	310	33.1	12.5	28.2	8.3	25.4	14.1	18.6	17.3	25.7	18	38.6	18.4
Iron	2,300	**38700**	**14000**	**74000**	**10500**	**28900**	**18000**	**25200**	**22500**	**45400**	**22500**	**107000**	**23700**
Lead	400[c]	32.2	7.7	15.6	6.1	25.4	10.3	14.8	10.5	18.8	11.1	15.6	10.9
Manganese	160	**189**	**259**	**1020**	129	**494**	**236**	**430**	**464**	**350**	**693**	**165**	**126**
Mercury (inorganic)	2.3	0.1		0.059		0.098				0.069			
Nickel	160	41.9	18.3	30.8	13.9	26	20.4	30.4	31.9	23.5	34.3	28.3	28.3
Selenium	39	2.1		1.8		2		0.65		2.2		1.8	0.64
Silver	39			2				1.6	1.6		1.2	1.7	
Thallium	0.51[d]	**1.9**		**2.9**			**1.3**			**1.9**		**4.4**	
Vanadium	55	19.6	14.3	8.8	7.5	19	13.2	24.9	21.1	14.3	17.7		13.5
Zinc	2,300	127	39.2	73	35.3	78	56	88.7	73.2	61.5	78.5	45.7	76.5

Table 4-12

Summary of Metal Analytical Results in Surface and Subsurface Soils
Site Investigation at Power House No. 2 Ash Pit
Former Plum Brook Ordnance Works, Sandusky, Ohio

	Sample Location:	PH2SO-07		PH2SO-08		PH2SO-09		PH2SO-10		PH2SO-11		PH2SO-12	
	Sample Number:	4130	4140	4150	4160	4170	4180	4190	4200	4210	4220	4230	4240
	Sample Depth (feet):	0-0.5	2 - 3	0-0.5	2 - 3	0-0.5	2 - 3	0-0.5	2 - 3	0-0.5	2 - 3	0 - 0.5	3- 4
	Sample Date:	9/29/96	9/29/96	9/28/96	9/28/96	9/29/96	9/29/96	9/29/96	9/29/96	9/29/96	9/29/96	9/29/96	9/29/96
Parameter	RBC[a]												
Metals (mg/kg)													
Aluminum	7,800	**10300**	**8940**	**11500**	6950	**13800**	7100	**10500**	5650	**10900**	**9880**	**11600**	5370
Arsenic (as carcinogen)	0.43	**18.1**	**4.6**	**6.3**	**5.1**	**9.3**	**5**	**16.2**	**4.4**	**13.6**	**5.8**	**21.2**	**4.3**
Barium	550	141	90	74.3	54.2	103	55.2	107	40.8	102	90.3	131	38.3
Beryllium	0.15	**1.6**	**0.68**	**0.73**		**0.96**		**1.2**		**1.3**	**0.7**	**1.2**	
Cadmium	3.9												
Chromium	39[b]	14.8	11.5	14.5	9.9	17	9.8	14.4	8.1	15.8	13.7	8.1	7.4
Cobalt	470	15.8	12.1	14.6	11.3	14.5	11.9	12	7.5	13	24.7	9.4	5.6
Copper	310	25	24.7	16.8	12.8	25.3	12.9	26.9	12	23.8	20.7	31.5	9.6
Iron	2,300	**41200**	**20800**	**21300**	**16200**	**27700**	**16700**	**38000**	**13900**	**29300**	**23100**	**70300**	**12800**
Lead	400[c]	19.1	11.1	17.6	7.3	21.8	8.2	25.5	10.5	22.6	15.1	11.7	7
Manganese	160	**241**	**324**	**450**	**565**	**663**	**305**	**423 J[e]**	149 J	**394 J**	**1560 J**	**258 J**	82.1 J
Mercury (inorganic)	2.3	0.072		0.045		0.061		0.11		0.14			0.039
Nickel	160	27	29.3	26.2	22.9	33.6	21.1	23.6	16.2	23.7	35.2	21.4	13.8
Selenium	39	1.7				1.3		2.4		1.9	0.81	2.6	
Silver	39												
Thallium	0.51[d]				**1.5**			**5**	**2**	**3.9**	**2.4**	**8.5**	**1.4**
Vanadium	55	19.9	14.8	22.3	15.6	23.7	14.2	18.9	10.4	21.5	18.4	9.3	10.7
Zinc	2,300	73.6	68.8	81.1	53.6	103	50.3	85.4	42.2	79	77.2	51.6	37.2

[a]Risk-based concentration for residential soil taken from EPA, 1997, *Risk-Based Concentration Table*, 14 March, EPA Region III, Philadelphia, PA, on-line, unless otherwise noted; adjus to reflect a cancer risk of 1E-6 and noncancer hazard index of 0.1 to provide additional protection for exposure to multiple chemicals or media.

[b]Based on the value for chromium (VI).

[c]Highest level in soil to which children may be regularly exposed for which exposure reduction is not recommended (EPA, 1994, "Guidance on Residential Lead-Based Paint, Lead-Contaminated Dust, and Lead-Contaminated Soil," Memorandum from Lynn R. Goldman, Assistant Administrator, to EPA Regional Directors, dated July 14).

[d]RBC for thallium sulfate multiplied by 0.81 to adjust for differences in molecular weight.

[e]J qualifier. Analyte present. Reported value may not be accurate or precise.

Note 1: **12700** Concentration exceeds RBC.
Note 2: Blank cells indicate that compound was analyzed for but was not detected.

5.0 Statistical Analysis of Data

5.1 Introduction

Presented in this section are the summary statistics on site-specific and background inorganics data and the details of the statistical methods used to compare background data with site-specific data. Note that the background comparison of inorganic compounds is limited to those metals that exceeded the RBCs as presented in Chapter 4.0, since constituents present below RBCs are not considered to present unacceptable risk to human health. Site-wide soil inorganic background concentration were established by D&M (D&M, 1996). The summary statistics on background were calculated by D&M (1996) and are presented in Table 5-1. The background raw data was not available for this analysis, which restricted the scope and complexity of the statistical analysis that could be performed for comparisons. Section 5.2 presents the statistical design for the comparison of background data to soil data, while Sections 5.3 through 5.6 show the comparisons of site and background data on a site-by-site basis.

5.2 Statistical Design for Background Comparisons

Upper Tolerance Limits. Upper tolerance limits (UTL) for metal concentrations in background soil samples are used as a single background number with which to compare site data (EPA, 1989). Lacking definitive criteria for defining the extent of contamination in soils at a Resource Conservation and Recovery Act (RCRA)/CERCLA facility, a UTL on background samples can be used as a screening concentration. A UTL establishes an upper limit for a specified proportion, P, of the population at a specified confidence level, γ, and is denoted here by $UTL_{p,\gamma}$. A UTL with a proportion, P, of 95 percent implies that 95 percent of the background samples will be below the UTL. The statistical confidence level for a UTL, γ, establishes the probability of being correct, i.e., a 95 percent confidence level suggests that 95 percent of the time the estimated UTL is the correct one. Thus, the $UTL_{p,\gamma}$, for a given metal, with a P of 95 percent, and a γ of 95 percent is an upper limit below which, it can be assumed with 95 percent confidence, 95 percent of the background samples will fall.

In general, UTLs are estimated for normally and lognormally distributed data (EPA, 1989,1992). If the data sets do not fit either distributions, a nonparametric distribution can be assumed to estimate UTLs. Because the raw data for background samples were unavailable, distribution testing could not be include in this analysis. Therefore, UTLs were estimated assuming a

Table 5-1

Statistical Quantities for Metal Concentrations in Background Soils
Former Plum Brook Ordnance Works, Sandusky, Ohio

Metal	Frequency of Detection (%)	Max. DL[a] (mg/kg)	Number of Observations	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Median Concentration (mg/kg)	Average Concentration (mg/kg)	Standard Deviation	75th % ile	95th % ile
Antimony	42.86	6.1	14	2.7	7.5	2.975	4.457	1.988	6.4	7.5
Arsenic	85.71	3.7	14	1.65	23	9.2	10.4	6.409	15	23
Beryllium	*BDL*[b]	1.2	14	0.55	0.6	0.55	0.564	0.023	0.6	0.6
Cadmium	*BDL*[b]	1.2	14	0.55	0.6	0.55	0.564	0.023	0.6	0.6
Chromium	100	--	14	6	29	13.5	13.5	5.802	17	29
Copper	85.71	2.2	14	1.1	35	7.1	12.285	12.241	17	35
Lead	100	--	14	5.3	25	11	13.343	6.243	15	25
Manganese	100	--	14	16.35	695	187	227.569	183.448	330	695
Mercury	*BDL*[b]	0.3	14	0.135	0.15	0.14	0.142	0.005	0.145	0.15
Nickel	100	--	14	7.6	33	16.5	19.414	8.766	28	33
Selenium	*BDL*[b]	4.9	14	2.15	2.45	2.25	2.267	0.093	2.35	2.45
Silver	*BDL*[b]	1.2	14	0.55	0.6	0.55	0.564	0.023	0.6	0.6
Thallium	*BDL*[b]	6.1	14	2.7	3.05	2.85	2.846	0.102	2.9	3.05
Zinc	100	--	14	11.5	187	44	53.035	41.16	56	187

Source: Table 5-9, TNT Areas Site Investigation Draft Report, Dames & Moore, Inc. May 1996.
a - Maximum detection limit.
b - Below detection limit in all background samples.

nonparametric distribution. In the case of small data sets (less than 50), the nonparametric 95 percent UTL can be assumed to be the maximum detected concentration (MDC) in the data set (Gilbert, 1987). The sitewide background data for PBOW has a small sample size (14); therefore, the nonparametric 95 percent UTL for the sitewide background data for inorganics is the MDC in this data set.

Basis for Comparison with Background. Based on EPA (1989) guidance, if a single site-related sample exceeds that 95 percent UTL, it can be assumed that the site-related data is greater than the background range. Thus, the 95 percent UTL on background for a given inorganic at a given site is compared to the MDC of its site-related data set. If the site-related MDC is less than the background MDC, then it can be concluded with 95 percent confidence that the site data is within the background range of values. If the site-related MDC exceeds the background MDC, then it can be concluded that the site-related data exceeds background values.

5.3 Reservoir No. 2 Burning Ground

5.3.1 Surface Soil

Of the 18 metals detected in surface soil samples, 7 exceeded the RBC in at least one of the eight samples, including aluminum, arsenic, beryllium, iron, lead, manganese, and thallium. Of these, arsenic, lead, and manganese were detected in the background samples collected by D&M. As presented in Table 5-2, the MDCs of arsenic and manganese in surface soils at 2BG were below the maximum detected background concentrations, and are attributable to naturally occurring conditions. However, the detected range of lead concentrations in surface soils exceeded the maximum background concentration. The elevated lead concentration may not be attributable to natural site conditions, but rather to site contamination.

Background concentrations have not been established for four of the metals detected in surface soils at 2BG. Therefore, aluminum, beryllium, iron, and thallium will require further evaluation to determine whether they are attributable to site contamination.

5.3.2 Subsurface Soil

As with surface soils, 7 of the metals detected in subsurface soils exceeded the RBC in at least 1 of 16 samples, including aluminum, arsenic, beryllium, iron, lead, manganese, and thallium. As presented in Table 5-2, detected concentrations of arsenic in subsurface soils were below the maximum background concentration, and this inorganic compound is attributable to naturally

Table 5-2

Statistical Quantities for Metal Concentrations in Soils
Site Investigation of Reservoir No. 2 Burning Ground
Former Plum Brook Ordnance Works,Sandusky, Ohio

surface soil

Metal	a	b	1-b/a	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Median Concentration (mg/kg)	Average Concentration (mg/kg)	Standard Deviation	75th % ile	95th %ile	95% UTL
ALUMINUM	8	0	100.00	6780.00	14900.00	9900.00	9987.50	2305.32	11543.59	13779.75	11799.52
ANTIMONY	8	8	0.00	3.65	3.90	3.75	3.76	0.10	3.82	3.92	N/C
ARSENIC	8	0	100.00	5.10	9.60	7.65	7.49	1.83	8.72	10.49	9.15
BARIUM	8	0	100.00	67.60	212.00	118.45	129.28	62.73	171.62	232.46	208.38
BERYLLIUM	8	5	37.50	0.31	0.78	0.32	0.46	0.20	0.59	0.79	0.65
CADMIUM	8	6	25.00	0.31	0.78	0.32	0.42	0.19	0.54	0.73	0.57
CHROMIUM	8	0	100.00	11.80	24.30	16.75	17.30	4.36	20.24	24.47	21.08
COBALT	8	1	87.50	3.15	16.40	9.35	9.58	3.92	12.23	16.03	15.37
COPPER	8	0	100.00	15.80	124.00	35.55	51.95	41.58	80.02	120.35	134.51
IRON	8	0	100.00	15500.00	25100.00	19150.00	19725.00	3477.58	22072.37	25445.62	22389.55
LEAD	8	0	100.00	39.60	1000.00	270.00	352.74	319.77	568.58	878.75	1748.40
MANGANESE	8	0	100.00	191.00	600.00	297.50	334.50	134.45	425.25	555.66	455.52
MERCURY	8	0	100.00	0.04	0.18	0.11	0.11	0.06	0.15	0.20	0.20
NICKEL	8	0	100.00	15.80	38.50	25.55	26.16	9.90	32.84	42.44	36.74
SELENIUM	8	2	75.00	0.31	1.00	0.76	0.72	0.28	0.91	1.18	1.14
SILVER	8	7	12.50	0.60	1.20	0.65	0.70	0.20	0.84	1.03	0.83
THALLIUM	8	3	62.50	0.60	2.10	1.25	1.20	0.55	1.57	2.11	1.88
VANADIUM	8	0	100.00	18.40	30.00	22.80	23.70	3.88	26.32	30.08	26.72
ZINC	8	0	100.00	55.20	445.00	110.95	184.35	150.38	285.86	431.72	510.79

Table 5-2

Statistical Quantities for Metal Concentrations in Soils
Site Investigation of Reservoir No. 2 Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

Subsurface soil

Metal	a	b	(1-b/a)	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Median Concentration (mg/kg)	Average Concentration (mg/kg)	Standard Deviation	75th % ile	95th %ile	95% UTL
ALUMINUM	16	0	100.00	6100.00	17000.00	12100.00	12471.25	2675.55	14277.25	16872.53	14054.97
ANTIMONY	16	16	0.00	3.40	3.80	3.65	3.64	0.11	3.72	3.83	N/C
ARSENIC	16	0	100.00	4.10	18.30	9.75	9.97	4.16	12.78	16.81	12.65
BARIUM	16	0	100.00	39.30	140.00	85.65	89.58	29.55	109.53	138.19	107.18
BERYLLIUM	16	7	56.25	0.30	0.88	0.66	0.55	0.24	0.71	0.94	0.72
CADMIUM	16	15	6.25	0.29	0.84	0.31	0.34	0.13	0.43	0.56	0.38
CHROMIUM	16	0	100.00	10.50	24.80	18.85	18.46	3.34	20.71	23.95	20.30
COBALT	16	0	100.00	6.50	21.20	12.15	12.68	4.68	15.84	20.39	15.39
COPPER	16	0	100.00	11.70	172.00	25.65	35.00	37.11	60.05	96.04	44.69
IRON	16	0	100.00	17600.00	37300.00	26900.00	26356.25	6062.89	30448.70	36329.70	29407.66
LEAD	16	0	100.00	10.80	232.00	14.40	30.04	54.12	66.57	119.06	37.87
MANGANESE	16	0	100.00	157.00	1390.00	456.50	592.63	410.96	870.02	1268.65	902.45
MERCURY	16	14	12.50	0.02	0.12	0.02	0.03	0.03	0.05	0.07	0.04
NICKEL	16	0	100.00	17.10	49.50	27.45	31.33	11.02	38.77	49.46	37.52
SELENIUM	16	13	18.75	0.29	1.20	0.31	0.40	0.24	0.56	0.79	0.48
SILVER	16	15	6.25	0.55	1.30	0.60	0.65	0.18	0.77	0.94	0.71
THALLIUM	16	6	62.50	0.60	3.30	1.50	1.53	0.89	2.13	3.00	2.24
VANADIUM	16	0	100.00	20.00	34.30	28.05	27.20	4.07	29.95	33.89	29.23
ZINC	16	0	100.00	52.90	270.00	68.95	83.28	50.95	117.67	167.09	98.09

Explanation:
a - Number of samples.
b - Number of nondetects.
1-b/a - Frequency of detection.
N/C - Not calculated.

occurring conditions. However, the MDCs of lead and manganese in subsurface soils exceed the maximum background concentrations, and these metals may be attributable to site contamination.

Background concentrations have not been established for four of the metals detected in subsurface soils at 2BG. Therefore, aluminum, beryllium, iron, and thallium will require further evaluation to determine whether they are attributable to site contamination.

5.4 Additional Burning Ground

5.4.1 Surface Soil

Ten of the 18 metals detected in surface soils at ABG exceeded the respective RBCs, including aluminum, arsenic, beryllium, cadmium, copper, iron, lead, manganese, thallium, and zinc. Five of these (arsenic, copper, lead, manganese, and zinc) have established background concentrations (Table 5-3). The MDC of each of these five metals exceeded the maximum background concentration and may be attributable to site contamination. Five of the metals exceeding RBCs (aluminum, beryllium, cadmium, iron, and thallium) do not have established background concentrations and will require further evaluation to determine whether they are attributable to site contamination.

5.4.2 Subsurface Soil

Of the metals detected in the ABG subsurface soils, five exceeded the respective RBC in at least one subsurface sample, including aluminum, arsenic, beryllium, iron, and manganese. The detected concentrations of arsenic were below the maximum background concentration and are attributable to naturally occurring conditions. The MDC of manganese exceeded the background concentration, and this metal may be attributable to site contamination. The remaining three inorganic compounds that exceeded RBCs (aluminum, beryllium, and iron) do not have established background concentrations and will require further evaluation.

5.5 Wastewater Disposal Plant No. 2

5.5.1 Surface Soil

Six of the detected metals in surface soils at WP2 exceeded the respective RBCs, including aluminum, arsenic, iron, lead, manganese, and thallium. As presented in Table 5-4, the MDCs of arsenic and manganese in surface (and subsurface) soils from this site were below the maximum background concentration and are attributable to naturally occurring conditions. However, the

Table 5-3

Statistical Quantities for Metal Concentrations in Soils
Site Investigation of Additional Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

Metal	a	b	(1-b/a)	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Median Concentration (mg/kg)	Average Concentration (mg/kg)	Standard Deviation	75th % ile	95th %ile	95% UTL
ALUMINUM	12	0	100.00	3670	9370	5340.00	5557.50	1695.08	6701.68	8345.91	6573.10
ANTIMONY	12	12	0.00	3.15	3.9	3.53	3.54	0.21	3.68	3.88	N/C
ARSENIC	12	0	100.00	1.8	39.1	12.95	14.19	10.62	21.36	31.67	36.35
BARIUM	12	1	91.67	11.65	98.6	41.75	45.01	23.44	60.84	83.58	67.17
BERYLLIUM	12	8	33.33	0.26	1	0.30	0.46	0.26	0.63	0.88	0.63
CADMIUM	12	8	33.33	0.26	9.2	0.30	1.81	3.36	4.08	7.34	5.75
CHROMIUM	12	0	100.00	4.8	40.3	7.35	11.58	10.60	18.73	29.01	17.43
COBALT	12	6	50.00	2.6	17.4	4.70	7.05	5.35	10.65	15.84	12.37
COPPER	12	1	91.67	1.45	2720	35.05	296.94	771.38	817.62	1565.85	7498.27
IRON	12	0	100.00	6620	159000	26400.00	41101.67	49417.63	74458.56	122393.66	91218.50
LEAD	12	0	100.00	5	690	50.15	154.21	229.02	308.80	530.95	1366.31
MANGANESE	12	0	100.00	38.3	1020	132.00	230.59	286.69	424.11	702.20	550.46
MERCURY	12	5	58.33	0.0185	1.2	0.04	0.18	0.35	0.41	0.75	0.73
NICKEL	12	0	100.00	5.4	117	20.50	31.11	33.87	53.97	86.83	69.56
SELENIUM	12	4	66.67	0.28	1.8	0.74	0.78	0.47	1.10	1.56	1.29
SILVER	12	11	8.33	0.5	1.2	0.60	0.64	0.18	0.76	0.94	0.72
THALLIUM	12	6	50.00	0.55	5.5	0.90	1.66	1.53	2.70	4.19	3.27
VANADIUM	12	2	83.33	3	22.2	12.50	12.07	5.58	15.83	21.25	19.59
ZINC	12	0	100.00	20.1	2720	44.55	306.03	768.79	824.97	1570.69	1081.67

Table 5-3

Statistical Quantities for Metal Concentrations in Soils
Site Investigation of Additional Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio

Metal	a	b	(1-b/a)	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Median Concentration (mg/kg)	Average Concentration (mg/kg)	Standard Deviation	75th % ile	95th %ile	95% UTL
ALUMINUM	12	0	100.00	2650	9880	5630.00	5951.67	2147.57	7401.28	9484.42	7471.11
ANTIMONY	12	12	0.00	3.45	4.35	3.65	3.67	0.24	3.83	4.06	N/C
ARSENIC	12	1	91.67	0.6	6.1	2.90	3.04	1.41	3.99	5.36	4.68
BARIUM	12	7	41.67	11.45	111	12.43	28.40	29.90	48.58	77.57	48.81
BERYLLIUM	12	11	8.33	0.285	0.66	0.31	0.34	0.10	0.41	0.51	0.38
CADMIUM	12	12	0.00	0.285	0.36	0.31	0.31	0.02	0.32	0.34	N/C
CHROMIUM	12	0	100.00	6	12.7	9.30	9.05	1.74	10.22	11.91	10.11
COBALT	12	5	58.33	3.05	8.3	6.25	5.45	2.07	6.85	8.86	7.12
COPPER	12	3	75.00	1.45	24.2	4.25	6.63	6.33	10.90	17.04	13.80
IRON	12	0	100.00	6830	32700	10830.00	12162.50	6760.82	16726.06	23284.06	15289.41
LEAD	12	0	100.00	3.3	54.8	4.80	9.29	14.51	19.09	33.17	14.73
MANGANESE	12	0	100.00	55.7	1830	108.30	262.29	498.52	598.79	1082.35	505.92
MERCURY	12	11	8.33	0.019	0.12	0.02	0.03	0.03	0.05	0.08	0.04
NICKEL	12	0	100.00	6.9	20.7	8.35	9.80	3.96	12.47	16.31	11.85
SELENIUM	12	12	0.00	0.285	0.36	0.31	0.31	0.02	0.32	0.34	N/C
SILVER	12	12	0.00	0.55	0.7	0.60	0.60	0.04	0.63	0.67	N/C
THALLIUM	12	12	0.00	0.55	0.7	0.60	0.60	0.04	0.63	0.67	N/C
VANADIUM	12	0	100.00	14.6	30.6	18.95	19.24	4.42	22.23	26.51	21.64
ZINC	12	0	100.00	17.6	105	19.25	30.89	25.26	47.94	72.45	42.91

Explanation: a - Number of samples.
b - Number of nondetects.
1-b/a - Frequency of detection.
N/C - Not calculated.

Table 5-4

Statistical Quantities for Metal Concentrations in Soils
Site Investigation of Wastewater Disposal Plant No. 2
Former Plum Brook Ordnance Works, Sandusky, Ohio

Metal	a	b	(1-b/a)	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Median Concentration (mg/kg)	Average Concentration (mg/kg)	Standard Deviation	75th % ile	95th %ile	95% UTL
ALUMINUM	5	0	100.00	3610.00	10600.00	7470.00	7218.00	2700.49	9040.83	11660.31	13017.38
ANTIMONY	5	5	0.00	3.30	3.80	3.60	3.58	0.19	3.71	3.90	N/C
ARSENIC	5	0	100.00	4.90	18.80	6.70	8.82	5.65	12.64	18.12	19.27
BARIUM	5	0	100.00	35.60	64.70	44.90	47.24	11.16	54.77	65.59	61.26
BERYLLIUM	5	5	0.00	0.28	0.32	0.30	0.30	0.02	0.31	0.33	N/C
CADMIUM	5	5	0.00	0.28	0.32	0.30	0.30	0.02	0.31	0.33	N/C
CHROMIUM	5	0	100.00	8.60	17.40	12.00	12.40	3.69	14.89	18.47	17.88
COBALT	5	3	40.00	2.75	9.80	3.10	5.03	3.08	7.11	10.10	12.66
COPPER	5	0	100.00	14.00	35.10	17.20	20.28	8.49	26.01	34.24	32.14
IRON	5	0	100.00	9060.00	28400.00	17000.00	18312.00	7028.64	23056.33	29874.11	32899.99
LEAD	5	0	100.00	12.50	514.00	27.10	137.66	214.23	282.26	490.07	35879.92
MANGANESE	5	0	100.00	96.30	458.00	314.00	294.46	139.70	388.76	524.26	870.96
MERCURY	5	2	60.00	0.02	0.29	0.11	0.13	0.12	0.20	0.32	8.10
NICKEL	5	0	100.00	9.10	23.60	18.90	17.52	5.34	21.13	26.31	28.40
SELENIUM	5	5	0.00	0.28	0.32	0.30	0.30	0.02	0.31	0.33	N/C
SILVER	5	5	0.00	0.55	0.65	0.60	0.60	0.04	0.62	0.66	N/C
THALLIUM	5	4	20.00	0.55	1.50	0.60	0.78	0.40	1.05	1.44	1.37
VANADIUM	5	0	100.00	11.50	22.80	21.90	18.88	5.05	22.29	27.19	27.44
ZINC	5	0	100.00	52.20	125.00	69.80	76.06	28.67	95.41	123.23	116.13

Table 5-4

Statistical Quantities for Metal Concentrations in Soils
Site Investigation of Wastewater Disposal Plant No. 2
Former Plum Brook Ordnance Works. Sandusky, Ohio

Metal	a	b	(1-b/a)	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Median Concentration (mg/kg)	Average Concentration (mg/kg)	Standard Deviation	75th % ile	95th %ile	95% UTL
ALUMINUM	5	0	100.00	6270.00	14600.00	13200.00	11364.00	3556.79	13764.83	17214.91	18260.28
ANTIMONY	5	4	20.00	3.40	106.00	3.60	24.04	45.82	54.97	99.41	5300.11
ARSENIC	5	0	100.00	7.90	10.10	9.10	9.06	0.79	9.59	10.36	N/C
BARIUM	5	0	100.00	45.30	87.00	65.90	66.28	18.25	78.60	96.30	93.61
BERYLLIUM	5	2	60.00	0.28	0.76	0.61	0.53	0.22	0.67	0.88	1.04
CADMIUM	5	4	20.00	0.28	0.71	0.30	0.38	0.19	0.50	0.68	0.64
CHROMIUM	5	0	100.00	14.90	20.70	19.30	18.66	2.21	20.15	22.29	21.33
COBALT	5	1	80.00	3.15	13.00	9.60	8.85	3.99	11.54	15.41	23.40
COPPER	5	0	100.00	22.40	40.80	23.10	26.48	8.01	31.89	39.66	35.88
IRON	5	0	100.00	19200.00	29600.00	24900.00	24420.00	4219.83	27268.39	31361.63	29628.16
LEAD	5	0	100.00	11.60	2870.00	12.80	585.02	1277.35	1447.23	2686.25	496935370.45
MANGANESE	5	0	100.00	309.00	598.00	437.00	449.40	103.54	519.29	619.72	592.05
MERCURY	5	4	20.00	0.02	1.40	0.02	0.30	0.62	0.71	1.31	1531.60
NICKEL	5	0	100.00	23.10	32.20	26.60	26.80	3.88	29.42	33.18	31.22
SELENIUM	5	5	0.00	0.28	0.32	0.30	0.30	0.01	0.31	0.32	N/C
SILVER	5	3	40.00	0.55	1.40	0.65	0.88	0.39	1.14	1.52	1.61
THALLIUM	5	3	40.00	0.55	1.30	0.65	0.86	0.36	1.10	1.45	1.51
VANADIUM	5	0	100.00	20.40	35.90	22.80	27.22	7.44	32.24	39.46	37.43
ZINC	5	0	100.00	59.90	141.00	64.40	81.82	34.15	104.87	137.99	129.61

Explanation: a - Number of samples.
b - Number of nondetects.
1-b/a - Frequency of detection.
N/C - Not calculated.

MDC of lead in surface soils exceeded the background concentration and may be attributable to site contamination. Background concentrations have not been established for aluminum, iron, and thallium, and these constituents will require further evaluation to determine whether they are attributable to site contamination.

5.5.2 Subsurface Soil

Of the 18 metals detected in subsurface soil samples collected at WP2 area, 8 exceeded the RBCs in at least one of the five samples, including aluminum, antimony, arsenic, beryllium, iron, lead, manganese, and thallium. The MDCs of arsenic and manganese in subsurface soils from this site were below the maximum background concentration and are attributable to naturally occurring conditions (Table 5-4). However, the MDCs of lead and antimony in subsurface soils exceeded the background concentrations and may be attributable to site contamination. Background concentrations have not been established for aluminum, beryllium, iron, and thallium, and these constituents will require further evaluation to determine whether they are due to site contamination.

5.6 Power House No. 2 Ash Pit

5.6.1 Surface Soil

Of the metals present in surface soils at the PH2 Ash Pit area, six exceeded the RBCs in at least seven samples, including aluminum, arsenic, beryllium, iron, manganese, and thallium. Arsenic was detected at concentrations below the MDC and is attributable to naturally occurring conditions, while the maximum detected concentration of manganese exceeded the background concentration and may be attributable to site contamination. Background concentrations have not been established for aluminum, beryllium, iron, and thallium; therefore, these detected metals will require further evaluation.

5.6.2 Subsurface Soil

A total of 17 metals were present in subsurface soils at the PH2 Ash Pit area, of which 6 exceeded the RBCs in at least five samples, including aluminum, arsenic, beryllium, iron, manganese, and thallium. Arsenic was detected at concentrations below the background concentration (Table 5-5), while the MDC of manganese exceeded the background concentration and may be attributable to site contamination. Four detected metals, aluminum, beryllium iron, and thallium, will require further evaluation as background concentrations have not been established for the inorganic compounds.

Table 5-5

Statistical Quantities for Metal Concentrations in Soils
Site Investigation of Power House No. 2 Ash Pit
Former Plum Brook Ordnance Works, Sandusky, Ohio

Metal	a	b	(1-b/a)	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Median Concentration (mg/kg)	Average Concentration (mg/kg)	Standard Deviation	75th % ile	95th %ile	95% UTL
ALUMINUM	12	0	100.00	8210.00	13900.00	10700.00	10875.00	1929.50	12177.41	14049.03	12015.92
ANTIMONY	12	12	0.00	3.80	5.35	4.70	4.61	0.52	4.96	5.46	4.91
ARSENIC	12	0	100.00	6.30	21.20	15.65	14.66	5.14	18.12	23.11	19.21
BARIUM	12	0	100.00	74.30	141.00	107.50	111.40	22.14	126.34	147.82	125.25
BERYLLIUM	12	0	100.00	0.73	1.60	1.20	1.14	0.24	1.31	1.54	1.30
CADMIUM	12	10	16.67	0.32	1.40	0.41	0.53	0.35	0.76	1.10	0.70
CHROMIUM	12	0	100.00	1.90	17.70	14.45	12.53	4.75	15.73	20.34	20.76
COBALT	12	0	100.00	9.40	19.00	14.85	14.63	2.44	16.27	18.64	16.18
COPPER	12	0	100.00	16.80	38.60	25.55	26.58	5.93	30.58	36.34	30.30
IRON	12	0	100.00	21300.00	107000.00	38350.00	45583.33	25553.89	62832.21	87619.49	62426.58
LEAD	12	0	100.00	11.70	32.20	18.95	20.06	5.73	23.92	29.48	23.68
MANGANESE	12	0	100.00	165.00	1020.00	408.50	423.08	235.04	581.73	809.72	598.71
MERCURY	12	3	75.00	0.02	0.14	0.07	0.07	0.04	0.09	0.13	0.11
NICKEL	12	0	100.00	21.40	41.90	26.60	28.03	5.63	31.83	37.29	31.09
SELENIUM	12	1	91.67	0.34	2.60	1.85	1.73	0.67	2.19	2.84	2.77
SILVER	12	9	25.00	0.65	2.00	0.83	1.03	0.46	1.34	1.78	1.30
THALLIUM	12	5	58.33	0.65	8.50	1.90	2.68	2.41	4.31	6.65	6.01
VANADIUM	12	1	91.67	3.25	24.90	19.30	17.12	6.75	21.68	28.22	27.13
ZINC	12	0	100.00	45.70	127.00	78.50	78.97	21.85	93.72	114.91	93.08

Table 5-5

Statistical Quantities for Metal Concentrations in Soils
Site Investigation of Power House No. 2 Ash Pit
Former Plum Brook Ordnance Works, Sandusky, Ohio

Metal	a	b	(1-b/a)	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Median Concentration (mg/kg)	Average Concentration (mg/kg)	Standard Deviation	75th % ile	95th %ile	95% UTL
ALUMINUM	12	0	100.00	3520.00	9920.00	7025.00	7320.83	2046.00	8701.88	10686.50	8837.42
ANTIMONY	12	12	0.00	3.25	3.80	3.45	3.49	0.18	3.61	3.79	N/C
ARSENIC	12	0	100.00	3.60	7.10	4.90	5.07	0.96	5.71	6.64	5.62
BARIUM	12	0	100.00	29.90	90.30	57.30	59.53	20.67	73.48	93.53	74.44
BERYLLIUM	12	7	41.67	0.27	0.76	0.31	0.46	0.22	0.61	0.82	0.62
CADMIUM	12	12	0.00	0.27	0.32	0.29	0.29	0.02	0.30	0.32	N/C
CHROMIUM	12	0	100.00	6.10	14.20	10.05	10.40	2.57	12.13	14.63	12.11
COBALT	12	0	100.00	5.60	24.70	12.00	12.73	5.23	16.26	21.33	16.38
COPPER	12	0	100.00	8.30	24.70	13.50	15.11	4.78	18.34	22.98	18.29
IRON	12	0	100.00	10500.00	23700.00	17350.00	17891.67	4550.02	20962.93	25376.44	20960.52
LEAD	12	0	100.00	6.10	15.10	10.40	9.65	2.49	11.33	13.75	11.21
MANGANESE	12	0	100.00	82.10	1560.00	282.00	407.68	408.57	683.46	1079.77	797.85
MERCURY	12	11	8.33	0.02	0.04	0.02	0.02	0.01	0.02	0.03	0.02
NICKEL	12	0	100.00	13.80	35.20	22.00	23.80	7.76	29.04	36.56	29.26
SELENIUM	12	10	16.67	0.27	0.81	0.29	0.36	0.17	0.48	0.65	0.45
SILVER	12	10	16.67	0.55	1.60	0.60	0.72	0.33	0.94	1.26	0.88
THALLIUM	12	7	41.67	0.55	2.40	0.63	1.06	0.65	1.50	2.13	1.55
VANADIUM	12	0	100.00	7.50	21.10	14.25	14.28	3.73	16.80	20.41	16.88
ZINC	12	0	100.00	35.30	78.50	54.80	57.33	16.81	68.68	84.98	68.84

Explanation: a - Number of samples.
b - Number of nondetects.
1-b/a - Frequency of detection.
N/C - Not calculated.

6.0 Conclusions and Recommendations

6.1 Summary

This chapter summarizes the analytical results and data comparison to applicable screening criteria and background concentrations for various areas as discussed in previous chapters. Results and comparisons are presented for both surface soil and subsurface soil in each investigative area. The depth discrimination is believed to be necessary for the characterization of the site soils in terms of spacial distribution of contaminants that are influenced by both vertical and lateral migration.

6.1.1 Reservoir No. 2 Burning Ground

A total of 24 soil samples were collected, with 3 discrete samples from each of the eight boring locations. The soil samples were collected from depths of 0 to 0.5 foot (surface soil), 2 to 3 feet (subsurface soil), and 6 to 7 feet (subsurface soil), respectively.

Surface Soil

- VOCs were not detected in any surface soils in this area.
- Fourteen SVOCs were detected in several locations; benzo(a)pyrene, 2,4-DNT, and 2,6-DNT were detected at concentrations that exceeded the RBCs.
- Pesticides were not detected; but Aroclor 1260 exceeded the RBC in most boring locations.
- Four nitroaromatic compounds (1,3,5-TNB, 2,4,6-TNT, 2,4-DNT, and 2,6-DNT) were reported at concentrations exceeding the RBCs in selected locations.
- Total cyanide was detected in one sample at a concentration below the RBC.
- Seven of 18 detected metals exceeded the respective RBCs. The comparison against background data indicate that arsenic and manganese concentrations appear to be at background levels while lead may be due to site contamination. Background data are not available for aluminum, beryllium, iron, and thallium.

Subsurface Soil

- Four VOCs were detected at concentrations significantly below respective RBCs.

- Three SVOCs were reported in several locations; however, only 2,4-DNT and 2,6-DNT exceeded the RBC in selective samples.

- Pesticides were not detected; Aroclor 1260 was detected at one sample with a concentration that exceeded the RBC.

- Three nitroaromatic compounds (2,4,6-TNT, 2,4-DNT, and 4-amino-2,6-DNT) were detected at concentrations that exceeded the RBCs.

- Total cyanide was not reported.

- Seven of 18 metals exceeded the RBCs. Of these, arsenic is considered to be present at background levels, while lead and manganese are possibly due to site contamination. Background data are not available for aluminum, beryllium, iron, and thallium.

6.1.2 Additional Burning Ground

A total of 24 soil samples were collected, with 2 discrete samples from each of the 12 boring locations. The soil samples were collected from depths of 0 to 0.5 foot (surface soil) and 2 to 3 feet (subsurface soil), respectively.

Surface Soil

- Two VOCs were detected in surface soils at concentrations below the RBCs.

- SVOCs were widely detected in surface soils; however, only four PAHs and 2,4-DNT exhibited concentrations exceeding the RBCs.

- Pesticides were not detected; Aroclor 1260 was detected at three locations at concentrations exceeding the RBC.

- One nitroaromatic compound (2,4-DNT) was detected in one location at a concentration exceeding the RBC.

- Total cyanide was not detected.

- Ten inorganic compounds were detected at concentrations that exceeded the RBCs. The comparison against background data indicate that arsenic, copper, lead, manganese, and zinc may be the result of site contamination. Background data are not available for aluminum, beryllium, cadmium, iron, and thallium.

Subsurface Soil

- Five VOCs were detected at concentrations below their respective RBCs.
- Three SVOCs were present in selected locations at concentrations below the RBCs.
- Pesticides and PCBs were not detected in the subsurface soils.
- One nitroaromatic compound was detected, but the concentration was significantly below the RBC.
- Total cyanide was not detected.
- Five of 14 detected metals exceeded the RBCs. Comparison against background data indicate that arsenic appears to be at background levels, while manganese may be due to site contamination. Background data are not available for aluminum, beryllium, and iron.

6.1.3 Wastewater Disposal Plant No. 2

In addition to 20 soil samples collected to screen for nitroaromatic compounds, 10 confirmation soil samples were collected from 10 boring locations for chemical analyses.

Surface Soil

- One VOC was detected at two locations at concentrations below the RBC.
- SVOCs were widely detected in surface soils. However, only five PAH compounds were detected at concentrations exceeding the RBCs.
- Pesticides were not reported. Aroclor 1260 was detected at several locations at concentrations above the RBC.
- Two nitroaromatic compounds were detected once each at concentrations below their RBCs.
- Total cyanide was not detected.
- Six of the detected metals exceeded the RBCs. Results of the background comparison indicate that arsenic and manganese appear to be at background levels, while lead may be due to site contamination. Background data are not available for aluminum, iron, and thallium.

Subsurface Soil

- One VOC was detected at concentrations significantly below the RBC.
- A total of 16 SVOCs were detected in two locations. Three PAHs were detected at concentrations that exceeded the RBCs.
- Pesticides were not detected; Aroclor 1260 was detected in one location at a concentration approximately 18 times greater than the RBC.
- Two nitroaromatic compound were detected, but the concentrations were below the RBCs.
- Total cyanide was not detected.
- Eight of the detected metals exceeded the RBCs. Among them, antimony was detected once and was not reported in other soil samples at the WP2 site, and was not detected in any soils in other areas being investigated. Comparison against the background data indicate that arsenic and manganese appear to be present at background levels, while antimony and lead are possibly the result of site contamination. Background data are not available for aluminum, beryllium, iron, and thallium.

6.1.4 Power House No. 2 Ash Pit

A total of 24 soil samples were collected, with 2 discrete samples from each of the 12 boring locations. The soil samples were collected from the depths of 0 to 0.5 foot (surface soil) and 2 to 3 feet (subsurface soil), respectively.

Surface Soil

- Three VOCs were detected at concentrations well below the RBCs.
- A total of 14 SVOCs were detected. However, only benzo(a)pyrene was present at a concentration that exceeded the RBC.
- PCBs were not detected. However, three pesticides (4,4'-dichlorodiphenyl-dichloroethene, 4,4'-dichlorodiphenyl-trichloroethane, and methoxychlor) were detected in several locations at concentrations below the respective RBCs.
- Total cyanide was detected in three surficial soil samples at concentrations below the RBC.
- Six of 18 metals were detected at concentrations exceeding the RBCs. Comparisons against the background data indicate that arsenic is present at background levels,

while manganese may be the result of site contamination. Background data for aluminum, beryllium, iron, and thallium are not available.

Subsurface Soil

- Four VOCs were detected at concentrations well below the respective RBCs.
- Two SVOCs were reported in several locations at concentrations below the RBCs.
- Pesticides/PCBs and cyanide were not detected.
- A total of 17 metals were detected, of which 6 were present at concentrations exceeding the RBCs. Comparisons against the background data indicate that arsenic appears to be at background levels, while manganese may be due to site contamination. Background data for aluminum, beryllium, iron, and thallium are not available.

6.2 Conclusions

The following conclusions are derived for each of the four segregated areas within the former PBOW based on the results of the current investigations.

6.2.1 Reservoir No. 2 Burning Ground

The geophysical survey data and trenching activities along with the analytical data indicated that this area was used previously as a dump/burning ground. A considerable amount of metallic and other debris are buried at depths 2 to 3 feet below grade. The exact boundary of the burning ground could possibly be larger than the area investigated.

Limited soil contamination has been identified in locations exhibiting geophysical anomalies. Soil contamination was evident primarily in shallow soils (less than 3 feet). The major chemicals of potential concern in soils of this area included one SVOC (benzo(a)pyrene), metals, PCBs (Aroclor 1260), and nitroaromatic compounds. Nitroaromatic compounds were detected at concentrations as high as 910,000 µg/kg. In addition, total cyanide was detected in one surface soil location.

Contaminants of potential concern in subsurface soils include nitroaromatic compounds, Aroclor 1260, and metals.

6.2.2 Additional Burning Ground

The geophysical survey data indicated that this area was possibly used previously as a burning ground. A considerable amount of cinders were observed on the ground surface. There is also evidence indicating other suspected uses of this site (e.g., vehicle maintenance and fueling depot). There is an apparent geophysical anomaly extending beyond the east boundary of the survey area.

Limited soil contamination has been identified, primarily in the surface soils. The major chemicals of concern in surface soils included PAHs, metals, and Aroclor 1260. The maximum PCB concentration was found to be 60 times higher than the RBC value. Nitroaromatic compounds were detected at selected locations, but only one detection exceeded the RBC.

Contaminants of potential concern in subsurface soils are limited to metals; detected concentrations of VOCs, SVOCs, and nitroaromatic compounds were well below the established RBCs.

6.2.3 Wastewater Disposal Plant No. 2

Although the screening sample results did not indicate any soil contamination by nitroaromatic compounds, the confirmation sampling identified limited soil contamination by other chemicals. Most organic contaminants were limited to the surface soils except in one location where the subsurface soil was also found to be impacted by organic compounds. The metal concentrations generally increased with depth. The major chemicals of concern for both surface and subsurface soils in this area include SVOCs, metals, and PCB. A few nitroaromatic compounds were also detected, but at concentrations below the RBCs.

6.2.4 Power House No. 2 Ash Pit

This area was covered with a thick layer of ash and the discharge pipe was still lying on the ground during the field investigation. The characteristic soil samples were collected from the native soil underneath the ash layer. Limited soil contamination by organic chemicals has been identified in surface soils. However, all detected concentrations were below the RBCs except for one PAH compound. The major chemicals of concern in soils of this area include metals and total cyanide. A few pesticides were also detected in this area, although the concentrations were significantly below the RBCs.

6.2.5 All Investigated Sites

For all investigated sites, both surface and subsurface soils were not notably impacted by VOCs. Several VOCs, often including aromatic hydrocarbons such as benzene, toluene, ethyl benzene, and xylene, were detected at low concentrations in both surface and subsurface soils. The detections were isolated with no recognizable pattern in their distribution and all detected concentrations were below the screening levels. Therefore, the presence of these VOCs in site soils is unlikely to cause environmental concern.

SVOCs were widely present in soils from all four sites. SVOCs were detected with greater frequency in surface soil than in the subsurface. The majority of the SVOCs detected at the investigated areas are PAHs and their degradation products, as would be expected from soils in the areas used as burning grounds or ash pits. Several SVOCs were detected at concentrations exceeding the respective RBCs.

With the exception of PH2 Ash Pit, the PCB isomer Aroclor 1260 was frequently detected in surficial soils at all sites with concentrations exceeding the RBC of 83 µg/kg. Nitroaromatic compounds were present in selected locations at three sites (samples were not collected for nitroaromatics at PH2 Ash Pit), with detected concentrations frequently exceeding the RBCs. The most commonly detected nitroaromatic compounds included 2,4,6-TNT, 2,4-DNT, and 2,6-DNT, with the maximum detection of 910,000 µg/kg (2,4,6-TNT, 2BGSO-03 [0 to 0.5 foot]) being 233 times higher than the corresponding RBC value. Cyanide was detected in surface or subsurface soils at selected locations at all sites except the ABG. The concentrations of cyanide were all below the RBC.

Soil sampling results from the site investigations have demonstrated that limited soil contamination by at least one or more of the contaminant suites including SVOCs (PAHs), metals, nitroaromatic compounds, PCBs, and cyanide are present in all areas that were investigated. It appears that surface soil contaminations by organic chemicals are generally more widespread and notable than in the subsurface in all areas, while the magnitude of metal contaminations in the subsurface soils were statistically higher than in the surface. Although the vertical and horizontal extend of the soil contamination in each area could only be established with a greater certainty through more extensive investigations, the major chemicals of concern in each area have been established based on the comparison of the analytical data with the RBCs and with the background data.

6.3 Recommendations

Based on the analytical results and conclusions of the investigations at various sites at the former PBOW, the following recommendations are made:

- Several metals (arsenic, copper, lead, manganese, and zinc in surface soils and antimony, lead, and manganese in subsurface soils) were detected at concentrations exceeding the RBC and the maximum background concentrations established by D&M. Other metals exceeding the RBCs (aluminum, beryllium, cadmium, iron, and thallium) were not detected or analyzed in the background samples. Therefore, it is recommended that background concentrations of inorganic compounds on the TAL list be evaluated further on a sitewide basis.

- With the possible exception of background sampling for inorganic compounds, no further action involving soil sampling at the ABG and PH2 Ash Pit is recommended.

- Additional soil sampling is necessary at 2BG (southern half of 2BG) and WP2 using a systematic grid sampling strategy to further determine the extent of nitroaromatic contamination (2BG), SVOCs, PCBs, and metals (WP2). The soil samples should be collected through the entire thickness of the overburden formation.

- A site-specific risk assessment should be performed at the ABG and PH2 Ash Pit to determine the necessity of further soil (or other media) investigations leading to site remediation or site closure. The data acquired during this investigation are considered adequate for a preliminary risk assessment at both sites.

- One monitoring well is needed in each area to acquire site-specific groundwater quality information with respect to the major chemicals of concern identified in each area. The type of monitoring well can be either an overburden or a bedrock well, depending on the thickness of the overburden. In addition to providing site-specific water quality data, these wells will be tied to the existing monitoring network to provide better groundwater flow direction data to assess the possibility of contaminant migration off site.

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APPENDIX A

GEOPHYSICAL SURVEY SUMMARY

APPENDIX A

GEOPHYSICAL SURVEY REPORT

RESERVOIR #2 BURN GROUND
ADDITIONAL BURN GROUND
PLUM BROOK ORDNANCE WORKS, OH

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A-III-1	Magnetic Base Station Data Plot (September 26, 1996)
A-III-2	Magnetic Base Station Data Plot (September 29,1996)
A-III-2	Magnetic Base Station Data Plot (September 30,1996)

List of Acronyms

E-W	east to west
EM	electromagnetic induction
EM-31	Geonics EM-31 Terrain Conductivity Meter
G-856	Geometrics G-856 magnetometer
G-858G	Geometrics G-858G magnetic gradiometer
GPR	ground penetrating radar
GSSI	Geophysical Survey Systems Inc.
IT	IT Corporation
MHz	megahertz
N-S	north to south
ns	nanoseconds
nT	nanoTeslas

A.1.0 Introduction

IT Corporation (IT) conducted surface geophysical surveys at the Reservoir #2 Burn Ground, and Additional Burn Ground at Plum Brook Ordnance Works in Sandusky, Ohio from September 23 through October 2, 1996. The vicinity maps presented in Figures A-1 and A-2 show the survey areas with respect to other site features. This report contains a summary and interpretation of all data collected at the approximately 60,700 square-foot (1.4-acre) Reservoir #2 site, and the 250,000 square-foot (5.7 acre) Additional Burn Ground site.

Both surveys were designed using electromagnetic induction (EM), magnetometry, and ground penetrating radar (GPR) techniques to delineate the suspected area of the burn grounds and to locate any buried metallic debris from decontamination and burning of pipe material. The geophysical survey location map for the Reservoir #2 site (Figure A-3) shows the location of the final survey area which is located on the former NASA ball field. Figure A-3 includes surveyed coordinates (NASA Plum Brook System) for five points on the boundary of the geophysical area. The irregular configuration of the site boundary was defined by the area that was accessible to the instruments after extensive brush clearing conducted by NASA maintenance personnel.

The geophysical survey location map for the Additional Burn Ground site (Figure A-4) shows the location of the final survey area located north of and centered on the intersection of Fox Road and Snake Road. Figure A-4 includes surveyed coordinates (NASA Plum Brook System) for the four corner points of the survey area.

Field procedures used during the investigations are described in Chapter A.2.0. The data processing methods used and interpretation of the geophysical data are presented in Chapter A.3.0. Conclusions derived from the geophysical survey are presented in Chapter A.4.0. Attachment I contains the color contour maps of magnetic and EM data. Attachment II contains select GPR profiles. Attachment III presents data plots for the magnetic base station. Attachment IV presents a theoretical background discussion of the geophysical techniques used in this investigation.

A.2.0 Field Procedures

This chapter describes the field procedures and instruments used to conduct the investigations, including survey control, data acquisition, and field verification of geophysical anomalies.

A.2.1 Survey Control

Initially, reconnaissance scans were conducted with the EM-31 to determine whether large-scale anomalies (e.g., burn areas or metallic debris) were present within the site boundaries and to determine whether significant anomalies existed near the planned survey boundary. Following the reconnaissance scans, several anomalous areas were identified within the site boundaries; however, no anomalies were initially identified along the edge of the survey area. Subsequent to the initiation of data collection, it was determined that the southern boundary of the Reservoir #2 Burn Ground site had a sizable anomaly between local grid coordinates 160E to 220E. As shown on Figure A-3 the survey grid was expanded 20 feet to the south in this area in an attempt to fully delineate the observed anomaly. The grid expansion was limited due to thick vegetation. No adjustments were made to the Additional Burn Ground survey area.

Once the boundaries of the survey area were established, control points were marked with surveyor's paint on 10-foot centers throughout the site to provide the spatial control required of the investigation. After the geophysics grid was completed, all surface objects that could potentially affect the geophysical data (e.g., metal posts, power lines, burned material) were plotted on site maps so that anomalies caused by these objects could be correctly interpreted. Following field work, a licensed civil surveyor mapped key points along the edge of the survey areas. These locations are shown on Figures A-3 and A-4.

A.2.2 Geophysical Survey

EM equipment used to conduct the investigation consisted of a Geonics EM-31 terrain conductivity meter (EM-31) coupled to an Omnidata DL720 digital data logger. Magnetic instruments used during the investigation consisted of a Geometrics G-858G magnetic gradiometer (G-858G) for survey data acquisition, and a Geometrics G-856 magnetometer (G-856) for collecting base station data. Digital GPR equipment used to conduct the survey consisted of a Geophysical Survey Systems Inc. (GSSI) System-2P unit coupled to 200- and 400-megahertz (MHz) antennas. A Metrotech 9860 EM utility locator was used to verify

pipelines observed in the EM-31 and magnetic data. A detailed description of the equipment used, and a theoretical discussion of the geophysical methods applied are presented as Attachment IV.

A geophysical field instrument (EM-31 and G-858G) base station and a magnetic base station were established at fixed locations determined in the field to be clear of cultural interference (e.g., surface or subsurface metallic debris, fences, power lines, or metallic objects present as a result of human activity). The geophysical field instrument base station for the Reservoir #2 site was located within the survey boundary at local geophysical grid coordinate 215N, 207E, (as shown on Figure A-3). At the Additional Burn Ground site, the geophysical field instrument base station was located approximately 20 feet north of the survey boundary along line 200E (as shown on Figure A-4). The magnetic base station was located at the Additional Burn Ground site and was utilized for both surveys. It was located 200 feet due west of survey coordinate 230N, 0E (see Figure A-4). The Additional Burn Ground site is approximately 1.5 miles from the Reservoir #2 Burn Ground site, well within range for collecting valid magnetic base station data.

The base station magnetometer was time-synchronized with the G-858G field gradiometer and programmed to measure the intensity of the earth's magnetic field at 10-second intervals during the survey period. The base station data were recorded in the internal memory of the G-856 and were later used to drift-correct the magnetic field data for variations in the earth's magnetic field.

Prior to and immediately following the magnetic survey, approximately 60 total magnetic field readings were recorded with the G-858G at the field instrument base station to verify the instrument was operating properly during the survey period. Evaluation of field instrument base station data indicated the instrument was operating properly during the survey.

Magnetic survey data were collected at 0.5-second intervals (approximately 2.0- to 2.5-foot intervals) along north to south (N-S) oriented survey lines spaced 5 feet apart for a total of approximately 12,500 linear feet of survey coverage at the Reservoir #2 site and 50,500 linear feet at the Additional Burn Ground. The magnetic data were stored in the internal memory of the G-858G, along with corresponding line and station numbers and the time of acquisition.

Magnetic data from the G-858G and magnetic base station were downloaded to a laptop computer and screened in the field to assess data quality prior to completing the survey.

Prior to conducting the EM survey, the EM-31 was calibrated, the in-phase component was zeroed, and 20 readings of conductivity and in-phase component were recorded at the field instrument base station and stored in the digital data logger. Following each data collection session, the field instrument base station was reoccupied and 20 additional readings were collected and compared with the opening base station data set to determine if instrument drift had occurred. Evaluation of the EM-31 base station data indicated the instrument was operating properly during the investigation.

Conductivity and in-phase component data were collected with the EM-31 at 5-foot intervals along N-S and east to west (E-W) oriented survey lines spaced 10 feet apart for a total of approximately 12,500 linear feet of survey coverage at the Reservoir #2 Burn Ground, and 51,000 linear feet at the Additional Burn Ground. The EM-31 data were stored in the digital data logger programmed with appropriate line and station numbers. All EM field data were then downloaded to a laptop computer and line profiles were reviewed in the field using the DAT-31® program by Geonics to assess data quality prior to completing the survey.

A.2.3 Anomaly Verification

Following the field survey, color-enhanced contour maps of EM-31 and magnetic data representing the site were field-checked to differentiate between anomalies caused by surface features and pipelines and those caused by subsurface source materials. Subsurface features potentially caused by metallic pipelines were verified with the Metrotech 9860 EM utility locator. Select anomalies caused by subsurface features were carefully located in the field and marked on the site map for further characterization with digital GPR.

Thirty-two GPR profiles were acquired at the Reservoir #2 site for a total of approximately 2,030 linear feet of survey data. Twenty-seven GPR profiles were acquired at the Additional Burn Ground site for a total of approximately 2,145 linear feet of survey data. The locations of the profiles are shown on the geophysical survey location maps (Figures A-3 and A-4). The GPR profiles were field-reviewed in real time on a color monitor to assess data quality, then recorded in the internal memory of the unit.

A.3.0 Data Processing and Interpretation

This chapter describes the data processing procedures used and the interpreted results of the geophysical investigations.

A.3.1 Data Processing

Contour maps of magnetic and EM-31 data were generated using the GEOSOFT® geophysical mapping system. The maps were color-enhanced to aid in interpretation of subtle anomalies. The color-contour maps of the Reservoir #2 site are included as Figures A-I-1 through A-I-7 in Attachment I of this Appendix. Color maps for the Additional Burn Ground site are included as Figures A-I-8 through A-I-14.

Prior to map generation, the ASCII-format magnetic data files were screened so that line and station ranges and overall data quality could be assessed. The field data file names and corresponding base station data files were recorded on the data file tracking form. The magnetic base station and field instrument base station data were screened for data spikes caused by variations in the earth's magnetic field and/or potential instrument problems. Following data quality assessment, geometry corrections to field data files were made, if necessary, using a text editor. Data from both magnetometers were then entered into the MAGMAP® software by Geometrics, where the field data were drift-corrected.

Attachment III contains plots of total magnetic field versus time for the data recorded by the magnetic (G-856) base station during the three days of magnetic data collection at the two sites. Figures A-III-1 presents the G-856 data collected on September 26, 1996, during the Reservoir #2 survey. Figures A-III-2, and A-III-3 present G-856 data for September 29 and 30, 1996, during data collection for the Additional Burn Ground site. The plots depict the diurnal variations (or drift) in the earth's magnetic field as recorded by the G-856. Figure A-III-1 shows an overall increasing total magnetic field, with relatively numerous and abrupt variations. The maximum range of the total magnetic field as shown on Figure A-III-1 is approximately 50 nanoTeslas. Figure A-III-2 also shows an overall increasing total magnetic field, although with much fewer variations. Figure A-III-3 depicts a short period of time earlier in the day than the data from Figures A-III-1 and A-III-2 with a stable and slightly decreasing magnetic field. The G-856 data show normal diurnal magnetic field variations which indicates that the base station was working properly during the survey period.

Preliminary EM-31 data processing included screening the ASCII-format data files so that line and station ranges and overall data quality could be assessed. The data file names, including corresponding base station data files, were recorded on the data file tracking form. The base station data were reviewed and the quantitative instrument response for each file was recorded on the base station summary form. Following data quality assessment, geometry corrections to field data files were made, if necessary, using a text editor.

After final corrections were made to the magnetic and EM data, files containing station coordinates (X,Y) and the geophysical measurement (Z) were converted to GEOSOFT® format. The data files were then gridded, optionally filtered, or otherwise processed and color-contoured. The names of the files generated and processing parameters used were recorded on data processing forms. All completed forms and computer printouts of magnetic and EM-31 data collected during the investigation are retained in project files.

Profiles of GPR data were generated using GRADIX® GPR processing and interpretation software by Interpex. The data were processed using color-enhancement techniques to help discriminate between magnetic and EM-31 anomalies caused by buried metallic and non-metallic debris and those caused by variations in natural geologic materials. Select GPR profiles that most represent subsurface conditions at the site are presented as Figures A-II-1 through A-II-10 in Attachment II of this Appendix.

Prior to signal processing, the GPR data were screened so that line and station ranges and overall data quality could be assessed. The field data file names were checked and recorded on GPR Data Tracking Forms to establish a permanent record of the data. After assessing data quality, the profiles were preliminary processed to maximize the signal to noise ratio of significant reflections. Processing included color-enhancement and automatic gain control to balance trace amplitudes. The names of the files generated and processing parameters used were recorded on data processing forms. All completed data acquisition and processing forms and original plotted sections collected during the investigation are retained in project files.

A.3.2 Interpretation

The contour maps of magnetic and EM-31 data are included as Attachment I of this Appendix.

A total of seven maps are presented for each site, three magnetic maps and four EM-31 maps. Anomalies shown on the contour maps range from high to low values and from negative to positive, depending on the type of data displayed. Attachment IV contains a brief theoretical discussion of the EM induction, magnetic, and GPR methods and commonly observed instrument responses to near-surface source materials. The observed anomalies in the contour maps of total magnetic field for the upper and lower sensors have values above and below the average magnetic field intensity for northern Ohio. This is a complex result of the various controlling factors described in Attachment IV. The typical magnetic data response to near-surface ferrous metallic debris is an asymmetrical south high/north low signature. The characteristic EM-31 anomaly over near-surface metallic conductors consists of a narrow zone having strong negative amplitude centered over the target and a broader lobe of weaker, positive amplitude on either side of the target. As the depth of the target feature increases, the characteristic EM-31 response changes to a positive amplitude centered over the target.

Anomalies present on the contour maps of magnetic and EM-31 data were first field-checked and correlated with known surface metallic objects and other surface features so that anomalies caused by subsurface sources could be determined. Anomalies caused by surface metal are labeled as such on the contour maps and the geophysical interpretation map for each site.

Reservoir #2 Burn Ground. Contour maps for the Reservoir #2 Burn Ground site are presented as Figures A-I-1 through A-I-7 in Attachment I. Maps of total magnetic field for the lower sensor, total magnetic field for the upper sensor, and vertical magnetic gradient data are presented as Figures A-I-1 through A-I-3, respectively. Contour maps of EM-31 conductivity and in-phase component data collected along N-S survey lines are presented as Figures A-I-4 and A-I-5, respectively. Contour maps of EM-31 conductivity and in-phase component data collected along E-W survey lines are presented as Figures A-I-6 and A-I-7, respectively. Magnetic anomalies are labeled only on the maps of total magnetic field and EM-31 anomalies are labeled only on the maps of the data collected along N-S lines. No GPR profiles are presented for the Reservoir #2 site since they were not clearly helpful in further delineating anomalies identified in the EM-31 and magnetic data. A geophysical interpretation map showing the locations of surface and subsurface features associated with observed geophysical anomalies is presented as Figure A-5.

Two prominent features in the contour maps of magnetic and EM-31 data collected during the investigation (Figures A-I-1 through A-I-7) are anomalies caused by a subsurface utility (pipe) that crosses the northwest corner of the site, and by surface metal remnants of the old ball field batting cage in the northeast corner of the site. Eight geophysical anomalies caused by features other than surface metal and buried pipelines are discussed in the following text, and shown on the contour maps and the Geophysical Interpretation Map (Figure A-5). A number of smaller anomalies interpreted to be isolated metallic objects, are not discussed but are shown on the Geophysical Interpretation Map.

Anomaly 1 occurs as a small magnetic feature along the northern site boundary at local coordinate 145E that can be seen in the maps of lower sensor total magnetic field (Figures A-I-1) and vertical magnetic gradient (Figure A-I-3). This anomaly is interpreted to be an isolated metallic object although it is not fully delineated and could potentially represent the edge of a feature located off site.

Anomaly 2 is a magnetic anomaly that also occurs only in the maps of lower sensor total magnetic field and vertical magnetic gradient. It is interpreted to be an isolated metallic object buried very close to the surface, due to the fact that it is not evident in the data of upper sensor total magnetic field.

Anomalies 3 is recognizable in all three magnetic data maps (Figure A-I-1, A-I-2, and A-I-3) and probably represents a single buried metallic object or a small pit containing metallic debris.

Anomaly 4 occurs as a cluster of smaller anomalies that can be observed in both EM-31 in-phase component datasets, the EM-31 conductivity data collected along N-S survey lines, and in all of the magnetic maps between survey coordinates 125N to 135N, and 160E to 185E. The amplitude of the in-phase component anomalies (Figures A-I-5 and A-I-7) and the magnetic dipole in the maps of total magnetic field (Figures A-I-1 and A-I-2) at this location are consistent with its interpretation as a small pit containing metallic debris.

Anomaly 5 occurs as an anomalous zone between 35N to 95N, and 20E to 55E and is most noticeable in all three maps magnetic data. It can also be seen as a more subtle feature in the maps of EM-31 in-phase component data collected along both N-S and E-W lines (Figures A-I-5 and A-I-7). A magnetic dipole occurs in the total magnetic field data near the

center of Anomaly 5 at survey coordinate 50N, 30E, indicating a local concentration of buried ferrous metallic debris or a metallic object at that location. The overall character of the anomaly in both the magnetic and EM-31 datasets is that of an area of dispersed buried metallic debris, although no great volume of metal is thought to be present.

Anomaly 6, which occurs in the southeast portion of the site and observed in all of the EM-31 and magnetic datasets, represents the largest amplitude site anomalies not related to buried utilities or surface cultural features. Anomaly 6 can be clearly seen in the EM-31 in-phase component maps collected along both N-S and E-W lines (Figures A-I-5 and A-I-7, respectively) between local coordinates -10N to 110N, and 160E to 250E. The highest and lowest in-phase component values recorded within Anomaly 6 vary from 3.5 to -8.0 parts per thousand secondary to primary field, indicating significant volumes of buried metallic debris in this area.

Anomaly 6 can also be observed in the maps of total magnetic field data (Figures A-I-1 and A-I-2) as an anomalous zone exhibiting total magnetic field values that range greater than 1000 nanoTeslas above and below backgound levels indicating large volumes of ferrous metal debris. High amplitude magnetic dipoles can be recognized within the anomalous zone indicating isolated areas of increased volume of buried metallic debris. As with the EM-31 data, the lateral extent of the anomaly is not clearly defined with the magnetic data collected, especially along the eastern site boundary. The survey area was extended to the south in the area of this anomaly, and based primarily on the maps of total magnetic field (Figures A-I-1 and A-I-2) the southern boundary can be inferred. However, Anomaly 6 trends off site to the east and the eastern boundary cannot be drawn on the geophysical interpretation map for the Reservoir #2 site (Figure A-5).

The appearance of Anomaly 6 in all datasets is consistent with what would be expected from a large burn pit or series of pits containing metallic debris. A lack of notable reflections characterized the GPR profiles collected across this anomaly. This indicates depth of burial of at least some of the source materials was greater than the effective depth of exploration for GPR at the site, approximately 3-5 feet. However, some near-surface metal objects were evident. Along the edge of this anomaly, at survey coordinate -5N, 165E, the surface soil was gouged during the tree clearing effort, exposing metallic debris, burnt wood, and blackened soil which is consistent with its interpretation as a burn area.

Anomaly 7 occurs within the area of Anomaly 6 in the maps of EM-31 conductivity data collected along N-S and E-W lines (Figures A-I-4 and A-I-6, respectively), and can be recognized as a large zone of high conductivity which is elongate in the N-S direction, and has a maximum conductivity of greater than 50 milliSiemens per meter. In the E-W conductivity data (Figure A-I-6) Anomaly 7 is more clearly seen to be caused by two distinct elongate high conductivity features. The high conductivity values associated with Anomaly 7 do not correspond to the greatest amplitude in-phase component values (observed within Anomaly 6) suggesting that the increase in conductivity is not related to buried metal. Anomaly 7 is interpreted to be caused by fine grained soils mixed with the metal or possibly covering the burn area.

Anomaly 8 occurs only in the EM-31 in-phase component data collected along N-S lines (Figure A-I-4) as an isolated feature located at survey coordinate 220N, 180E. It is probably caused by a small, buried (probably non-ferrous) metallic object.

Additional Burn Ground. Contour maps for the Additional Burn Ground site are presented as Figures A-I-8 through A-I-14 in Attachment I. Maps of total magnetic field for the lower sensor, total magnetic field for the upper sensor, and vertical magnetic gradient data are presented in as Figures A-I-8 through A-I-10, respectively. Contour maps of EM-31 conductivity and in-phase component data collected along N-S survey lines are presented as Figures A-I-11 and A-I-12, respectively. Contour maps of EM-31 conductivity and in-phase component data collected along E-W survey lines are presented as Figures A-I-13 and A-I-14, respectively. Magnetic anomalies are labeled only on the maps of total magnetic field and EM-31 anomalies are labeled only on the maps of the data collected along N-S lines. Select GPR profiles are presented in Attachment II. A geophysical interpretation map showing the locations of surface and subsurface features associated with observed geophysical anomalies is presented as Figure A-6.

The most prominent features in the contour maps from the Additional Burn Ground site are anomalies caused by a series of subsurface utilities (pipes), and several surface features containing metal. As shown in the contour maps of magnetic and EM-31 data (Attachment I), and GPR data (Attachment II), and summarized in the geophysical interpretation map (Figure A-6), eight geophysical anomalies caused by features other than surface metal and buried pipelines occur within the site boundaries.

Anomaly 1 occurs in all three magnetic datasets (Figures A-I-8, A-I-9, and A-I-10) as a small dipolar anomaly in the north-central portion of the site at local survey coordinate 420N, 245E. This anomaly exhibits reverse polarity, with an increase in positive magnitude toward the north, indicating that the source has remnant magnetism. This response may be due to pipeline exposed above ground located to the southeast. This feature is interpreted as a small, isolated, buried metallic object.

Anomaly 2 is a strong dipolar feature at local coordinate 430N, 290E that can be seen in all three of the magnetic data maps. It also is interpreted as an isolated buried metallic object or a volume of metal, approximately the size of a couple of buried drums or a small burial pit containing a moderate volume of buried ferrous metal debris.

Anomaly 3 occurs in all three magnetic datasets, with the southern-most extent also evident in the EM-31 in-phase component data. The anomaly is most clearly seen in the maps of lower sensor total magnetic field and vertical magnetic gradient (Figures A-I-8 and A-I-10). It is an area of relatively small magnetic anomalies between local coordinates 355N to 410N, from 395E trending off site to the east. As shown on the Geophysical Interpretation Map (Figure A-6) it is interpreted as an area of dispersed buried metallic debris. The nature of the anomaly suggests small volumes of buried metal spread over a wide area, possibly related to the documented burning at the site.

Anomaly 4 is a dipolar feature that occurs in all three magnetic data maps at local coordinate 263N, 205E, and is interpreted to be caused by a pit containing metallic debris. The amplitude of the anomaly in the vertical magnetic gradient data is minor in comparison with that of the total magnetic field datasets suggesting that the object responsible for this anomaly is buried quite deep (below the upper few feet of the subsurface).

Anomaly 5 can be seen in all datasets, but is most clearly seen in the maps of total magnetic field and vertical magnetic gradient as an area of anomalies located in the south central part of the survey area, possibly trending off site to the south. The magnetic anomalies that comprise Anomaly 5 are the largest site anomalies not related to surface debris or buried pipes, with a maximum amplitude of +/-500 nanoTeslas. Anomaly 5 can be recognized in the GPR data as a relatively shallow anomaly occurring at approximately 1.5 to 2 feet below ground surface (bgs). GPR line 270E, which was collected south to north along survey coordinate X=270E between

stations Y=0N to 60N, is presented as Figure A-II-1 in Attachment II. GPR line 340E, which was collected south to north along survey coordinate X=340E between stations Y=0N to 60N, is presented as Figure A-II-1. The nature of Anomaly 5 in the GPR data, as with many site anomalies, is such that large metallic objects are not recognized even in areas exhibiting significant magnetic and EM-31 anomalies. It appears that this anomaly is caused by a concentration of small metallic objects, rather than a series of large objects, consistent with its interpretation as a burn area. Anomaly 5, as shown on the Geophysical Interpretation Map (Figure A-6), is an area containing significant volumes of buried metallic debris, probably related to the documented burn area at the site.

Anomaly 6 is an area located to the northeast of Anomaly 5 that can be recognized primarily in the magnetic data, and to a limited extent in the EM-31 in-phase component data. Anomaly 6 is really an extension of Anomaly 5, but is discussed separately because the anomalies are more disperse and of lower overall magnitude. Anomaly 6 probably represents a continuation of the burn area discussed previously for Anomaly 5, although it is characterized by lesser volumes of buried metallic debris that is much more disperse over a wide area. The relative intensity of the vertical magnetic gradient data in this area indicate that the metal associated with Anomaly 6 is probably buried in the upper few feet of the subsurface. Anomaly 6 trends off site to the east between survey coordinates 200N and 240N.

Anomaly 7 occurs in all three magnetic datasets and the EM-31 data collected along N-S lines as a relatively high amplitude anomaly at local coordinates 25N, 450E. Based on the nature of this anomaly on the contour maps and GPR profiles it is probably caused by a local concentration of metallic debris, with a volume comparable to that of a couple of drums, buried in the upper few feet of the subsurface.

Anomaly 8 is recognized only in the magnetic data as a relatively small area along the eastern survey boundary between local coordinates 50N to 65N. This is interpreted as a small pit containing small volumes of metallic debris. As with the much larger Anomalies 3 and 6, this anomaly trends off site and is not completely delineated with the data collected.

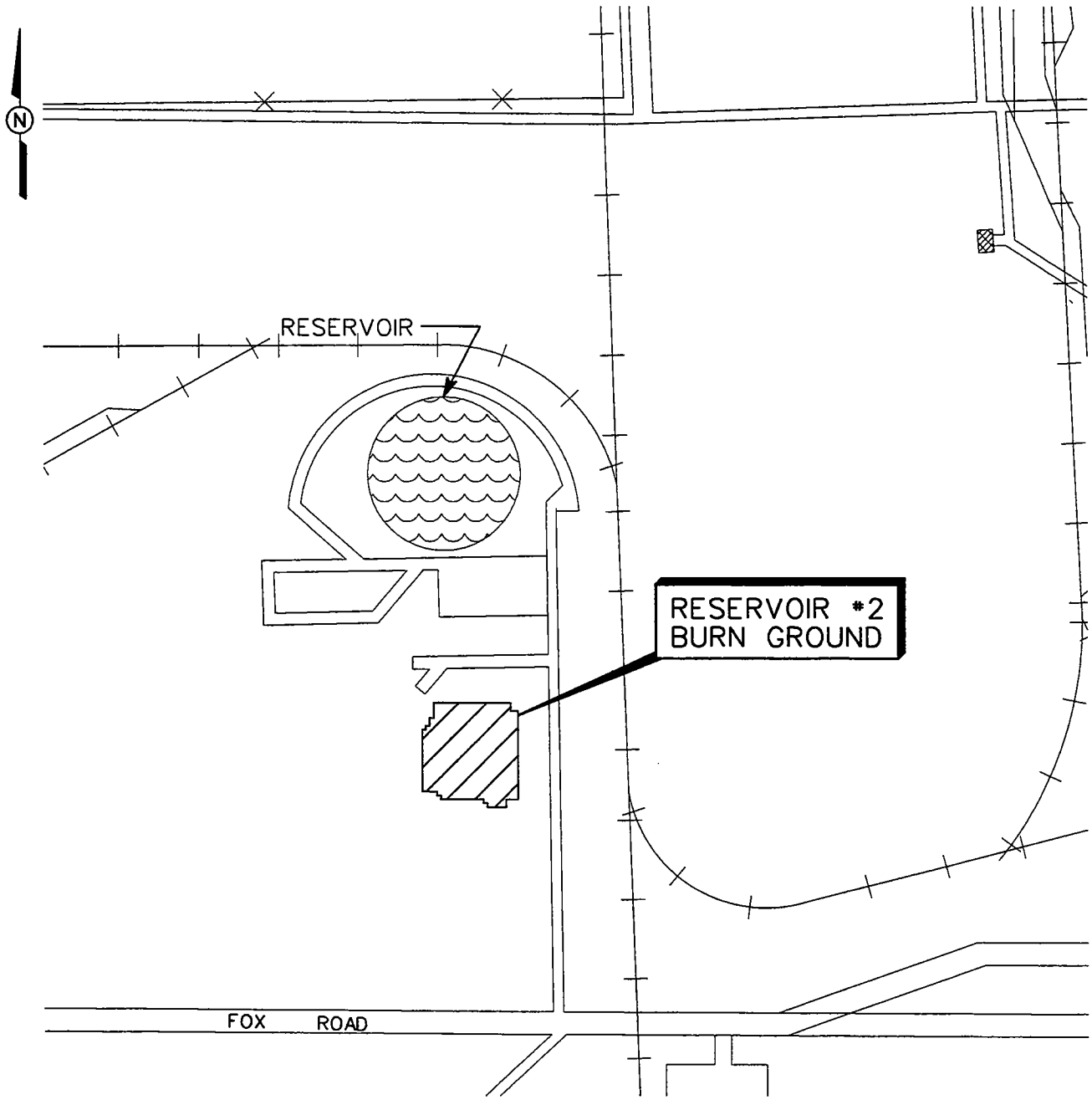
A.4.0 Conclusions

The geophysical surveys conducted at the Plum Brook Ordnance Works site using EM, magnetic, and GPR techniques were successful in delineating a number of suspected burn areas containing buried metallic debris, as well as some isolated buried metal objects. However, at each site there are anomalies that trend off site and cannot be completely delineated based on the data collected. At the Reservoir #2 Burn Ground, the largest site anomaly (in the southeast corner) extends beyond the eastern boundary of the survey area. A small anomaly along the northern boundary is also not completely delineated. At the Additional Burn Ground site, an extensive area of buried metallic debris was identified in the eastern portion of the site that trends off site to the east.

Evidence from the data collected suggests that many of the laterally extensive anomalies are a result of concentration and burial of small rather than large metal objects. Eight main geophysical anomalies caused by source materials other than surface metallic objects or obvious buried utilities were identified at each site and are discussed in section A.3.0. The Geophysical Interpretation Maps (Figure A-5 and A-6) show the site layouts, surface cultural debris, and the locations of all geophysical anomalies identified.

Other than the need to fully delineate the anomalies along the boundaries of each site, no further geophysical work is recommended at the site.

FIGURES



LEGEND:

- INVESTIGATION AREA
- BUILDINGS
- FENCE (PBOW BOUNDARY)
- RAILROAD
- DITCH
- SURFACE POND

SCALE

0 400 800 FEET

FIGURE A-1
VICINITY MAP
RESERVOIR #2 BURN GROUND
GEOPHYSICAL SURVEY

PLUM BROOK ORDNANCE WORKS
NASA PLUM BROOK STATION
SANDUSKY, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

STARTING DATE:1/22/97	DATE LAST REV.:	DRAFT. CHCK. BY: R. KNIGHT	INITIATOR:T.KIRKPATRICK	DWG. NO.:766952ES.018
DRAWN BY: R. KNIGHT	DRAWN BY:	ENGR. CHCK. BY:T. KIRKPATRICK	PROJ. MGR.:D. BURTON	PROJ. NO.:766952

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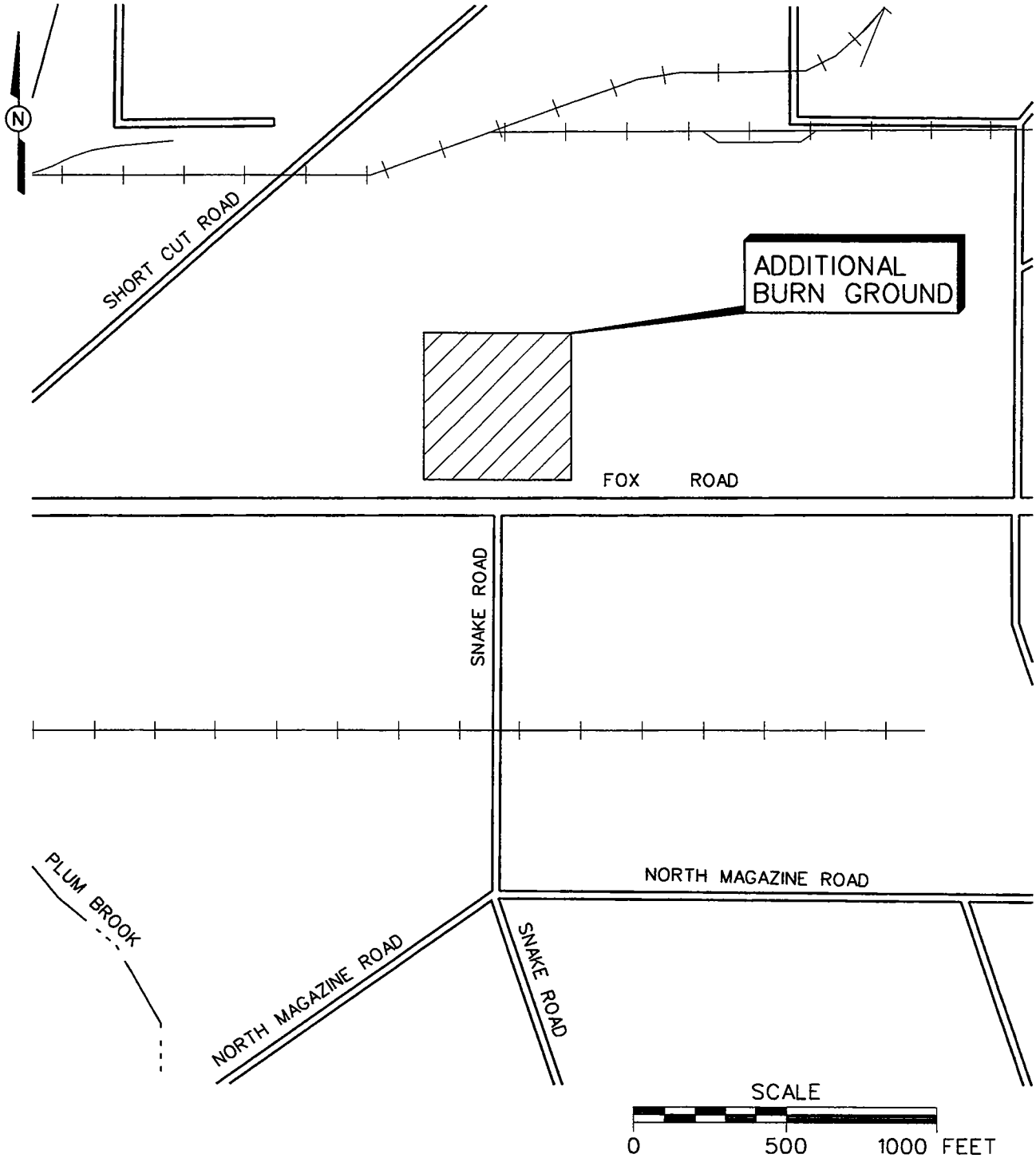


LEGEND:

INVESTIGATION AREA

RAILROAD

DITCH

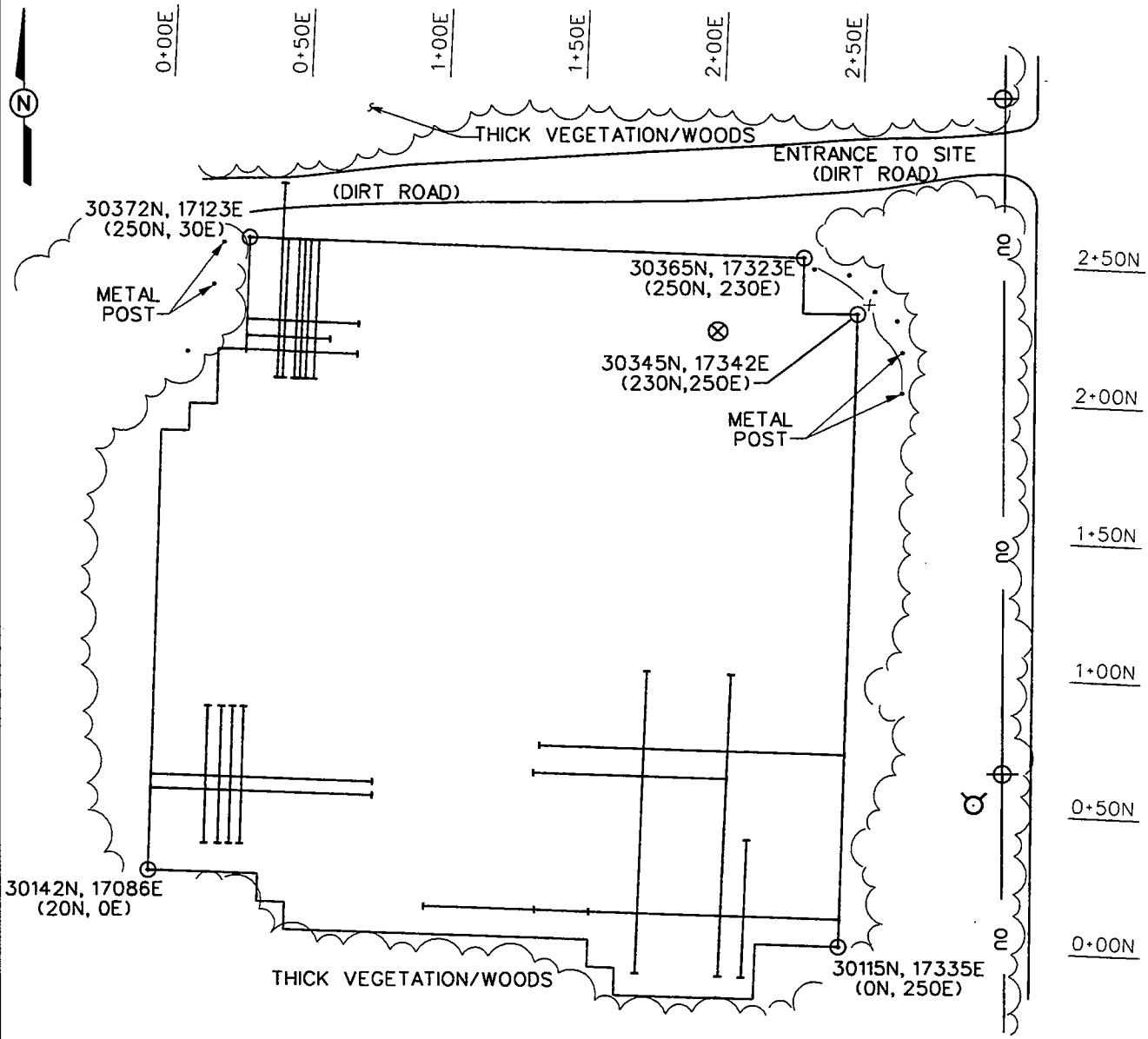
FIGURE A-2
VICINITY MAP
ADDITIONAL BURN GROUND
GEOPHYSICAL SURVEY

PLUM BROOK ORDNANCE WORKS
NASA PLUM BROOK STATION
SANDUSKY, OHIO

INTERNATIONAL
TECHNOLOGY
CORPORATION

STARTING DATE:1/22/97	DATE LAST REV.:	DRAFT. CHCK. BY:R. KNIGHT	INITIATOR:J. HACKWORTH	DWG. NO.:766952ES.019
DRAWN BY: R. KNIGHT	DRAWN BY:	ENGR. CHCK. BY:J. HACKWORTH	PROJ. MGR.:D. BURTON	PROJ. NO.:766952

766952ES.019 14:13:26 MARCH 21, 1997 RMK



LEGEND:

⊙ 30142N, 17086E	GEOPHYSICAL SURVEY COORDINATES IN FEET (NASA PLUM BROOK SYSTEM)
(20N, 0E)	LOCAL GEOPHYSICAL SURVEY COORDINATES IN FEET
⊗	GEOPHYSICAL FIELD INSTRUMENT BASE STATION
———	GPR PROFILE LOCATION
⊖	UTILITY POLE
☿	FIRE HYDRANT
—— OU ——	OVERHEAD UTILITIES
⌒⌒	TREE LINE
——×——	FENCE

SCALE

0 60 120 FEET

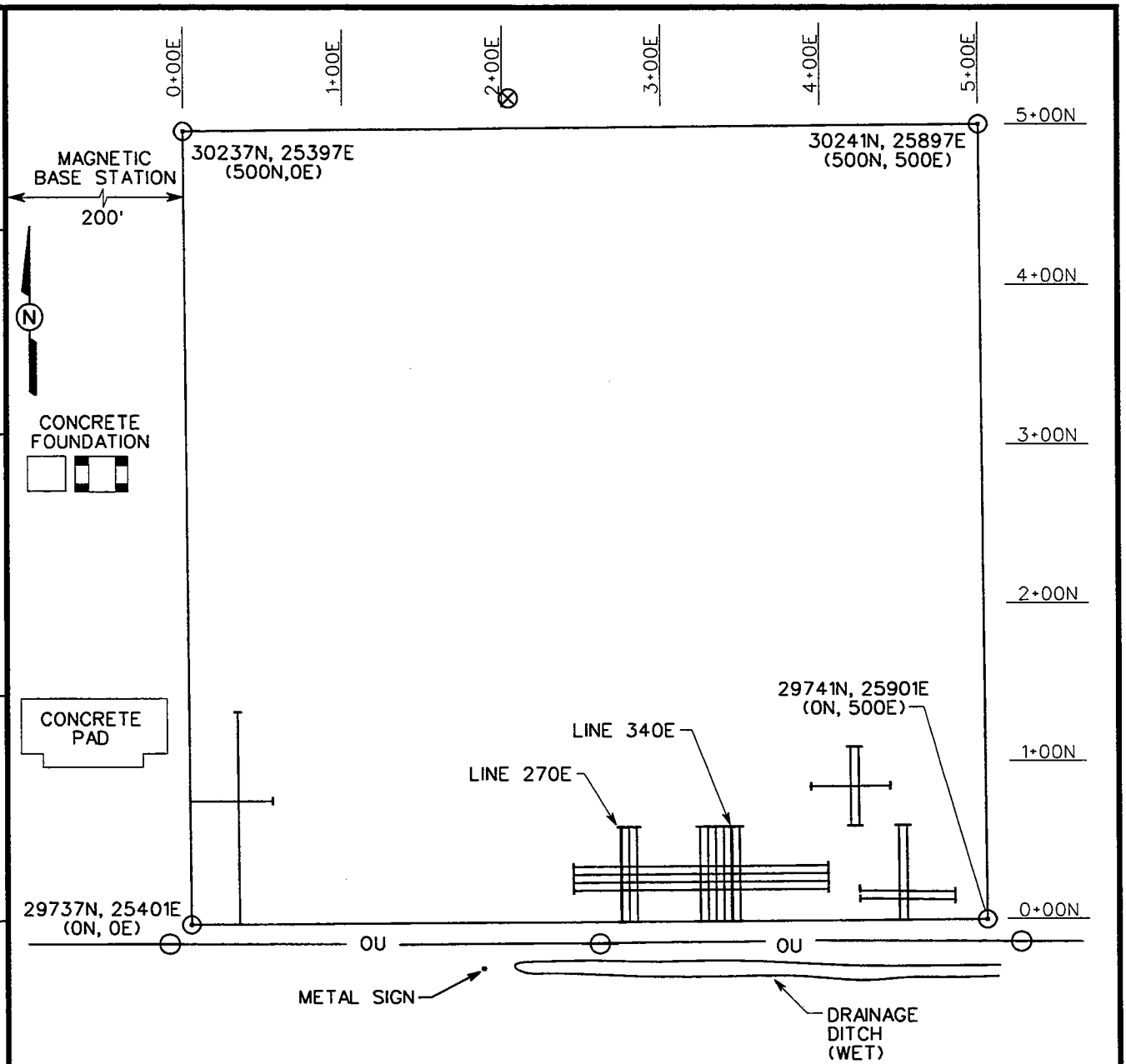
FIGURE A-3
GEOPHYSICAL SURVEY
LOCATION MAP
RESERVOIR #2 BURN GROUND

PLUM BROOK ORDNANCE WORKS
NASA PLUM BROOK STATION
SANDUSKY, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

DWG. NO.:766952ES.020 | PROJ. NO.:766952
INITIATOR:J. HACKWORTH | PROJ. MGR.:D. BURTON
DRAFT. CHCK. BY: R. KNIGHT | ENGR. CHCK. BY:J. HACKWORTH
DATE LAST REV.: | DRAWN BY:
STARTING DATE:1/22/97 | DRAWN BY: R. KNIGHT

766952ES.020 10:59:36 MARCH 26, 1997 RMK



LEGEND:

⊙30241N, 25897E	GEOPHYSICAL SURVEY COORDINATES IN FEET (NASA PLUM BROOK SYSTEM)
(500N, 500E)	LOCAL GEOPHYSICAL SURVEY COORDINATES
⊗	GEOPHYSICAL FIELD INSTRUMENT BASE STATION
⊖	UTILITY POLE
—OU—	OVERHEAD UTILITIES
———	GPR PROFILE LOCATION
——— LINE 270E	GPR PROFILE LOCATION (PRESENTED IN REPORT)

SCALE

0 100 500 FEET

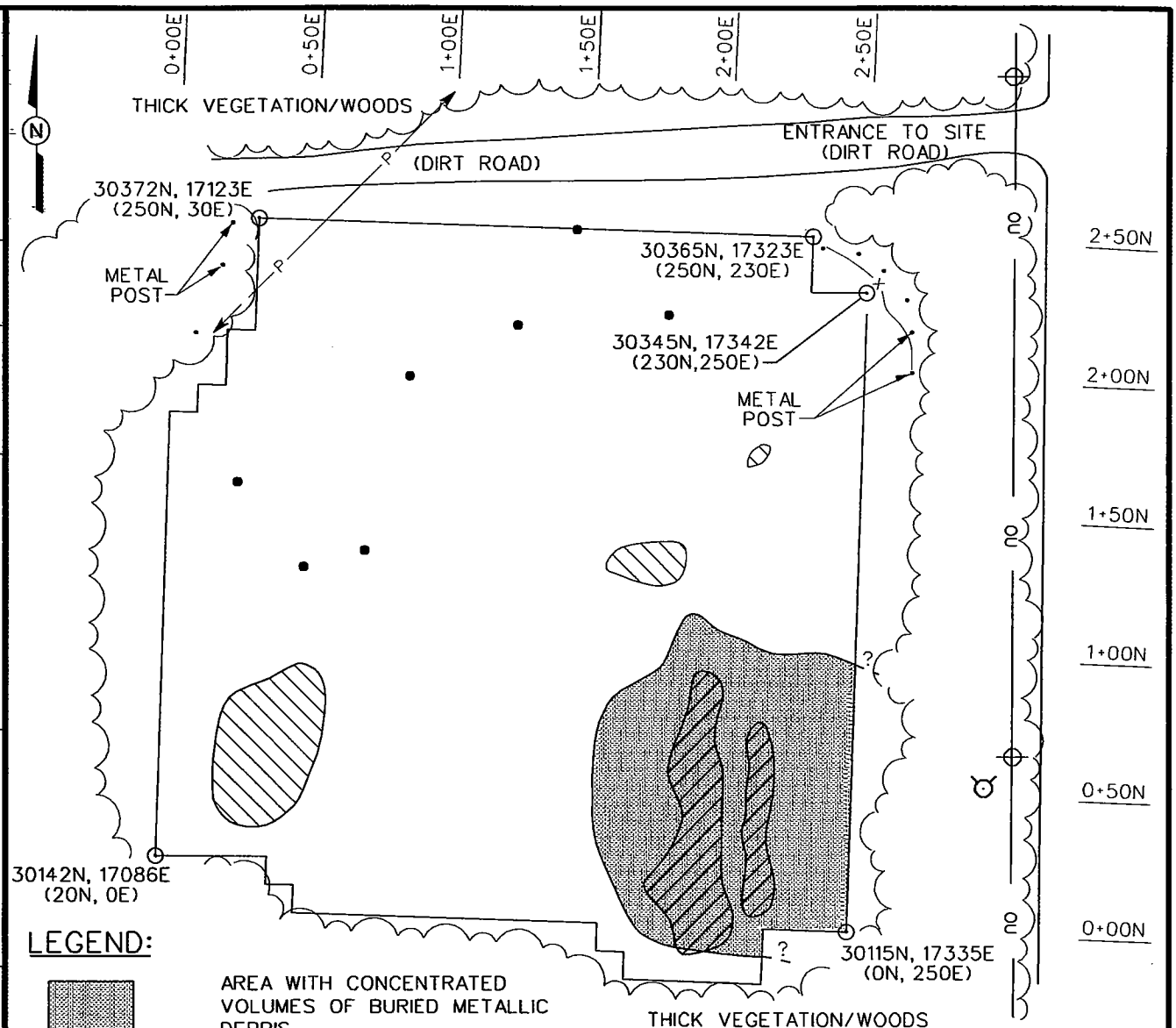
FIGURE A-4
GEOPHYSICAL SURVEY
LOCATION MAP
ADDITIONAL BURN GROUND

PLUM BROOK ORDNANCE WORKS
NASA PLUM BROOK STATION
SANDUSKY, OHIO

INTERNATIONAL
TECHNOLOGY
CORPORATION

DWG. NO.:766952ES.023 | PROJ. NO.:766952
INITIATOR:J. HACKWORTH | PROJ. MGR.:D. BURTON
DRAFT. CHCK. BY:R. KNIGHT | ENGR. CHCK. BY:J. HACKWORTH
DATE LAST REV.: | DRAWN BY:
STARTING DATE:2/6/97 | DRAWN BY: R. KNIGHT

766952ES.023 17:00:23 MARCH 25, 1997 RMK



LEGEND:

- AREA WITH CONCENTRATED VOLUMES OF BURIED METALLIC DEBRIS
- AREA WITH DISPERSED METALLIC DEBRIS
- AREA WITH ANOMALOUS HIGH CONDUCTIVITY
- BURIED METAL
- —— P —— BURIED PIPE
- ⊙30142N, 17086E GEOPHYSICAL SURVEY COORDINATES IN FEET (NASA PLUM BROOK SYSTEM)
- (20N, 0E) LOCAL GEOPHYSICAL SURVEY COORDINATES IN FEET
- UTILITY POLE
- FIRE HYDRANT
- —— OU —— OVERHEAD UTILITIES
- TREE LINE
- ——x—— FENCE

SCALE

0 60 120 FEET

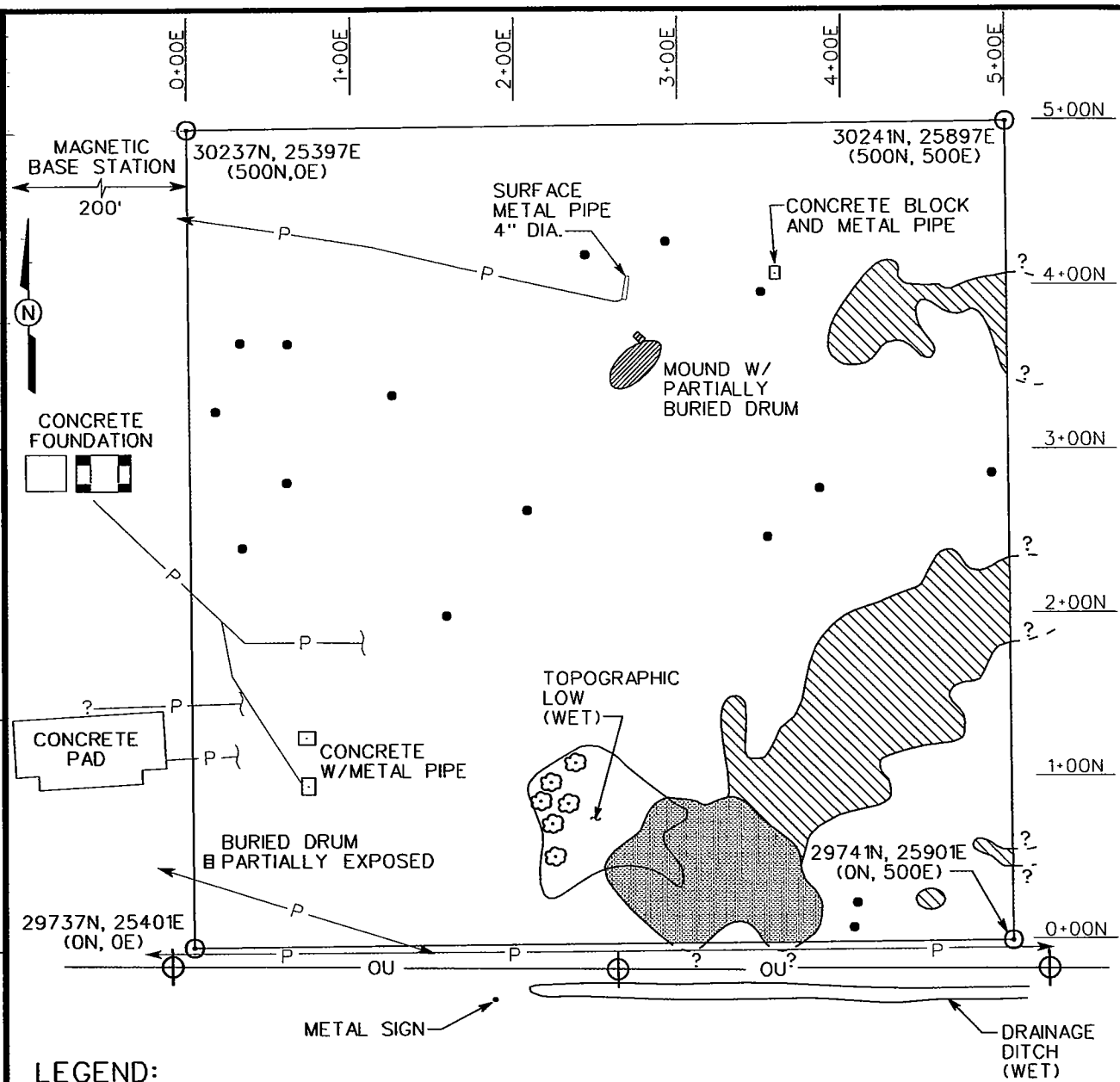
FIGURE A-5
GEOPHYSICAL INTERPRETATION MAP
RESERVIOR #2 BURN GROUND

PLUM BROOK ORDNANCE WORKS
NASA PLUM BROOK STATION
SANDUSKY, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

STARTING DATE: 2/5/97	DATE LAST REV.:	DRAFT. CHCK. BY: R. KNIGHT	INITIATOR:J. HACKWORTH	DWG. NO.: 766952ES.022
DRAWN BY: R. KNIGHT	DRAWN BY:	ENGR. CHCK. BY:J. HACKWORTH	PROJ. MGR.: D. BURTON	PROJ. NO.:766952

766952ES.022 10:19:21 MARCH 26, 1997 RMK



LEGEND:

	AREA WITH CONCENTRATED VOLUMES OF BURIED METALLIC DEBRIS
	AREA WITH DISPERSED METALLIC DEBRIS
•	BURIED METAL
— P —	BURIED PIPE
⊙ 30241N, 25897E	GEOPHYSICAL SURVEY COORDINATES IN FEET (NASA PLUM BROOK SYSTEM)
(500N, 500E)	LOCAL GEOPHYSICAL SURVEY COORDINATES IN FEET
⊕	UTILITY POLE
— OU —	OVERHEAD UTILITIES
	TREE

SCALE

0 100 200 FEET

FIGURE A-6
GEOPHYSICAL INTERPRETATION MAP
ADDITIONAL BURN GROUND

PLUM BROOK ORDNANCE WORKS
NASA PLUM BROOK STATION
SANDUSKY, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

DWG. NO.:766952ES.021	PROJ. NO.:766952
INITIATOR:J. HACKWORTH	PROJ. MGR.:D. BURTON
DRAFT. CHCK. BY:R. KNIGHT	ENGR. CHCK. BY:J. HACKWORTH
DATE LAST REV.:	DRAWN BY:
STARTING DATE:1/23/97	DRAWN BY: R. KNIGHT

766952ES.021 15:04:11 MARCH 25, 1997 RMK

ATTACHMENT I
MAGNETIC AND EM-31 COLOR CONTOUR MAPS

ATTACHMENT II
GPR PROFILES

ATTACHMENT III
MAGNETIC (G-856) BASE STATION DATA PLOTS

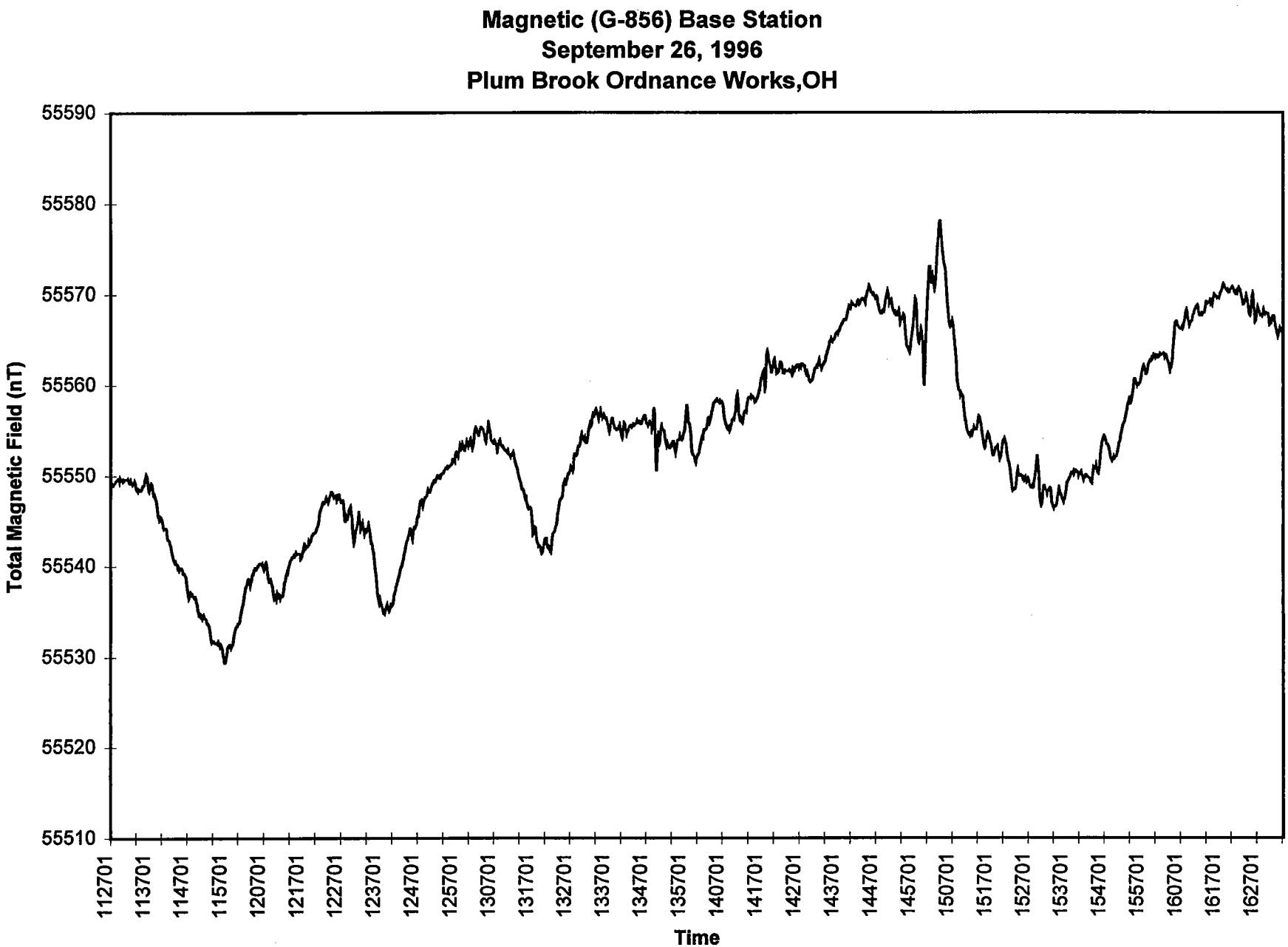


FIGURE A-III-1

KN\TMK\PLUMTMF.XLS(CHART269)\3/24/97(1:54 PM)

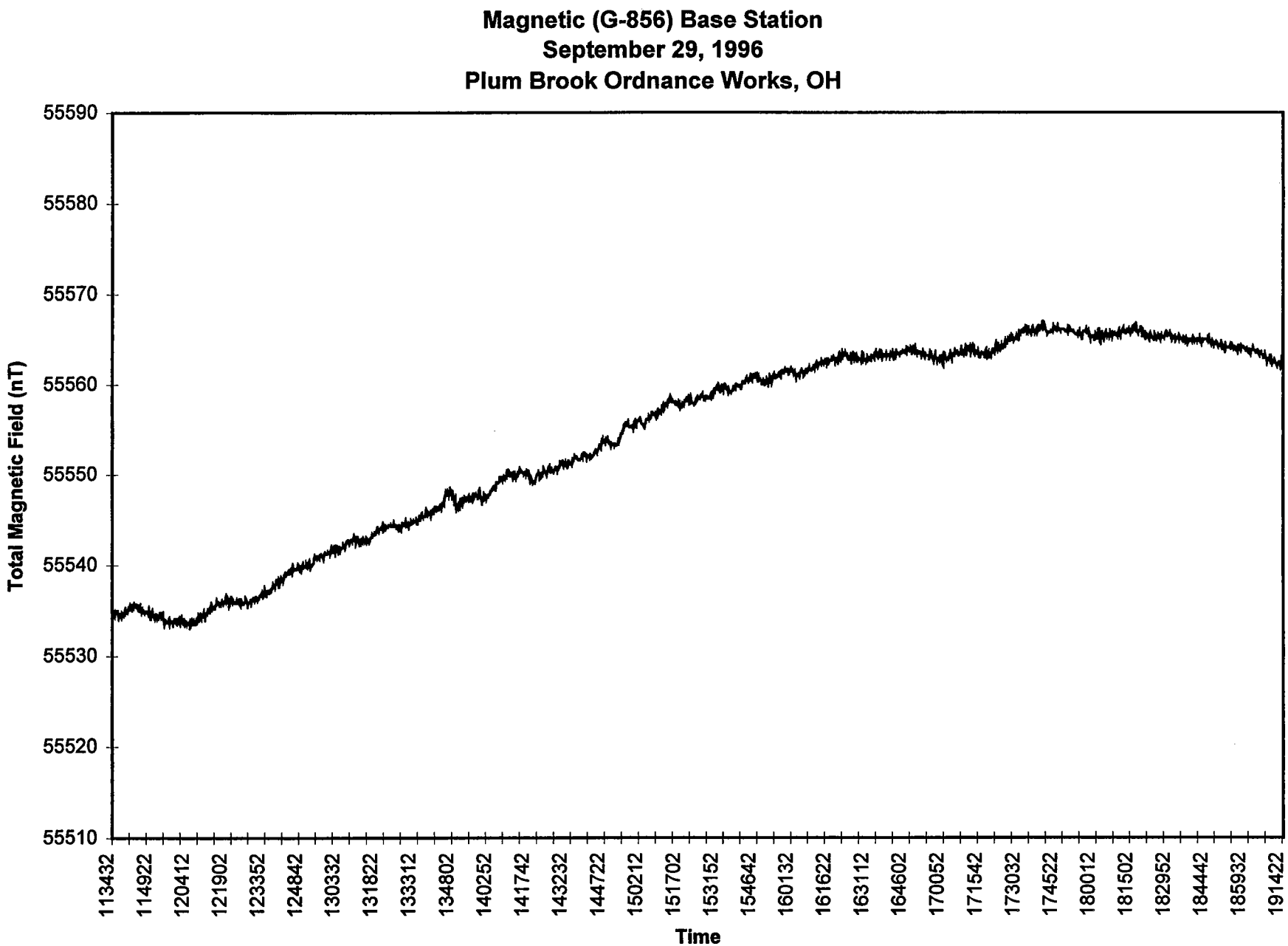


FIGURE A-III-2

KN\TMK\PLUMTMF.XLS(CHART272)\3/24/97(1:53 PM)

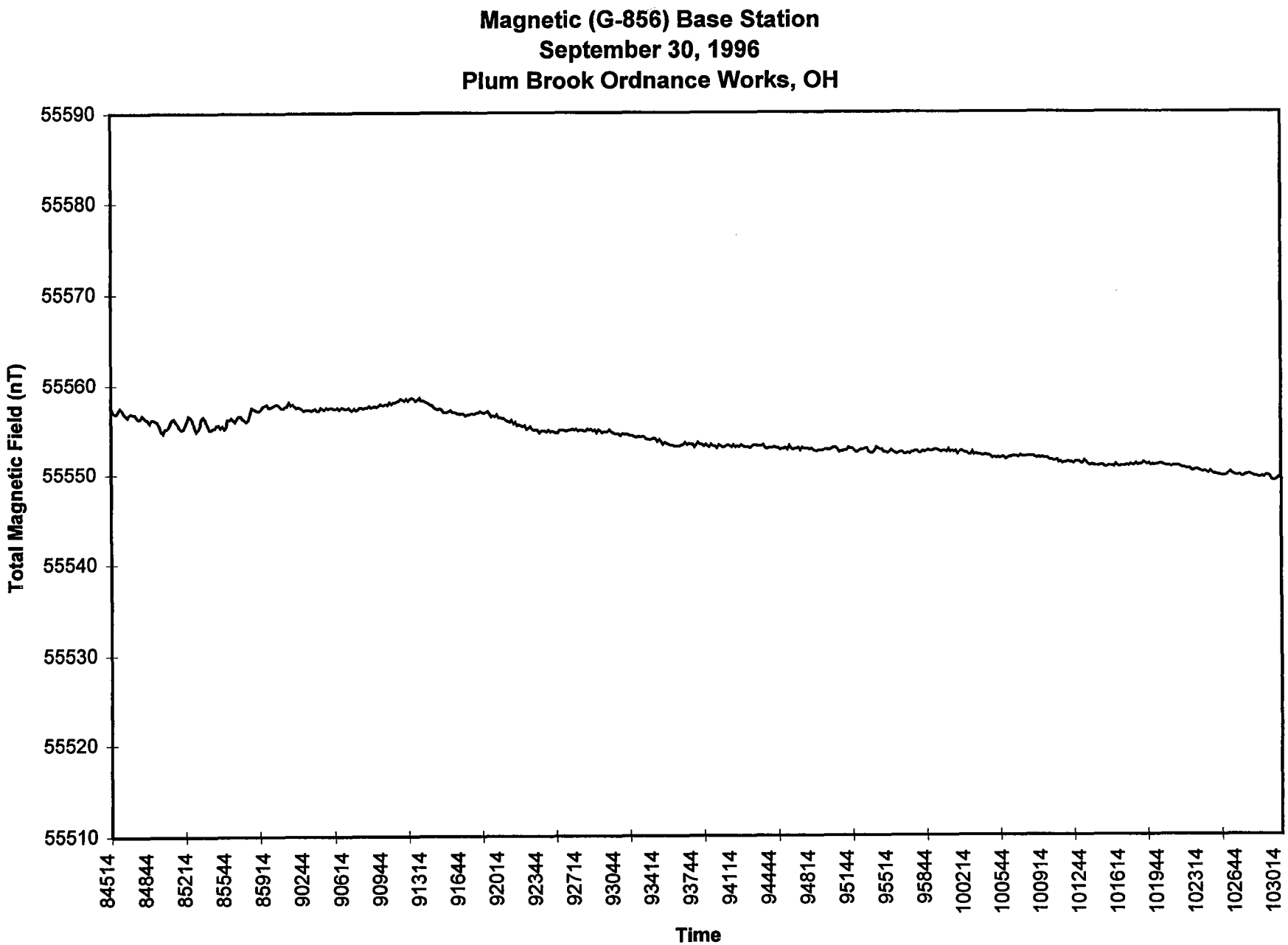


FIGURE A-III-3

KN\TMK\PLUMTMF.XLS(CHART273)\3/24/97(1:55 PM)

ATTACHMENT IV
THEORETICAL BACKGROUND

Attachment IV
Theoretical Background

A.IV.1.0 Magnetic Method

The magnetic instrument used during the surface geophysical surveys at Plum Brook Ordnance Works, Sandusky, Ohio was a Geometrics Inc. G-858G "walking mode" magnetic gradiometer. The G-858G, which is an optically-pumped cesium vapor instrument, measures the intensity of the earth's magnetic field in nanoTeslas (nT) and the vertical gradient of the magnetic field in nanoTeslas per meter (nT/m). The vertical gradient is measured by simultaneously recording the magnetic field with two sensors at different heights. To determine the vertical magnetic gradient, the upper sensor reading is subtracted from the lower sensor reading, and the result is then divided by the distance between the sensors. The distance between sensors for this investigation was 2.5 feet (0.76 meters). The vertical magnetic gradient measurement allows for better definition of shallower anomalies.

During operation of the G-858G magnetic gradiometer, a direct current is used to generate a polarized monochromatic light. Absorption of the light occurs within the naturally precessing cesium atoms found in the instrument's two vapor cells or sensors. When absorption is complete, the precessing atoms become a transfer mechanism between light and a transverse radiofrequency (RF) field at a specific frequency of light known as the Larmor frequency. The light intensity is used to monitor the precession and adjusts the RF frequency allowing for the determination of the magnetic field intensity (Sheriff, 1990).

The earth's magnetic field is believed to originate in currents in the earth's liquid outer core. The magnetic field varies in intensity from approximately 25,000 nT near the equator, where it is parallel to the earth's surface, to approximately 70,000 nT near the poles, where it is perpendicular to the earth's surface. In northern Ohio, the intensity of the earth's magnetic field varies from approximately 55,000 to 56,000 nT and has an associated inclination of approximately 75 degrees.

Anomalies in the earth's magnetic field are caused by induced or remanent magnetism. Remanent magnetism is caused by naturally occurring magnetic materials. Induced magnetic anomalies result from the induction of a secondary magnetic field in a ferromagnetic material (such as pipelines, drums, tanks, or well casings) by the earth's magnetic field. The shape and amplitude of an induced magnetic anomaly over a ferromagnetic object depend on the geometry, size, depth, and magnetic susceptibility of the object and on the magnitude and inclination of the earth's magnetic field in the study area (Dobrin, 1976; Telford, et al., 1976). Induced magnetic anomalies over buried objects such as drums, pipes, tanks, and buried metallic debris generally exhibit an asymmetrical, south high/north low signature (maximum amplitude on the south side and minimum on the north). Magnetic anomalies due to buried metallic objects have dimensions much greater than the dimensions of the objects themselves. As an extreme example, a magnetometer may begin to sense a buried oil well casing at a distance of greater than 50 feet.

The magnetic method is not effective in areas having ferromagnetic material at the surface because the signal from the surface material obscures the signal from any buried objects. Because of the high precision required in the measurement of the frequency at which the protons precess, the presence of an alternating current electrical power source can render the signal immeasurable (Breiner, 1973). Also, the precession signal is sharply degraded in the presence of large magnetic gradients exceeding approximately 600 nT/m.

The earth's magnetic field undergoes low-frequency diurnal variations associated with the earth's rotation, generally referred to as magnetic drift. The source of these variations is mainly in the ionosphere and of a magnitude large enough that it can introduce artificial trends in field data. A base station magnetometer is generally used to monitor this drift so that it can be removed from the field data.

Large volumes of data can be acquired quickly with modern magnetometers, and the clear signatures from strong magnetic sources such as metallic objects make magnetometers effective in their search. The magnetic method has been effective in delineating old waste sites and searching for oil wells, drums, tanks, pipes, and buried metallic debris. The method also is useful in searching for magnetic ore bodies, delineating basement rock, and mapping subsurface geology characterized by volcanic or mafic rocks.

A.IV.2.0 Electromagnetic Induction Method

Electromagnetic (EM) induction equipment used during this investigation consisted of a Geonics EM-31 terrain conductivity meter (EM-31) coupled to an Omnidata DL720 digital data logger. The EM-31 has a transmitter coil mounted at one end and a receiver coil at the other end of a 12-foot-long plastic boom. An audiofrequency alternating current is applied to the transmitter coil, causing the coil to radiate a primary EM field. As described by Faraday's law of induction, this time-varying magnetic field generates eddy currents in conductive subsurface materials. These eddy currents have an associated secondary magnetic field with a strength and phase shift (relative to the primary field) that are dependent on the conductivity of the medium. The receiver coil measures the resultant effect of both primary and secondary fields. By comparing the signal at the receiver to that at the transmitter, the instrument records the component of the secondary field in-phase (in-phase) and 90 degrees out-of-phase (quadrature) with the primary field. Most geologic materials are poor conductors. The flow of current through the material takes place in the pore fluids (Keller and Frischknecht, 1966); as such, conductivity is predominantly a function of soil type, porosity, permeability, pore fluid ion content, and degree of saturation. The EM-31 is calibrated so that the out-of-phase component is converted to electrical conductivity in units of millisiemens per meter (mS/m) (McNeill, 1980). The in-phase component is read in parts per thousand (ppt) of the primary EM field and is generally adjusted in the field to read zero response over background materials.

The depth of penetration for EM induction instruments depends on the transmitter/receiver separation and coil orientation (McNeill, 1980). The EM-31 has an effective exploration depth of approximately 18 feet when operating in the vertical dipole mode (horizontal coils). In this mode, the maximum instrument response results from materials at a depth of approximately two-fifths the coil spacing (approximately 2 feet below ground surface with the instrument at the normal operating height of approximately 3 feet), providing that no large metallic features such as tanks, drums, pipes, and reinforced concrete are present. A single buried drum typically can be located to depths of approximately 5 feet, whereas clusters of drums can be located to significantly greater depths if background noise is limited or negligible. The EM-31 has an effective exploration depth of approximately 9 feet when operating in the horizontal

dipole mode (vertical coils) and is most sensitive to materials immediately beneath the ground surface.

The EM-31 generally must pass over or very near a buried metallic object to detect it. Both the out-of-phase and in-phase components exhibit a characteristic anomaly over near-surface metallic conductors. This anomaly consists of a narrow zone having strong negative amplitude centered over the target and a broader lobe of weaker, positive amplitude on either side of the target. For long, linear conductors such as pipelines, the characteristic anomaly is as described when the axis of the coil (instrument boom) is at an angle to the conductor. However, when the instrument boom is oriented parallel to the conductor, a positive amplitude anomaly is obtained.

EM applications include mapping conductive groundwater contaminant plumes in very shallow aquifers and delineating oil brine pits; landfill boundaries; buried pipes, cables, drums, and tanks; and pits and trenches containing buried metallic and nonmetallic debris.

A.IV.3.0 Ground Penetrating Radar Method

GPR equipment used during this investigation consisted of a Geophysical Survey Systems, Inc. (GSSI) System 2P equipped with 200- and 400-megahertz (MHz) monostatic antennas.

When conducting a GPR survey, an antenna containing both a transmitter and a receiver was pulled along the ground surface. The transmitter radiates short pulses of high-frequency (center frequencies in the range of 200 to 400 MHz) EM energy into the ground. The EM wave propagates into the subsurface at a velocity determined by the relative dielectric constant of the medium through which the wave travels. When the wave encounters the interface of two materials having different propagation velocities or some other electrical heterogeneity, such as soil and a UST, a portion of the energy is reflected back to the surface. The contrast in velocity between the two media can be quantified by a reflection coefficient at the media interface. The magnitude of the reflection coefficient increases as the contrast in velocities increases; the coefficient sign is positive when the velocity increases at the interface and negative when it decreases. The reflected signal is detected at a receiver antenna, often as a

characteristic triplet that is the result of the receiving antenna response and of multiples generated along the propagation path. The signal is transmitted to a control unit, displayed on a color monitor, and saved on digital tape.

As predicted by Maxwell's equations for a propagating EM wave, two kinds of charge flow are generated by the associated alternating electric and magnetic fields (Ulriksen, 1982). The charge flows are conduction and displacement currents. The conduction current term is predominant at lower frequencies, and conduction currents are used in the EM induction method. At the higher frequencies used in the GPR method, the displacement current term becomes predominant because the high frequencies will set bound charges in motion, causing polarization.

The physical properties that describe the movement of charges by conduction and displacement currents are the conductivity and the dielectric constant of the medium, respectively. Conductivity is a measure of the ease with which charges and charged particles move freely through the medium when subjected to an external electric field. The dielectric constant, or its value normalized by the dielectric constant of free space called the relative dielectric constant, is a measure of how easily a medium polarizes to accommodate the EM fields of a propagating wave (Keller and Frischknecht, 1966).

Although conductivity has a smaller effect on the transmission of EM waves emitted from a GPR unit, it has an important effect on the attenuation of the waves (Ulriksen, 1982). Highly conductive media will attenuate the EM signal rapidly and restrict depth penetration to the first several feet. Highly resistive (poorly conductive) media allow deeper penetration. The frequency of the transmitted waves also affects the depth of penetration. Lower frequencies penetrate deeper but have lower resolution, whereas higher frequencies can resolve smaller objects and soil layers at the expense of depth penetration. At many sites in the western U.S., soils are relatively conductive and depth penetration is often limited to 5 feet or less.

In unconsolidated materials, conduction occurs predominantly through pore fluids (Keller and Frischknecht, 1966). Therefore, changes in pore fluid content, porosity, permeability, and degree of saturation will affect reflected and refracted EM signals. Backfilled trenches, in which there may be different compaction densities relative to the surrounding area, can be identified in this manner. When the target of a GPR survey is a metallic conductor such as

metal pipes and cables, drums, tanks, or ammunition shells, the characteristic response is somewhat different because an EM wave is completely reflected upon reaching the metallic conductor. Thus, the property of total reflection makes metallic targets well suited for detection within the range of the GPR unit. No reflections will occur from below the metallic conductor, although multiples are common. The edges of the metallic reflector will exhibit diffraction patterns as a result of the transmitting and the receiving antennae being unfocused but emitting and receiving from a 45-degree cone. The cone allows the radar to detect objects that are ahead of it, placing them deeper in time. As the radar approaches the object, the reflection becomes shallower, with the shallowest reflection taking place when the radar is immediately above the object. An identical pattern occurs as the antenna moves away from the object.

GPR applications include delineation of pits and trenches containing metallic and nonmetallic debris; location of buried pipes, drums, and UST's; and mapping of landfill boundaries and near-surface geology. Near-surface metallic objects such as pipes and UST's exhibit a characteristic high-amplitude hyperbolic anomaly and generally are relatively easy to recognize.

A.IV.4.0 References

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Keller, G. V. and F.C. Frischknecht, 1966, ***Electrical Methods in Geophysical Prospecting,*** International Series in Electromagnetic Waves, Volume 10, Pergamon Press, Oxford, England.

McNeill, J. D., 1980, ***Electromagnetic Terrain Conductivity Measurement at Low Induction Numbers***, Geonics Limited, Technical Note TN-6, Ontario, Canada, October.

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Telford, W. M., L. P. Geldart, R. E. Sheriff, and D. A. Keys, 1976, ***Applied Geophysics,*** Cambridge University Press, Cambridge, England.

Ulriksen, C.P.F., 1982, ***Application of Impulse Radar to Civil Engineering,*** Department of Engineering Geology, Lund University of Technology, Sweden.

APPENDIX B

PHOTOGRAPHS OF TRENCHING ACTIVITIES

Photo 1. Metallic objects from Trench No.1 (pulley, pipe, plate)

Photo 2. Soil profile of Trench No.1 (west wall, 3.5 feet)

Photo 3 Burn layer on west wall of Trench No.1

Photo 4 Metallic objects (pipes, bivalve section, pipe flanges etc.) from Trench No.2

Photo 5 Shale rock fragments from excavated soil in Trench No.1

Photo 6 Soil from Trench No.2 with wood debris

Photo 7 Trench No.3 with lead sheet, pipes, strapping, 1/2 oil filter, etc..

Photo 8 Metallic objects from Trench No.4

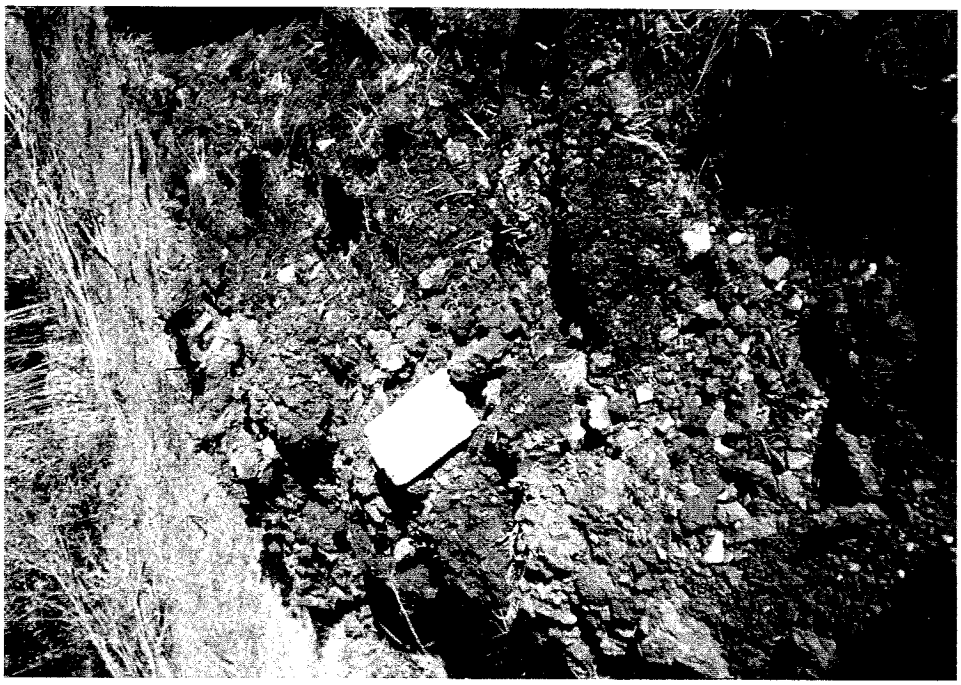


Photo 9 Soil pile from Trench No.4 (tile fragment, cinders, metal objects)

Photo 10 East view of 4 trenches in Reservoir No.2 Burn Ground

APPENDIX C

DATA QUALITY EVALUATION

Appendix C

Data Quality Evaluation
Plumbrook Ordnance Works
Site Investigations

C1.0 Introduction

This appendix of the Plumbrook Site Investigation Report presents the results of the Quality Assurance/Quality Control (QA/QC) protocols implemented during the sampling and analysis portion of the investigation of the Reservoir No. 2 Burning Ground (2BG), Additional Burn Ground (ABG), Wastewater Disposal Plant No. 2 (WP2), and the Power House No. 2 Ash Pit (PH2). The quality indicators from every aspect of the data collection process have been reviewed, and an assessment of the data with regard to the project specific objectives is presented. The reliability of the sampling and analytical procedures used during the investigations was demonstrated by implementing the project specific quality assurance procedures specified in the site-wide Sampling and Analysis Plan and Quality Assurance Project Plan (IT 1996a) and its site-specific attachments (SSAP, IT 1996). Successful execution of these procedures provides strong supporting evidence for the acceptance of the data as being representative of the area under investigation. A complete evaluation of the procedures implemented in the investigations are summarized in this Data Quality Evaluation (DQE).

The DQE for the Plumbrook site investigations was divided into two phases. The first phase includes the discussion of the overall field sampling effort and the field quality control (QC) activities employed. The resulting QC data were presented and compared to the procedures and goals established in the Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP), as well as the verification of the completeness, accuracy and representativeness of the field sampling. The second phase deals with the analytical program and the results of the QC activities employed. An overall comparison to data quality objectives (DQOs) was performed as well as a complete data review. All elements of data evaluation were compiled and used to determine the usability and overall applicability of the resulting data.

C2.0 Field Sampling Program

Field Quality Control Activities. To ensure the reliability of the field sampling procedures, and analytical data, field QA/QC samples were collected or prepared for each medium sampled, each sample shipment and/or each sampling event. These QA/QC samples are then used to address any sample variability and uncertainty in procedures.

C2.1 Field Duplicates

The purpose of the field duplicate is to generate data used to evaluate the precision of the sample collection, handling and analysis procedures. As required by the SAP, a field duplicate was collected for every ten (10) soil samples collected. Field duplicate samples were collected from the following locations: PH2SO04, PH2SO08, 2BGSO02, 2BGSO05, 2BGSO07, WP2SO04, ABGSO02, and ABGSO11.

It can be difficult to collect true duplicate samples, especially for solid matrices that are inherently more heterogeneous than liquid matrices. Greater variations are seen in the precision data which are measured by calculating the relative percent difference (RPD) between the original sample results and its duplicate results. Higher RPDs are thought to reflect difficulties often encountered during the collection of duplicate samples or sample handling. Wide variations in soil results may be attributable to actual variations in concentrations rather than denoting problems with precision or sampling effectiveness.

All positive concentrations and the calculated RPD for the original sample and/or its duplicate are presented in Tables E-1 to E-8. The RPD results were calculated as follows:

$$RPD = \frac{A-B}{[(A+B)/2]} 100$$

where:

RPD = Relative percent difference
A = Original sample result
B = Duplicate sample result.

When concentrations are detected in only one of the two samples, "NC" is used to represent the RPD which is then "not calculable" for the parameter. There is no quantifiable result available from the "non-detect" sample to be used in the RPD calculation. When "estimated" (J qualified) concentrations are reported, there is a greater potential for increased variability between the primary and duplicate results as reflected in the RPD calculation.

The soil samples and the respective duplicates exhibited low levels of various organic constituents and numerous metals. All RPD results fell within acceptable limits (50 percent) for the soil matrices for the duplicates collected from PH2SO04, PH2SO08, and 2BGSO07. These results reflected very good sample and analysis precision with RPDs meeting the more stringent acceptance criteria for water samples (20 percent). The remaining locations exhibited good overall process precision with the exception of a few outliers. The duplicate collected from 2BGSO02 demonstrated good precision for the analysis with the following exceptions: calcium (51.4 percent), copper (78.8 percent), lead (57.2 percent), 2,4-dinitrotoluene (173 percent) and 2,4,6-trinitrotoluene (175 percent). It should be noted that the original sample for the explosives analysis using method 8330 was performed by the laboratory at a tenfold greater dilution level (1:50) than its duplicate (1:5). The possibility of mathematical error in this case would help to explain the variation indicated by the resulting RPDs. The elements exhibiting a greater degree of variability should be attributed to the heterogeneous nature of the matrix. The samples collected from 2BGSO05 and WP2SO04 exhibited good precision results with the exception of the manganese RPDs of 96.2 percent and 56.8 percent, respectively. WP2SO04 also showed RPDs of 61.5 percent for arsenic and 161 percent for acetone. The presence of acetone is most likely attributable to analytical process contamination at the concentrations reported (4.2 µg/kg and 39 µg/kg). The duplicates collected from ABGSO02 and ABGSO11 demonstrated good precision in the sample collection process with the exception of barium (56.6 percent) in SO02 and calcium (61.2) and lead (116 percent) in SO11. Compounds that were reported as "NC" for the RPD were found to be reported just above or below the reporting limit established for the parameter. All remaining reported concentrations compared very well, demonstrating good precision in the sample collection process.

C2.2 Trip Blanks

The site investigation involved the collection and analysis of soil samples only, therefore, trip blanks were not required for this field investigation.

C2.3 Equipment Rinse Blanks

Equipment rinses (ER) are used to assess the effectiveness of the equipment decontamination procedures employed and the potential of cross-contamination of environmental samples between sampling locations. The rinsates are collected by passing clean, analyte-free water through and over the sampling equipment after the decontamination procedures have been executed. There were two (2) ERs collected for each of the four sites with the exception of WP2 which required only one ER. The blanks were analyzed for the same analytical parameters as the associated environmental samples collected.

The analytical results exhibited some low level concentrations of volatiles, semivolatiles, metals and explosives. Volatile organics, such as carbon disulfide (2.0 and 5.2µg/L), methylene chloride (6.9 µg/L), toluene (2.5JB µg/L) and chlorobenzene (1.6J µg/L) were reported in the rinsates. The semivolatiles that were reported consisted of phthalate ester compounds such as diethyl phthalate and di-n-butyl phthalate at estimated concentrations below the laboratory's reporting limits. The metals that were reported included iron (143 and 129 µg/L), which is categorized as a nutritional, lead (14.9, 5.7, 9.7, 7.0 and 3.2 µg/L) and zinc (57.4, 80.2, 26.8, and 30.1 µg/L).

The analytical results for the explosives analysis by modified method 8330 curiously did exhibit some elevated reporting limits attributed to matrix interferences by the laboratory and some low level concentrations of 3-nitrotoluene (0.69 µg/L), and 2,6-dinitrotoluene (0.28, 0.43, and 0.35 µg/L). Careful review of all site related sample data suggested that the concentrations reported are not indicative of deficiencies in the decon process but rather laboratory process contamination or constituents detected or inherent in the water used in the final rinse. The ER data were used in the validation process by applying the "5X/10X Rule" and associated results were qualified accordingly.

C2.4 Field Blanks

Field blanks were prepared from clean water used in the decontamination procedures employed. Analysis of the blanks ensures that all water sources used during decon are free of parameters of interest. A field blank was collected from the source water (potable) used for steam cleaning sampling equipment and the final decontamination rinse water. Only one lot number of the deionized final rinse water was used; therefore, two (2) field blanks (potable and non-potable) were submitted for analysis and tested for all parameters analyzed in this investigation.

The potable water sample used in the steam cleaning portion of the decontamination process exhibited low level concentrations of volatiles, metals and explosives. The volatiles detected included methylene chloride (7.4B µg/L), chloroform (46B µg/L), bromodichloromethane (14 µg/L), dibromochloromethane (4.3J µg/L) and chlorobenzene (1.2J µg/L). The concentrations reported are indicative of those present in potable water (Trihalomethanes) or laboratory contaminants (methylene chloride). Aluminum (291 µg/L), calcium (34000 µg/L), magnesium (9250 µg/L), sodium (14600 µg/L), lead (22.4 µg/L) and zinc (32.4 µg/L) were detected in the potable water field blank at concentrations expected for nutritional or the mineral elements. 2,4,6-Trinitrotoluene was reported for the field blank at a concentration of 0.22 µg/L which is 0.02 µg/L above the laboratory reporting limit for the compound.

The non-potable, analyte-free water used in the final rinse of the sampling equipment exhibited low level concentrations of volatiles, metals and explosives. The volatiles reported included methylene chloride at 6.3 µg/L, chloroform at an estimated concentration of 1.7 µg/L and toluene, estimated at 1.1 µg/L. Methylene chloride and chloroform were also detected in the associated laboratory method blank. Iron (165 µg/L) and zinc (41.4) were reported in the metals analysis and 2,6-dinitrotoluene (0.32 µg/L) was reported for the 8330 analysis. Review of the associated field sample data suggest that these concentrations are a result of laboratory process contamination and should not be considered to be native to the water source being evaluated.

C3.0 Analytical Program

The analytical program determined, with documented precision and accuracy, if specific compounds were present in the soil samples collected from the areas investigated. Chemical analyses for the investigation were performed in accordance with the guidelines prescribed by the U.S. Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846), Physical/Chemical Methods, Third Edition, September 1986 and subsequent revisions. The soil samples and associated QA/QC samples were analyzed for volatile organics, semivolatile organics, pesticides/PCBs, metals, cyanide, and a specific list of nitroaromatics and nitroamines using the methods presented in Table E-9. Each sample collected was analyzed for the full suite of parameters with the exception of PH2 which did not require the explosives analysis by SW-846 method 8330. A field screening procedure for the presence of 2,4,6-trinitrotoluene was employed for the WP2 site. The screening was performed in accordance with USACE's *Field Method for Determination of 2,4,6-TNT in Soil* (Jenkins, 1990).

All analytical samples collected for the generation of definitive data were reported in EPA Level IV CLP-like data packages and a Level III data validation was performed using EPA validation guidelines as stated in EPA Contract Laboratory Functional Guidelines for Organic and Inorganic dated February 1994. The regulatory compound/analyte list reported was the Target Compound List (TCL) for organics and the Target Analyte List (TAL) for inorganics. These data packages have also been reviewed for completeness and compliance to the approved final work plan (IT, 1996). All samples were submitted to the laboratory accompanied by a request for analysis/ chain of custody (RFA/COC) form. The RFA portion of the form provides project specific analytical specifications and quality control instruction to the laboratories. A formal chain-of-custody (COC) traceability record was included as part of the document ensuring documentation of custody for sample transportation, storage and eventual disposition by the laboratory. Copies of all custody documentation are included in the data packages submitted. All samples were received at the laboratory within the 4 +/- 2 degrees Celsius with custody seals intact.

Soil samples from ten (10) sample locations (2 per boring) at WP2 were screened for the presence of 2,4,6-TNT. The sample was prepared and analyzed as specified in the USACE published method and presented in section III.5.2 of the SSAP (IT, 1996). The application of the colorimetric procedure resulted in no detectable concentrations of TNT in the soil tested. One confirmation sample from each location was forwarded to the laboratory for the analysis of nitroaromatics by 8330 which includes 2,4,6-TNT. Confirmation data supported the results of the screening process.

C3.1 QA/QC Procedures

The project QA/QC program described in the SAP and QAPP was followed for the sample collection and laboratory analysis of samples. The elements of this program are discussed in the sections that follow. The laboratory analytical program consisted of EPA SW-846 methods with Level IV CLP-like deliverables for the generation of definitive data for the investigation. Deliverables included sample preparation information, calibration records, QC data such as method blanks, spikes, duplicates, surrogate recoveries, internal standards, and copies of the RFA and COC records. Chemical analyses for this project were performed following standardized protocols, which include specific requirements for how compounds are analyzed, identified and reported.

Each of the methods employed included specific QA/QC protocols that are used to support the validity of the sampling event and the resulting data. These QA/QC protocols are a critical part of the analytical method and were followed explicitly during sample analysis. Specific measures

included detailed record keeping procedures, analysis of duplicate samples, instrument calibrations, and the analyses of blanks, surrogate and internal standards.

C3.1.1 Reporting Limits

Practical Quantitation Limits (PQLs), the laboratories' statistically determined reporting limits, were presented in the QAPP section of the Final Work Plan for the investigation for the Quanterra-Knoxville, TN laboratory. The analytical program executed required the use of SW-846 methods which specify the procedures for calculating the PQLs presented. Each laboratory is required to demonstrate method performance through method detection limit (MDL) studies for every analysis, media, and instrument. These studies are required to be laboratory specific so that individual laboratory variables such as equipment brands, reagent suppliers, chemist technique, etc., are all factored into the performance study. The PQL is statistically supported by the MDL established. The PQL calculation is designed to use the MDL, established using controlled matrices (i.e. distilled water), and adjusts the limit by a predetermined mathematical factor for the analysis of actual environmental sample matrices (i.e. soil, groundwater, etc.). For purposes of clarity and consistency with respect to definition and terminology, the term "reporting limit" has been substituted for PQL when referencing the limit of detection to which the laboratory reported for each individual sample and parameter. This value has been corrected for all necessary dilution and interference factors as applicable based on the resulting analytical data for the sample.

All laboratory results were reviewed with respect to the actual reporting limits achieved as compared to the limits presented in the SAP. No variations were noted. There were no dilutions, matrix or chemical interferences resulting in elevated limits noted. Data were reported on a dry-weight basis and all reporting limits were adjusted accordingly.

C3.1.2 Holding Times

All laboratory results submitted for the Plumbrook site investigations were reviewed with respect to laboratory adherence to analysis holding times. Maximum analytical holding times, as presented in Table 5-1 of the QAPP, were met by the laboratory.

C3.1.3 Method Blanks

Method blanks were analyzed with each analytical "batch" processed. The blanks were carried through the analytical procedure, step-by-step, including the addition of all solvents and other reagents required in the analytical process. The purpose of the blank is to ensure that no

contaminants are being introduced to the sample as a result of any part of the analytical process, helping to eliminate the element of doubt as to the origin of reported concentrations.

The method blank results reported with the site investigation data were evaluated for high readings characteristic of background or process contamination. There were no significant concentrations detected in the designated blank samples that deem any analytical process out of control or require further corrective action. The acetone, methylene chloride, and bis(2-ethylhexyl)phthalate concentrations reported for the method blanks submitted should be attributed to laboratory process contamination. These compounds are common laboratory contaminants. Methylene chloride is a laboratory solvent commonly used for the preparation and extraction of samples for many analyses. Acetone is also used in the laboratory as a solvent. Phthalate esters are often seen in laboratory method or process blanks. They are thought to originate from the extraction portion of the semivolatiles analysis either through the safety gloves that are worn by the extraction technician or other theorized origins. All concentrations thought to be a product of laboratory process contamination based on method blanks results have been qualified (B) accordingly in the reporting process.

All applicable method blank criteria were met for all parameters as specified by the method employed and the SAP. The analytical data presented in the site investigation report are blank corrected as a function of the data validation process.

C3.1.4 Laboratory Control Samples

Laboratory control samples (LCSs) were used in the analytical program as a measure of accuracy without the influence of matrix on the analysis. The laboratory control sample is best described as a spiked laboratory blank measured and reported by calculating the percent recovery of the known spiked concentrations. An LCS was analyzed with every batch of samples processed and analyzed. The control limits applied were statistically derived by the laboratory as required by the method. The review of all LCS data associated with these site investigation data sets revealed all data to be within the specified control limits demonstrating accuracy within all analytical processes employed.

C3.1.5 Matrix Spike\Matrix Spike Duplicates

Matrix spikes are used to provide an indication of bias due to matrix effects and a measure of accuracy of associated results. Duplicate analyses, sometimes performed using a matrix spike duplicate in the case of organics analyses, provide a measure of precision in the analytical process. Two matrix spike/matrix spike duplicate (MS/MSD) pairs were analyzed for the G-8

Burning Grounds site investigation. Samples 3004 and 3021 were collected and submitted for an MS/MSD analysis. The observed percent recovery of the spikes was used to determine accuracy for the analyses. Control limits used to evaluate these recoveries were determined statistically by the laboratory for organics as required by the methods employed. Relative percent difference (RPD) calculations are used to evaluate duplicate sample results as they are for field duplicate samples. The acceptance criteria for the precision data were statistically determined by the laboratory. All precision and accuracy results for the MS/MSD analysis associated with sample 3004 were within all applicable acceptance criteria for organics. Metals data exhibited variances in accuracy data for several elements with recoveries reported as low as 43 percent or as high as 140 percent. The acceptable range for the project was defined as 80-120 percent. Associated data were qualified as estimated in the validation process for the effected elements. Similar anomalies were noted in the accuracy data for sample 3021. Associated results were qualified as estimated in the data validation process for this sample as well. Precision data were all within the control limits of 75-125 percent with the exception of Iron (199.6 percent) and Manganese (46.5 percent) for 3004, and Barium (25.9 percent) and Manganese (75.2 percent) for sample 3021. The validation process resulted in estimated data for these elements based on these precision data as well. Sample 3021 exhibited variances in the precision and accuracy data for volatile organics in addition to the metals data. These variations were only slight as indicated below, and no qualification was deemed necessary as a result of these recoveries.

Parameter	MS/MSD, %	Control Limits
Benzene	74/71	75-137
Toluene	77/105	70-138
Chlorobenzene	68/66	71-147

C3.1.6 Surrogate Standards

Surrogate standards were used in the analytical program to monitor the percent recovery efficiencies of the sample preparation and analytical procedure on a sample-by-sample basis for organic constituents. The surrogate standards used were those required by the analytical methodology employed and were compliant with the requirements of the method employed. Control limits for the surrogate recovery were determined statistically by the laboratory as required by the methodology. Evaluation of the surrogate standard data exhibited acceptable results for all semivolatile, pesticide/PCB and explosives analyses. Volatile organics analyses exhibited some anomalies in the surrogate standard recoveries, particularly, bromofluorobenzene (BFB), that were attributed to matrix interferences based on internal standard recoveries for the

affected samples and the recoveries reported for the sample reanalyses. The variations noted were only slight. Recoveries generally fell within 10 percent of the lower limit of the established acceptance limits. Some data were estimated in the validation process as e result of these variations, but all data were found to be acceptable as reported. No other anomalies were encountered in the surrogate standard data reported.

C4.0 Data Quality Objectives

DQOs are qualitative and quantitative criteria used to guide sample collection and analysis activities. The DQOs for the project were developed at the outset of the investigation to ensure that the data generated during the execution of the analytical program were of appropriate quality to support the anticipated end use of the data. DQOs describe the level of uncertainty that a decision-maker is willing to accept in results derived from the environmental data. This uncertainty is used to the quality of the measurement data, usually in terms of objectives, bias, representativeness, comparability and completeness. DQOs seek to ensure that the right type, amount and quality of data are collected to accomplish the objectives of the project.

The DQOs for this project are to produce scientifically valid data of known accuracy and precision, which are complete with respect to identified critical samples, comparable with similar data types and representative of the media sampled so as to be useful for the cited purposes.

In order to achieve these DQOs, criteria were established in the SAP by which these goals could be achieved. The Site Investigation required that all laboratory analyses be performed and resulting data reported as definitive data. A non-CLP, (SW-846) method was employed and Level IV (CLP-like) data packages were provided for evaluation for these samples. Definitive data criteria were chosen because compliance with the criteria specified within its guidelines provides quantified concentrations with acceptable reliability for the purposes of the investigation. All reported analytical data met or exceeded the requirements of Level IV QC criteria.

C5.0 Data Useability

The data review process as presented in this report, compares sample results to pre-established criteria to confirm that the data are of acceptable technical quality. Specific criteria were reviewed which verifies the achievement of all precision, accuracy, completeness, comparability

and representativeness goals established to meet the project DQOs. To verify that these objectives were met, field measurements, sampling and handling procedures, laboratory analysis and reporting and all nonconformances and discrepancies in the data were examined to determine compliance with the appropriate and applicable procedures. The results of this review were presented in previous sections with all outliers or nonconformances were discussed where they occurred.

Precision data was obtained through the analysis and evaluation of duplicate QA samples. Accuracy was determined through the analysis and evaluation of method blanks, laboratory control samples, trip blanks and matrix spike samples. These QA samples were collected and/or analyzed at the frequency established in the SAP, verifying the completeness element of the goals along with the evaluation of holding times, and reporting limits.

Completeness is a measure of the amount of valid data that are obtained during a sampling event. There were no data points rejected in the evaluation process.

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. Comparability ensures that results for the sampling event can be compared with data from other past and/or future sampling programs. Comparability for this sampling event was achieved through the use of established and recognized techniques and accepted standard EPA methods. All samples collected and analyzed were subjected to the same sampling, handling, preparation, analysis, reporting and validation criteria for the purpose of achieving comparability goals within the data set.

To verify sample representativeness, field data such as field activity daily logs (FADL), sample collection logs, COC/RFA forms, field instrument calibrations and variances were reviewed. The overall results of the analyses as discussed in this evaluation suggest that representative samples were collected and analyzed with results being indicative of the media analyzed with the exception of the few anomalies noted. Organic chemicals were omitted from consideration if they were a common laboratory contaminant or could be traced to some other source within the analytical investigation process. Overall, the investigation data do reflect expected site conditions.

All analytical results for chemicals are reported using laboratory data qualifiers. Chemicals flagged with a "U" qualifier are considered to be not detected, or detected at a concentration below the normal, random "noise" of the analytical instrument. The "J" qualifier describes an

estimated value when a compound is qualitatively identified (spectral identification criteria are met), but at values less that the project-required reporting limit. A full list of laboratory data qualifiers and their definitions are included in the laboratory data report.

C6.0 Conclusions

The goals and objectives for the Plumbrook Site Investigation were to provide information concerning the possible environmental contamination that can be used in making management decisions for the necessity of further work at the site. The investigation is preliminary in nature and the information acquired will provide a foundation upon which other studies of the site, if other studies are deemed necessary and appropriate, should be based. Specifically , the objectives of the site investigation were as follows: define the location and extent of the burning ground areas (where applicable); confirm or deny the presence of residual chemical contamination of surface and subsurface soils; and determine whether or not soils are the sample media of importance, and if other media should be further evaluated. To accomplish this goal, samples were collected and definitive data were generated for the contaminants of potential concern. Evaluation of the data using the specific DQOs established for the project and the data validation process resulted in the determination that the data set is valid and of sufficient quality to meet the objectives of the investigation. There were no significant problems observed that would adversely affect the application of the data or the success of the overall investigation.

Table C-1

Field Duplicate Results
Power House No. 2 Ash Pit
Former Plum Brook Ordnance Works, Sandusky, Ohio
PBOW-96-SO-PH2-PH2S004-4080 (2-3.0)

Parameter	4080 Original (µg/kg)	4081 Duplicate (µg/kg)	RPD %
Acetone	23 U	13 J	NC
Aluminum	9490	8520	10.8
Barium	59.4	57.7	2.9
Beryllium	0.60	0.58	3.4
Calcium	2390	2270	5.2
Chromium	14.2	12.5	12.7
Cobalt	15.2	12.7	17.9
Copper	17.3	16.7	3.5
Iron	22500	21300	5.5
Magnesium	2500	2390	4.5
Manganese	464	434	6.7
Nickel	31.9	30.2	5.5
Potassium	1130	902	22.4
Silver	1.6	1.2 U	NC
Vanadium	21.1	17.3	19.8
Zinc	7.3	70.4	3.9
Arsenic	7.1	6.9	2.9
Lead	10.5	9.8	6.9

U = Compound analyzed for but not detected; value given is quantification limit.
J = Compound detected but below quantification limit; value estimated.
NC = Not calculable.

Table C-2

Field Duplicate Results
Power House No. 2 Ash Pit
Former Plum Brook Ordnance Works, Sandusky, Ohio
PBOW-96-SO-PH2-PH2S008-4160 (2-3.0)

Parameter	4160 Original (µg/kg)	4161 Duplicate (µg/kg)	RPD %
Bromomethane	1.1 J	11 U	NC
Aluminum	6950	6840	1.6
Barium	54.2	52.9	2.4
Calcium	1910	1990	4.1
Chromium	9.9	9.7	2.0
Cobalt	11.3	12.7	11.7
Copper	12.8	12.9	0.8
Iron	16200	17000	4.8
Magnesium	1760	1800	2.2
Manganese	565	597	5.5
Nickel	22.9	24.2	5.8
Potassium	774	760	1.8
Vanadium	15.6	16.0	2.5
Zinc	53.6	56.2	4.7
Arsenic	5.1	5.4	5.7
Thallium	1.5	1.1 U	NC

U = Compound analyzed for but not detected; value given is quantification limit.
J = Compound detected but below quantification limit; value estimated.
NC = Not calculable.

Table C-3

Field Duplicate Results
Reservoir No. 2 Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio
PBOW-96-SO-2B2-2BGS002-1040 (0-0.5)

Parameter	1040 Original (µg/kg)	1041 Duplicate (µg/kg)	RPD %
2,6-Dinitrotoluene	290 J	300 J	3.4
2,4-Dinitrotoluene	1000	870	13.9
Aroclor 1260	1700	2200	25.6
Aluminum	9200	8600	6.7
Barium	170	158	7.3
Beryllium	0.65	0.68	4.5
Calcium	16600	9810	51.4
Chromium	20.1	18.2	9.9
Cobalt	9.2	10.1	9.3
Copper	60.0	138	78.8
Iron	19900	19100	4.1
Magnesium	5900	4720	22.2
Manganese	191	174	9.3
Nickel	38.5	42.1	8.9
Potassium	1270	1360	6.8
Silver	1.2	1.3 U	NC
Vanadium	27.2	24.2	11.7
Zinc	267	246	8.2
Arsenic	9.5	8.7	8.8
Lead	1000	555	57.2
Selenium	1.0	0.71	33.9
Thallium	2.1	1.8	15.4
Mercury	0.18	0.23	24.4
2.4-Dinitrotouene (SW-846, 8330)	35	2.5	173
2,4,6-Trinitrotoluene	140	9.5	175

U = Compound analyzed for but not detected; value given is quantification limit.
J = Compound detected but below quantification limit; value estimated.
NC = Not calculable.

Table C-4

Field Duplicate Results
Reservoir No. 2 Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio
PBOW-96-SO-2BG-2BGS005-1140 (2-3.0)

Parameter	1140 Original (µg/kg)	1141 Duplicate (µg/kg)	RPD %
Acetone	4.6 J	25 U	NC
Aluminum	14000	16000	13.3
Barium	138	90.1	42.0
Beryllium	0.74	0.79	6.5
Calcium	4210	4030	4.4
Chromium	20.2	21.7	7.2
Cobalt	19.3	14.0	31.8
Copper	32.2	32.3	0.3
Iron	32100	33300	3.7
Magnesium	5110	5230	2.3
Manganese	1390	487	96.2
Nickel	48.3	33.2	37.1
Potassium	1420	2040	35.8
Vanadium	28.7	33.2	14.5
Zinc	76.4	83.3	8.6
Arsenic	12.0	13.0	8.0
Lead	13.7	14.2	3.5
Thallium	1.6	2.1	27.0

U = Compound analyzed for but not detected; value given is quantification limit.
J = Compound detected but below quantification limit; value estimated.
NC = Not calculable.

Table C-5

Field Duplicate Results
Reservoir No. 2 Burning Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio
PBOW-96-SO-2BG-2BGS007-1210 (6-7.0)

Parameter	1210 Original (µg/kg)	1211 Duplicate (µg/kg)	RPD %
Acetone	23 U	6.0 J	NC
Aluminum	6100	6350	5.0
Barium	39.3	42.0	6.6
Calcium	54000	55700	3.1
Chromium	10.5	11.1	5.6
Cobalt	7.0	6.8	2.9
Copper	19.4	19.4	0.0
Iron	17600	17700	0.6
Magnesium	19000	19700	3.6
Manganese	421	428	1.6
Nickel	17.1	18.1	5.7
Potassium	1240	1260	1.6
Vanadium	20.0	20.3	1.5
Zinc	52.9	48.6	8.5
Arsenic	9.0	8.2	9.3
Lead	11.8	10.1	15.5

U = Compound analyzed for but not detected; value given is quantification limit.
J = Compound detected but below quantification limit; value estimated.
NC = Not calculable.

Table C-6

Field Duplicate Results
Waste Water Disposal Plant No. 2
Former Plum Brook Ordnance Works, Sandusky, Ohio
PBOW-96-SO-WP2-WP2S004-3240 (4-5.0)

Parameter	3240 Original (µg/kg)	3241 Duplicate (µg/kg)	RPD %
Acetone	4.2 J	39	161
Aluminum	13200	14200	7.3
Barium	81.8	117	35.4
Beryllium	0.61	0.74	19.3
Calcium	3730	3630	2.7
Chromium	19.5	19.7	1.0
Cobalt	13.0	18.9	37.0
Copper	23.4	34.6	38.6
Iron	27100	35500	26.8
Magnesium	4960	5310	6.8
Manganese	430	771	56.8
Nickel	28.9	39.3	30.5
Potassium	1610	2030	23.1
Silver	1.4	1.2 U	NC
Vanadium	22.8	27.8	19.8
Zinc	81.4	88.1	7.9
Arsenic	8.9	16.8	61.5
Lead	18.1	15.1	18.1
Thallium	1.3	1.2	8.0

U = Compound analyzed for but not detected; value given is quantification limit.
J = Compound detected but below quantification limit; value estimated.
NC = Not calculable.

Table C-7

Field Duplicate Results
Additional Burn Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio
PBOW-96-SO-ABG-ABGS002-2020 (2-3.0)

Parameter	2020 Original (mg/kg)	2021 Duplicate (mg/kg)	RPD %
Aluminum	9880	8880	1.1
Barium	111	62.0	56.6
Beryllium	0.66	0.61	7.9
Calcium	47100	48400	2.7
Chromium	12.7	12.0	5.7
Cobalt	8.3	6.0 U	NC
Copper	9.6	8.0	18.2
Iron	32700	28800	12.7
Magnesium	21900	22200	1.4
Manganese	1830	1310	33.1
Nickel	20.7	17.2	18.5
Potassium	783	651	18.4
Vanadium	30.6	27.7	10.0
Zinc	51.7	48.1	7.2
Arsenic	6.1	5.3	14.0
Lead	11.6	9.6	18.9

U = Compound analyzed for but not detected; value given is quantification limit.
NC = Not calculable.

Table C-8

Field Duplicate Results
Additional Burn Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio
PBOW-96-SO-ABG-ABGS011 (0-0.5)

Parameter	2210 Original (mg/kg)	2211 Duplicate (mg/kg)	RPD %
2-Methylnaphthalene	51 J	51 J	0.0
Acenaphthylene	39 J	380 U	NC
Phenanthrene	86 J	67 J	24.8
Fluoranthene	150 J	93 J	46.9
Pyrene	120 J	73 J	48.7
Benzo(a)anthracene	83 J	380 U	NC
Chrysene	110 J	70 J	44.4
bis(2-Ethylhexyl)phthalate	54 J	53 J	1.9
Benzo(b)fluoranthene	91 J	380 U	NC
Benzo(a)pyrene	72 J	380 U	NC
Aluminum	6610	5220	23.5
Barium	98.6	148	40.1
Beryllium	0.72	0.74	2.7
Calcium	5950	11200	61.2
Chromium	8.8	7.5	16.0
Cobalt	8.4	9.1	8.0
Copper	37.2	23.9	43.5
Iron	27900	19300	36.4
Magnesium	1360	2220	48.0
Manganese	145	135	7.1
Nickel	23.3	18.8	21.4
Potassium	571	575 U	NC
Vanadium	13.5	14.0	3.6
Zinc	48.0	49.5	3.1

Table C-8

Field Duplicate Results
Additional Burn Ground
Former Plum Brook Ordnance Works, Sandusky, Ohio
PBOW-96-SO-ABG-ABGS011 (0-0.5)

Parameter	2210 Original (mg/kg)	2211 Duplicate (mg/kg)	RPD %
Arsenic	7.6	7.6	0.0
Lead	64.3	17.0	116
Selenium	0.61	0.72	16.5

U = Compound analyzed for but not detected; value given is quantification limit.
J = Compound detected but below quantification limit; value estimated.
NC = Not calculable.

Table C-9

Summary of Chemical Analysis and Methodologies for Soil Samples
Site Investigations
Former Plum Brook Ordnance Works, Sandusky, Ohio

Matrix	Analytical Parameters	Analytical Method
Soil	TCL Volatile Organic Compounds	SW-846 8260A[a]
	TCL Semivolatile Organic Compounds	SW-846 3520B/3541/8270B[a]
	TAL Metals	SW-846 3050A/6010A[b] for Ag, Al, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, Sb, Tl, V, Zn 7471A[a] for Hg 7060A[b] for As 7740[b] for Se
	TCL Pesticides/PCBs	SW-846 3520B/8081[a]
	Nitroaromatic Compounds	SW-846/8330[c] (as modified)
	Total Cyanide	SW-846 9013/9010A

[a]U.S. Environmental Protection Agency (EPA), *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, Third Edition, Update II, September 1994.
[b]U.S. Environmental Protection Agency (EPA), *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, Third Edition, Update I, July 1992.
[c]U.S. Environmental Protection Agency (EPA), *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, Third Edition, Revision 1, December 1990.

TCL - Target compound list.
TAL - Target analyte list.

APPENDIX D

SOIL BORING LOGS

HTRW DRILLING LOG

DISTRICT: Nashville, TN		HOLE NUMBER: TR-1
1. COMPANY NAME: IT CORPORATION	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF SHEETS 2
3. PROJECT: PLUM BROOK	4. LOCATION: Reservoir No. 2 Burning Ground	
5. NAME OF DRILLER: Tom Hendley	6. MANUFACTURER'S DESIGNATION OF DRILL: Back hoe	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Back hoe with 18" bucket	8. HOLE LOCATION: TR-1	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10-14-96	11. DATE COMPLETED: 10-14-96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 3.3 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

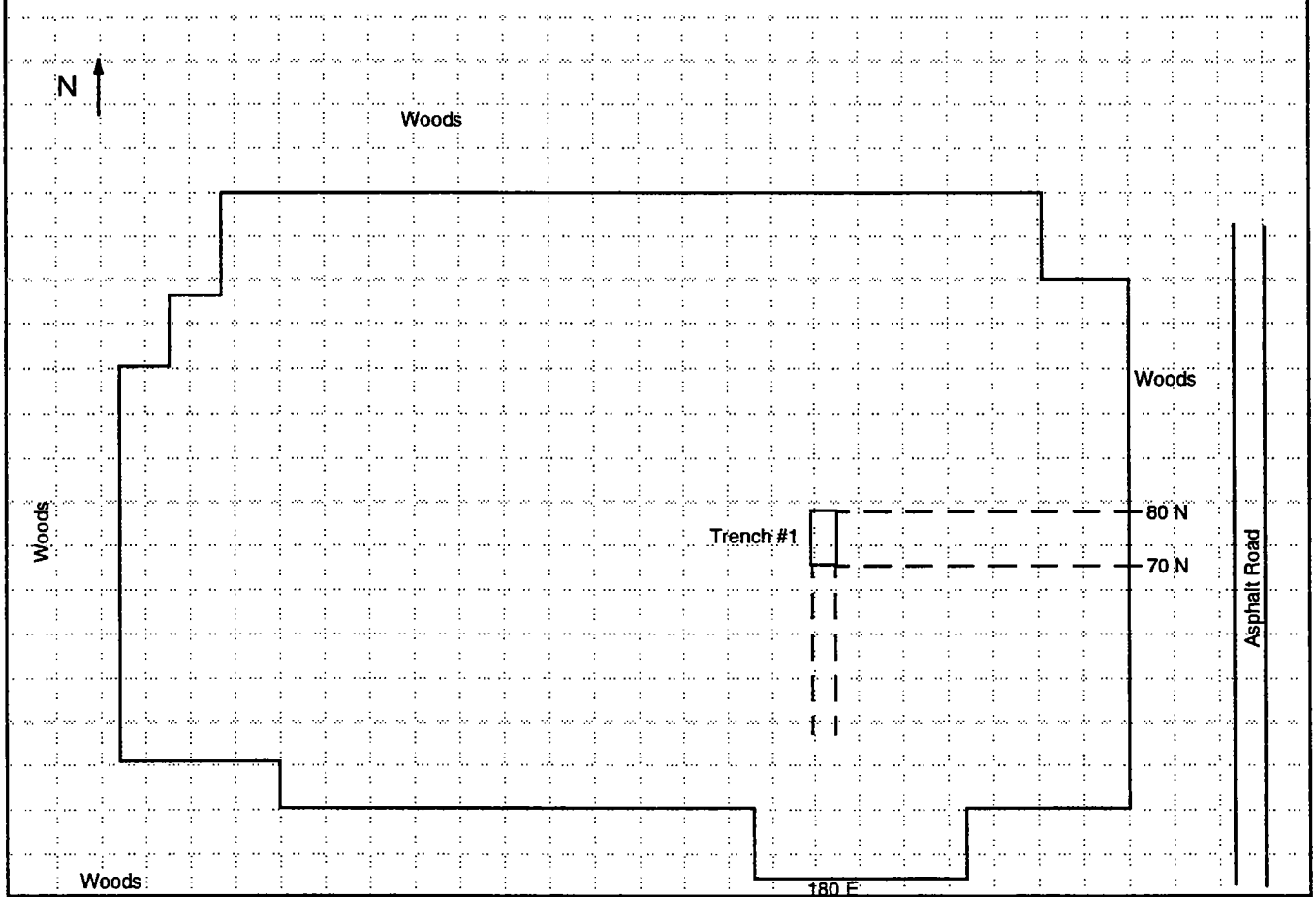
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	NA	NA	NA	NA	NA	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE NO.
Plum Brook	TR-1

TR-1.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. TR-1

PROJECT: Plum Brook

INSPECTOR: David Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass					
	Fill: 0.5	(Soft, black, very fine grain, sandy SILT (20% sand) slate fragments, organics (roots), moist ml		NA		NA	10/14/96
	1						
	Fill: 1.5	1.3 (Black, CINDER and ASH, metal objects,(pully pipe, nails, etc.) many slate fragments, moist)	0.0				
	2	2.2					
	2.5	Medium stiff, light green, very fine grain, SILT, trace of sand (5%), low plasticity, moist ml					
	3						
	3.5	Total Depth= 3.3 Ft.					
	4						

Project: Plum Brook

Hole No. TR-1

tr-1a.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville, TN		HOLE NUMBER: TR-2
1. COMPANY NAME: IT CORPORATION	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF SHEETS 2
3. PROJECT: PLUM BROOK	4. LOCATION: Burn Ground Reservoir No. 2	
5. NAME OF DRILLER: Tom Hendley	6. MANUFACTURER'S DESIGNATION OF DRILL: Back hoe	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Back hoe with 18" bucket	8. HOLE LOCATION: TR-2	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 10-14-96	11. DATE COMPLETED: 10-14-96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: 1.7	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 3.5 Ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

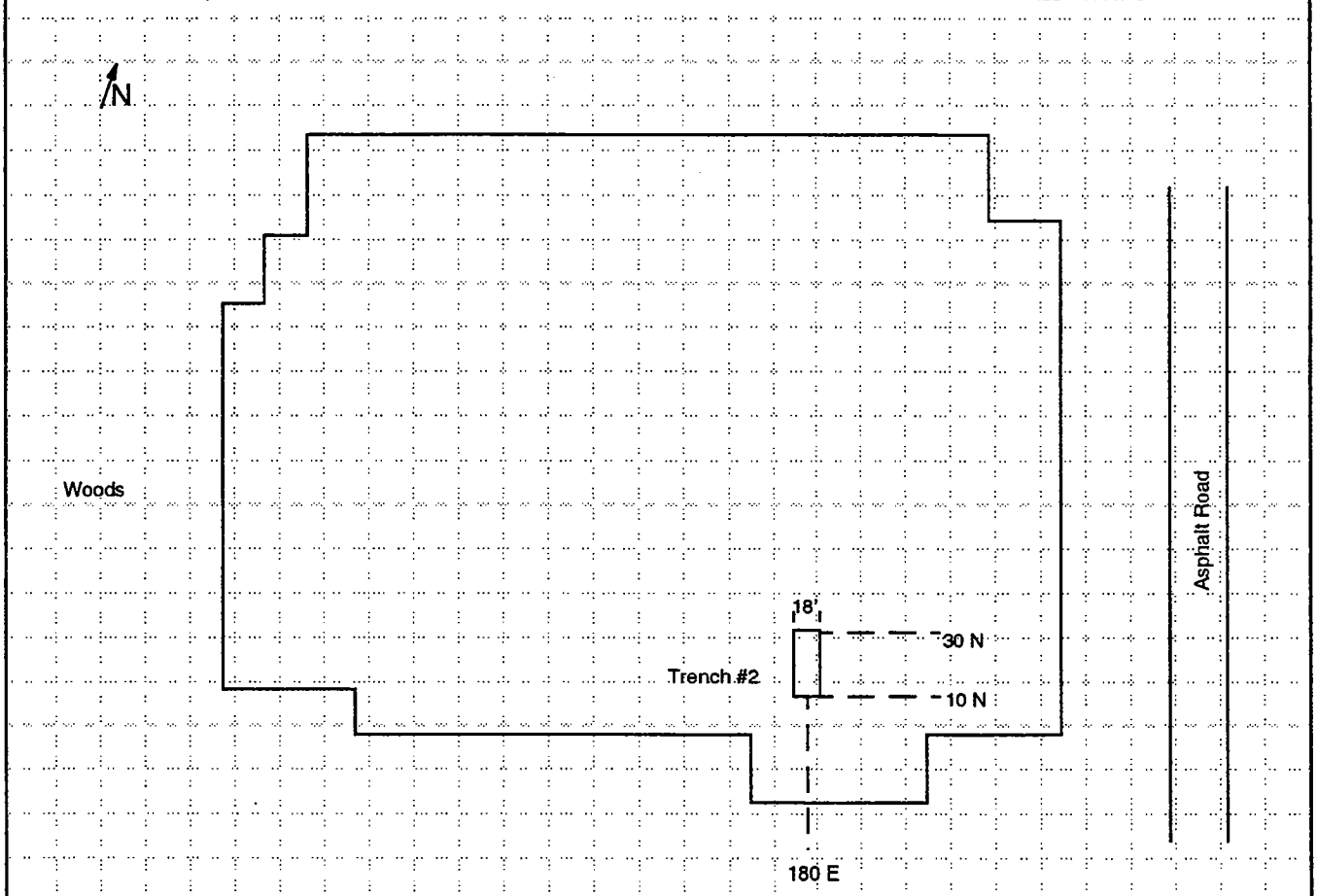
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	NA	NA	NA	NA	NA	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE NO.
Plum Brook	TR-2

tr-2.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. TR-2

PROJECT: Plum Brook

INSPECTOR: David Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass					
	Fill: 0.5	(Soft, black, homogeneous, very fine grain, sandy SILT, (10% sand), slate fragments, organics (roots), moist) ml 0.5		NA	NA	NA	Breathing Air 0.0
	Fill 1	(Loose, dark brown, homogeneous, very fine grain, silty SAND, many rock fragments, moist) sm 1.2					
	Fill: 1.5	(Very loose, black CINDER/ASH(pipe flanges, pipes, straps, etc.) tile pieces, wood, moist) 1.7	0.0				
	Fill: 2	(Medium dense, light brown, homogeneous, very fine grain, silty SAND, (35% silt), well sorted, moist) sm 2.1					∇ Encountered groundwater 1.7 Ft.
	2.5	Medium stiff, light green, mottle (gray), very fine grain, SILT, trace of sand (5%), low plasticity blocky, moist ml					
	3						
	3.5	Total Depth= 3.5 Ft.					

Project: Plum Brook

Hole No. TR-2

TR-2a.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville, TN		HOLE NUMBER: TR-3
1. COMPANY NAME: IT CORPORATION	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF SHEETS 2
3. PROJECT: PLUM BROOK	4. LOCATION: Burn Pit Reservoir No. 2	
5. NAME OF DRILLER: Tom Hendley	6. MANUFACTURER'S DESIGNATION OF DRILL: Back hoe	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Back hoe with 18" bucket	8. HOLE LOCATION: TR-3	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 10-14-96	11. DATE COMPLETED: 10-14-96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 3.5 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

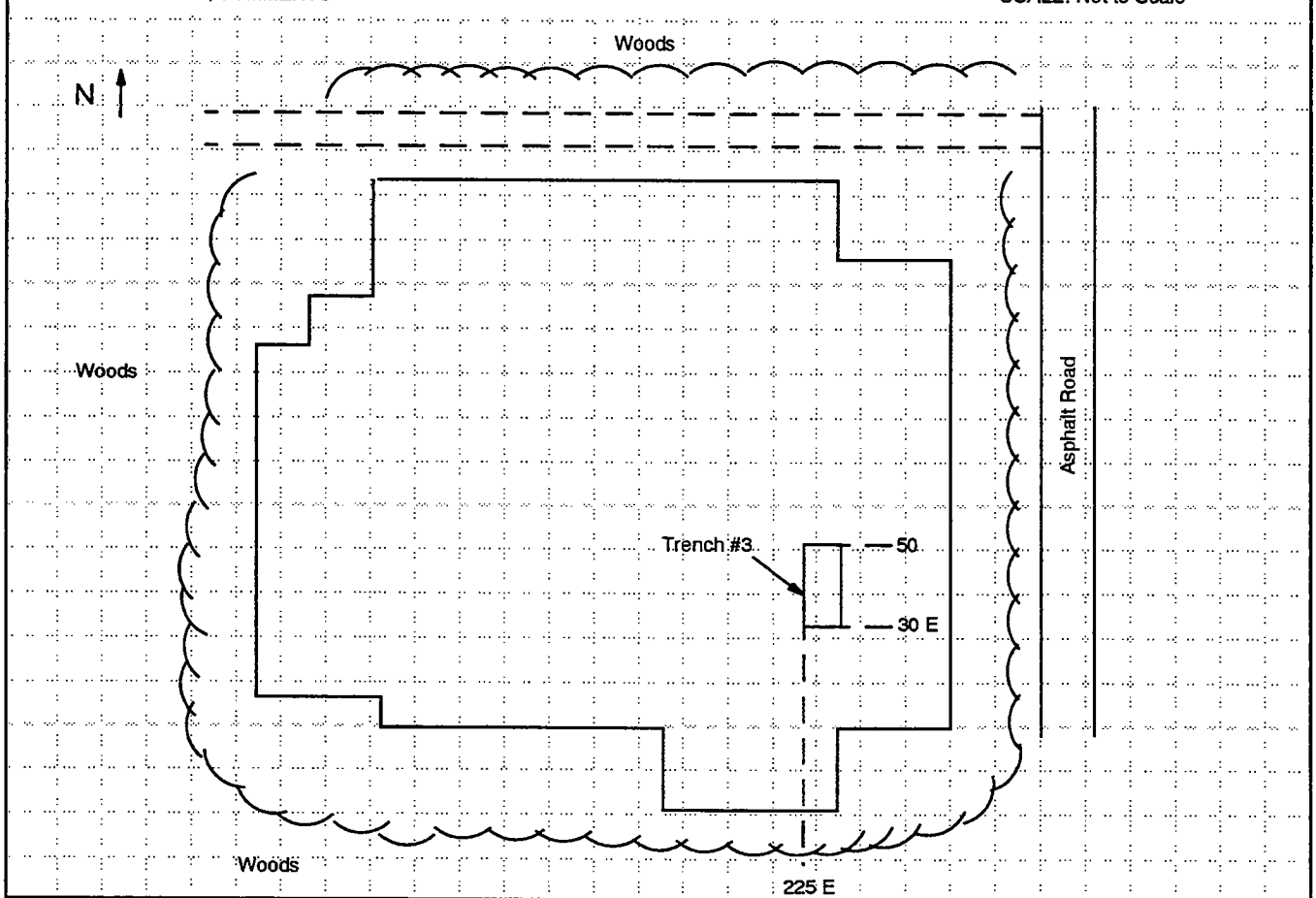
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	NA	NA	NA	NA	NA	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE NO.
Plum Brook	TR-3

tr-3.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. TR-3

PROJECT: Plum Brook

INSPECTOR: David Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass					
	Fill: 0.5	(Soft, black homogeneous, very fine grain, sandy SILT, rock fragments (20% sand), organics (roots) moist) ml 0.5		NA	NA	NA	
	Fill 1	(Loose, brown mottled,(black,gray,white), very fine grain, silty SAND, rock fragments (30%), cinders, moist) sm 0.9					Possible lead sheet insulation (asbestos) pipes, etc.
	Fill: 1.5	(Loose, black, CINDER/ASH, metal objects, many tile fragments, moist) 1.5	0.0				
	2	Medium stiff, brown, mottled (light green gray), very fine grain, SILT, trace of sand (5%) low to no plasticity, moist ml					
	2.5						
	3						
	3.5	Total Depth= 3.5 ft.					
	4						

Project: Plum Brook

Hole No. TR-3

TR-3a.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville, TN		HOLE NUMBER: TR-4
1. COMPANY NAME: IT CORPORATION	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF SHEETS 2
3. PROJECT: PLUM BROOK	4. LOCATION: Reservoir No. 2 Burn Pit	
5. NAME OF DRILLER: Tom Hendley	6. MANUFACTURER'S DESIGNATION OF DRILL: Back hoe	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Back hoe with 18" Bucket	8. HOLE LOCATION: TR-4	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10-14-96	11. DATE COMPLETED: 10-14-96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 3.5 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

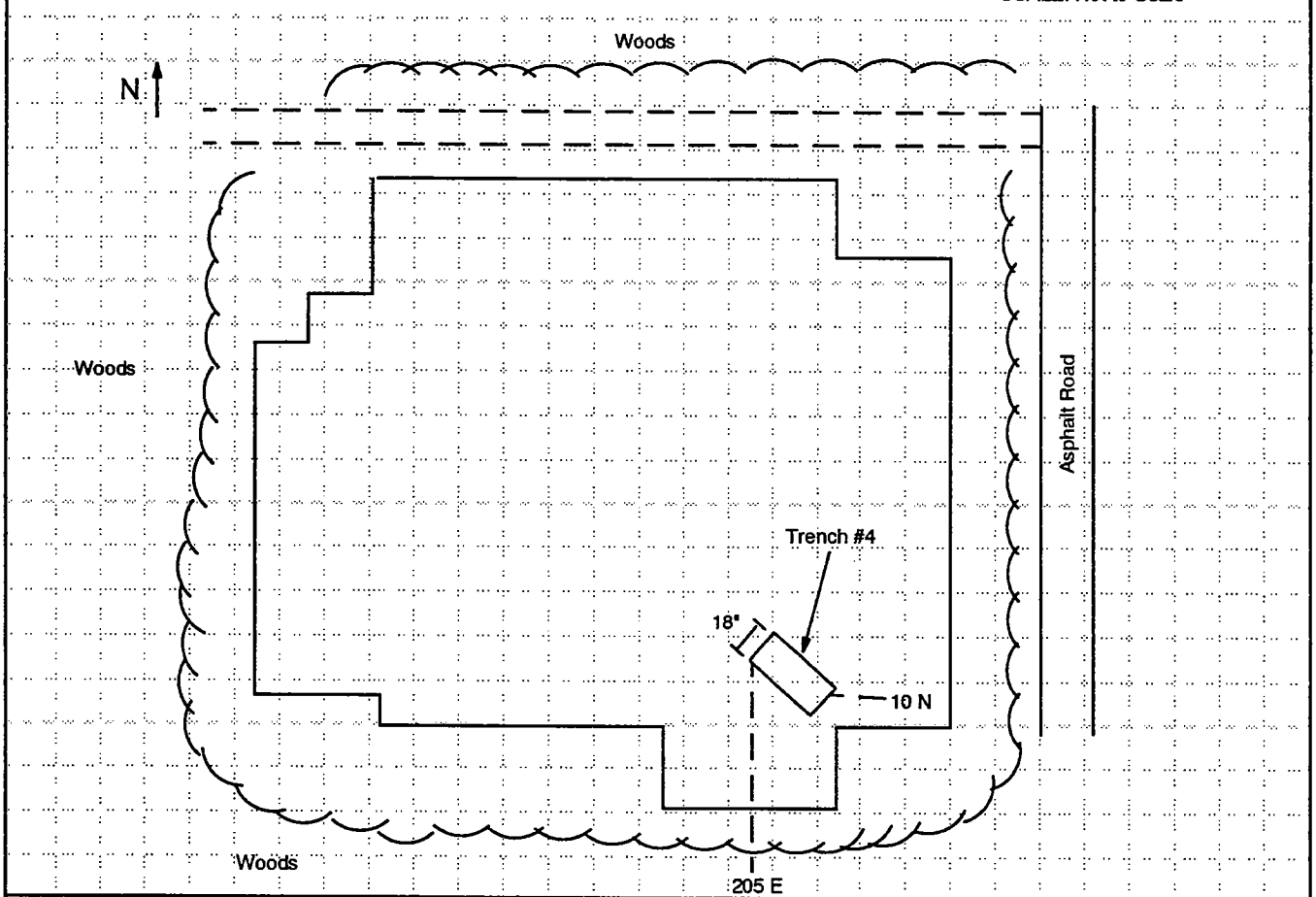
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	NA	NA	NA	NA	NA	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE NO.
Plum Brook	TR-4

tr-4.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. TR-4

PROJECT: Plum Brook

INSPECTOR: David Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass					
	Fill: 0.5	(Soft, black, homogeneous, very fine grain, sandy SILT, (40% sand), tile fragments, organics(roots), moist) ml 0.7		NA	NA	NA	
	Fill: 1	(Loose, light brown, mottled (white, gray), very fine grain, silty SAND, (10% silt), metal objects (pipes) ceramics, glass, insulation(asbestos?) sm many broken tiles moist) 1.4	0.0				
	1.5 Fill: 2 2.5	(Loose, black ASH/CINDERS, metal objects, many broken tiles, metal ceramics) 2.6					
	3	Medium stiff, light brown, mottled light(green/gray), very fine gray, SILT, (sand 5%), low plasticity, moist ml					
	3.5 4	Total Depth= 3.5 Ft.					

Project: Plum Brook

Hole No. TR-4

tr-4a.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

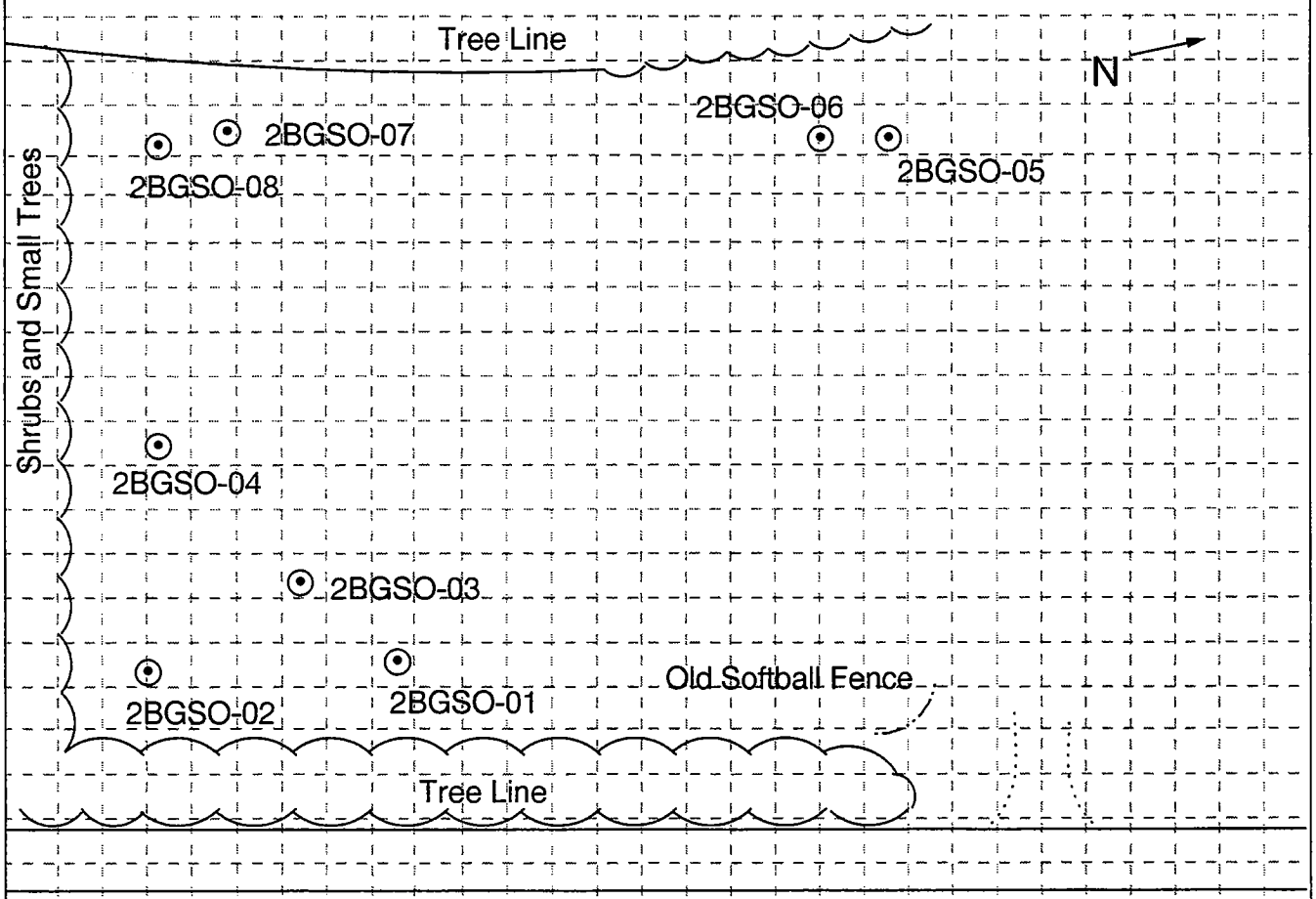
DISTRICT: Nashville COE		HOLE NUMBER: 2BGSO-01
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: Alliance	SHEET 1 OF 2 SHEETS
3. PROJECT: PBOW	4. LOCATION: Erie County	
5. NAME OF DRILLER: Paul D. McAdams	6. MANUFACTURER'S DESIGNATION OF DRILL: Dietrich D-50	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Split Spoons, 8-1/2" O.D. Augers	8. HOLE LOCATION: Reservior #2 Burn Ground	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10/1/96	11. DATE COMPLETED: 10/1/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 7.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC/Pect/PCBs	Nitroaromatics	Cyanide	%

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X			Wesley White

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	2BGSO-01

PBOW/BORINGS/2BGS-1.DRW/MC/11-13-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. 2BGSO-01

PROJECT: PBOW | INSPECTOR: W. White | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	USCS f	BLOW COUNTS g	REMARKS h
		Medium dense, black (10 YR 2/1) silty very fine SAND, moderately well sorted, (20% silt), poorly graded, moist	0.0				
		Grading to a dark grayish brown (10 YR 4/2) 1.0		S-1	SM	4,5 19,22	
	1	Loose, black (2.5 Y 2.5/1) silty fine to coarse SAND, trace fine gravel, poorly sorted, well graded, wet 1.5			SW		
		Hard, dark grayish brown (10 YR 4/2), weathered shale and silt, trace glass, dry to moist 2.0			ML		
	2	Hard, to very stiff, black (2.5 Y 2/1), clayey SILT, medium plasticity, moist 2.7	0.0		ML		
		Hard, greenish gray (5 GY 5/1), clayey SILT, medium plasticity, moist 3.0			ML	8,8 4,6	
	3	Stiff, bluish gray (5 B 6/1) mottled with strong brown (7.5 YR 5/6), sandy SILT, medium plasticity, 25% very fine sand, moist		S-2			
	4				ML		
		5.0		S-3		7,9 2,2	
	5	Stiff, brown (10 YR 5/3) mottled with bluish gray (5 B 6/1), clayey SILT, trace sand, medium plasticity, moist					
	6				ML		
		7.0	0.0	S-4		4,6	
	7	Total Depth = 7.0 Ft.					
	8						
	9						
	10						

Project: PBOW | Hole No. 2BGSO-01

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: 2BGSO-02
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: Alliance	SHEET 1 OF 2 SHEETS

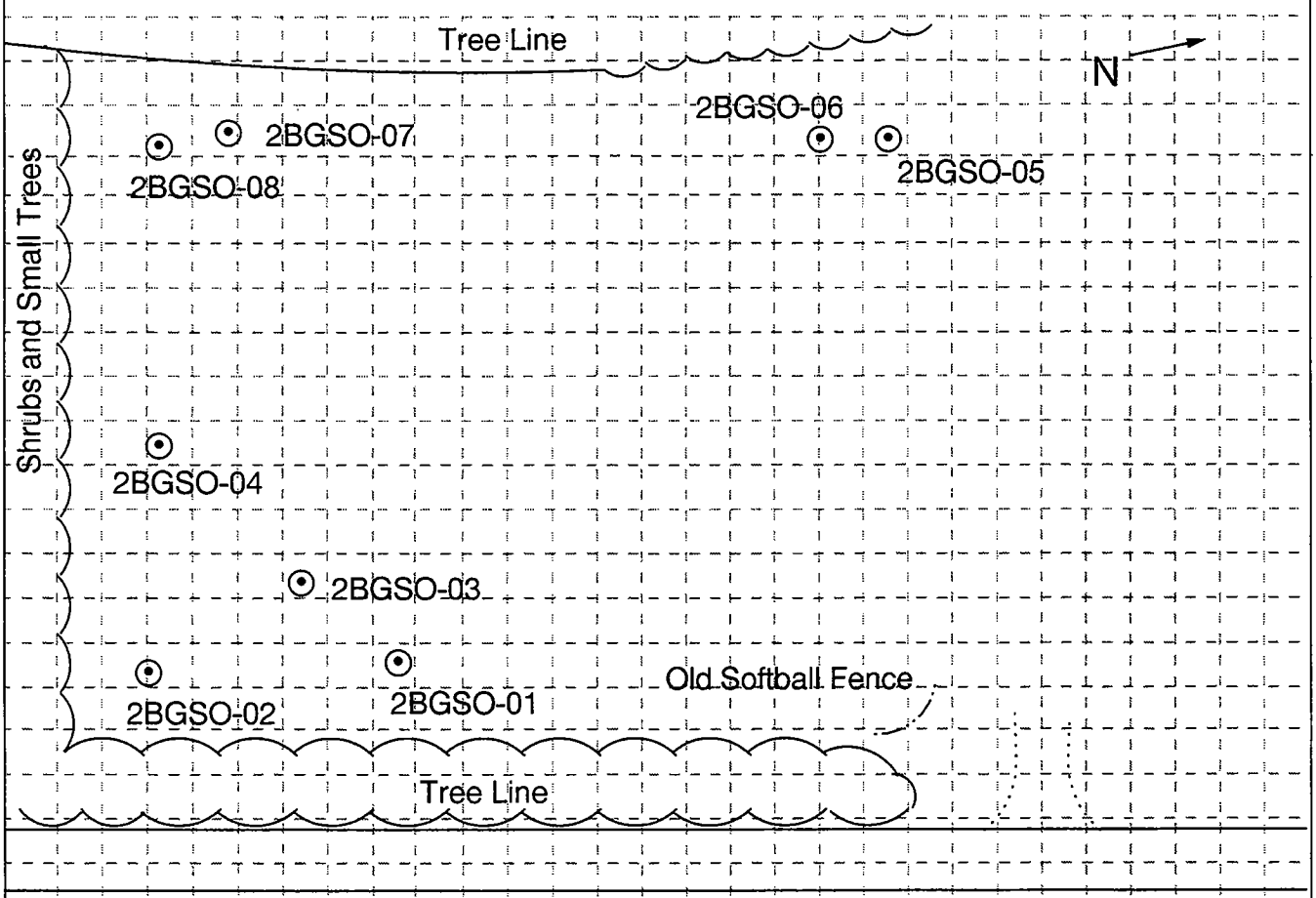
3. PROJECT: PBOW	4. LOCATION: Erie County
5. NAME OF DRILLER: Paul D. McAdams	6. MANUFACTURER'S DESIGNATION OF DRILL: Dietrich D-50
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Split Spoons, 8-1/2" O.D. Augers	8. HOLE LOCATION: Reservior #2 Burn Ground
	9. SURFACE ELEVATION:
	10. DATE STARTED: 10/1/96 / 11. DATE COMPLETED: 10/1/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 7.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC/Pect/PCBs	Nitroaromatics	Cyanide	%

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X			Wesley White

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	2BGSO-02

PBOW/BORINGS/2BGS-2.DRW/MC/11-13-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. 2BGSO-02

PROJECT: PBOW | INSPECTOR: W. White | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	USCS f	BLOW COUNTS g	REMARKS h
		Soft, very dark brown (10 YR 2/2) SILT, medium plasticity, moist 0.5	1.0		ML		
	1	Loose, black (2.5 Y 2.5/1), silty fine to coarse SAND, gravelly shale at 30%, burn debris, poorly sorted, well graded, moist 1.9		S-1	SW	3,3 7,8	
	2	Hard, to very stiff, black (10 YR 2/1), clayey SILT, medium plasticity, moist 2.3	0.5		ML		
		Stiff, bluish gray (5 B 6/1) mottled with strong brown (7.5 YR 5/6), very fine sandy SILT, medium plasticity, 25% very fine sand, moist			ML		
	3			S-2		5,6 7,10	
	4	4.0					
		Stiff, brown (10 YR 5/3) mottled with bluish gray (5 B 6/1), clayey SILT, trace sand, medium plasticity, moist					
	5			S-3	ML	3,5 6,9	
	6		1.0	S-4		5,6	
	7	7.0					
		Total Depth = 7.0 Ft.					
	8						
	9						
	10						

Project: PBOW | Hole No. 2BGSO-02

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: 2BGSO-03
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: Alliance	SHEET 1 OF 2 SHEETS

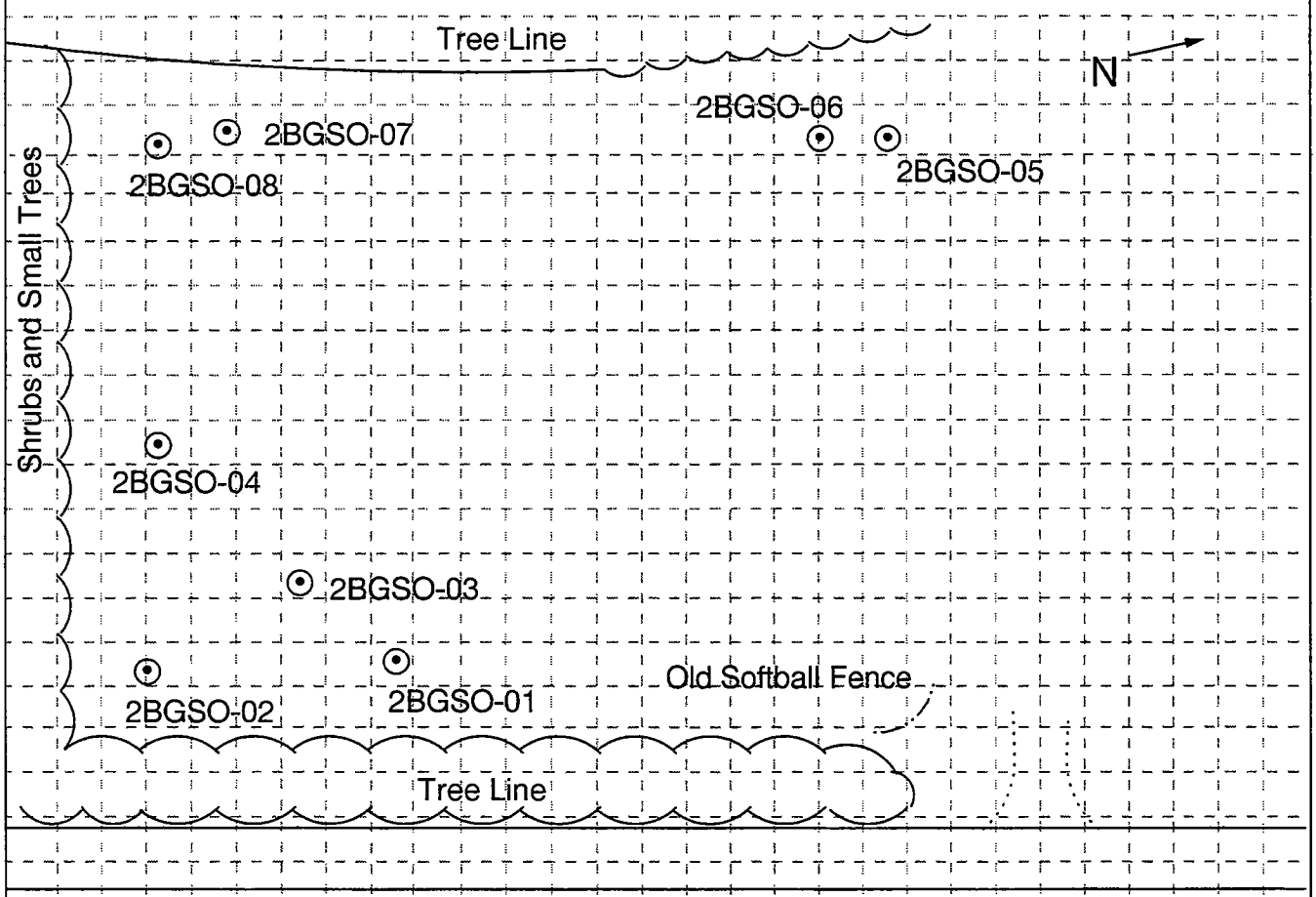
3. PROJECT: PBOW	4. LOCATION: Erie County
5. NAME OF DRILLER: Paul D. McAdams	6. MANUFACTURER'S DESIGNATION OF DRILL: Dietrich D-50
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Split Spoons, 8-1/2" O.D. Augers	8. HOLE LOCATION: Reservior #2 Burn Ground
	9. SURFACE ELEVATION:
	10. DATE STARTED: 10/2/96 / 11. DATE COMPLETED: 10/2/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 7.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC/Pect/PCBs	Nitroaromatics	Cyanide	%

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X			Wesley White/

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	2BGSO-03

PBOW/BORINGS/2BGS-3.DRW/MC/11-13-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. 2BGSO-03

PROJECT: PBOW | INSPECTOR: W. White | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	USCS f	BLOW COUNTS g	REMARKS h
		Soft, very dark brown (10 YR 2/2), SILT, medium plasticity, moist	0.0				
	1			S-1	ML	3,4 12,24	
	2	2.0					
		Loose, black (2.5 Y 2.5/1), gravelly silty SAND, 30% gravelly shale pieces, burn remains, poorly well graded, moist 2.5	1.0		SW		
	3	Stiff, bluish gray (5 B 6/1), mottled with strong brown (7.5 YR 5/6), sandy SILT, medium plasticity, 25% very fine sand, moist		S-2	ML	7,7 7,12	
	4	4.0					
		Stiff, brown (10 YR 5/3) mottled slightly with bluish gray (5 B 6/1), clayey SILT, trace sand, medium plasticity, moist					
	5			S-3	ML	3,4 6,6	
	6		0.0	S-4		6,6	
	7	7.0					
		Total Depth = 7.0 Ft.					
	8						
	9						
	10						

Project: PBOW | Hole No. 2BGSO-03

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

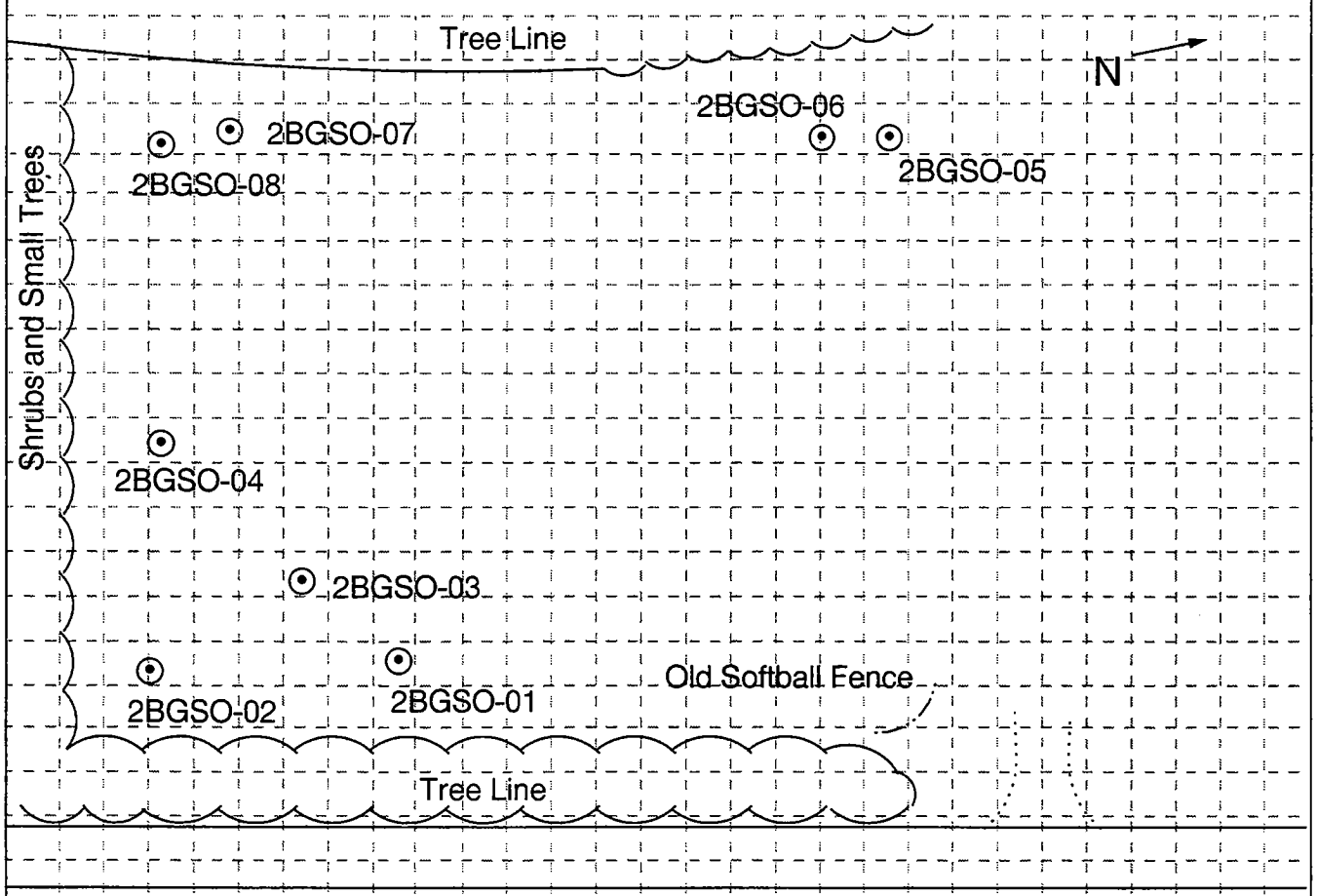
DISTRICT: Nashville COE		HOLE NUMBER: 2BGSO-04
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: Alliance	SHEET 1 OF 2 SHEETS
3. PROJECT: PBOW	4. LOCATION: Erie County	
5. NAME OF DRILLER: Paul D. McAdams	6. MANUFACTURER'S DESIGNATION OF DRILL: Dietrich D-50	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Split Spoons, 8-1/2" O.D. Augers	8. HOLE LOCATION: Reservior #2 Burn Ground	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10/2/96	11. DATE COMPLETED: 10/2/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 7.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC/Pect/PCBs	Nitroaromatics	Cyanide	%

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X			Wesley White

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	2BGSO-04

PBOW/BORINGS/2BGS-4.DRW/MC/11-13-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. 2BGSO-04

PROJECT: PBOW | INSPECTOR: W. White | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	USCS f	BLOW COUNTS g	REMARKS h
		Hard, very dark gray (10 YR 3/1) sandy SILT, medium plasticity, 10% very fine sand, roots, moist	0.0	S-1	ML	5,6 10,12	
	1						
	2	2.25	0.5	S-2	ML	8,7 8,12	
		Hard, light yellowish brown (10 YR 5/6) clayey SILT, low dry strength, crumbly, dry, low to medium plasticity (below plastic limit)					
	3						
	4	4.0					
		Firm, light gray (10 YR 7/1) with yellow (10 YR 7/6), clayey SILT, interbedded, dry to moist, medium plasticity		S-3	ML	8,9 10,11	
	5						
	6	6.2					
		Medium dense, pale brown (10 YR 6/3) silty very fine SAND, 25% silt, well sorted, well rounded, poorly graded, wet to moist	0.0	S-4	SM	6,8	
	7	7.0					
		Total Depth = 7.0 Ft.					
	8						
	9						
	10						

Project: PBOW | Hole No. 2BGSO-04

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

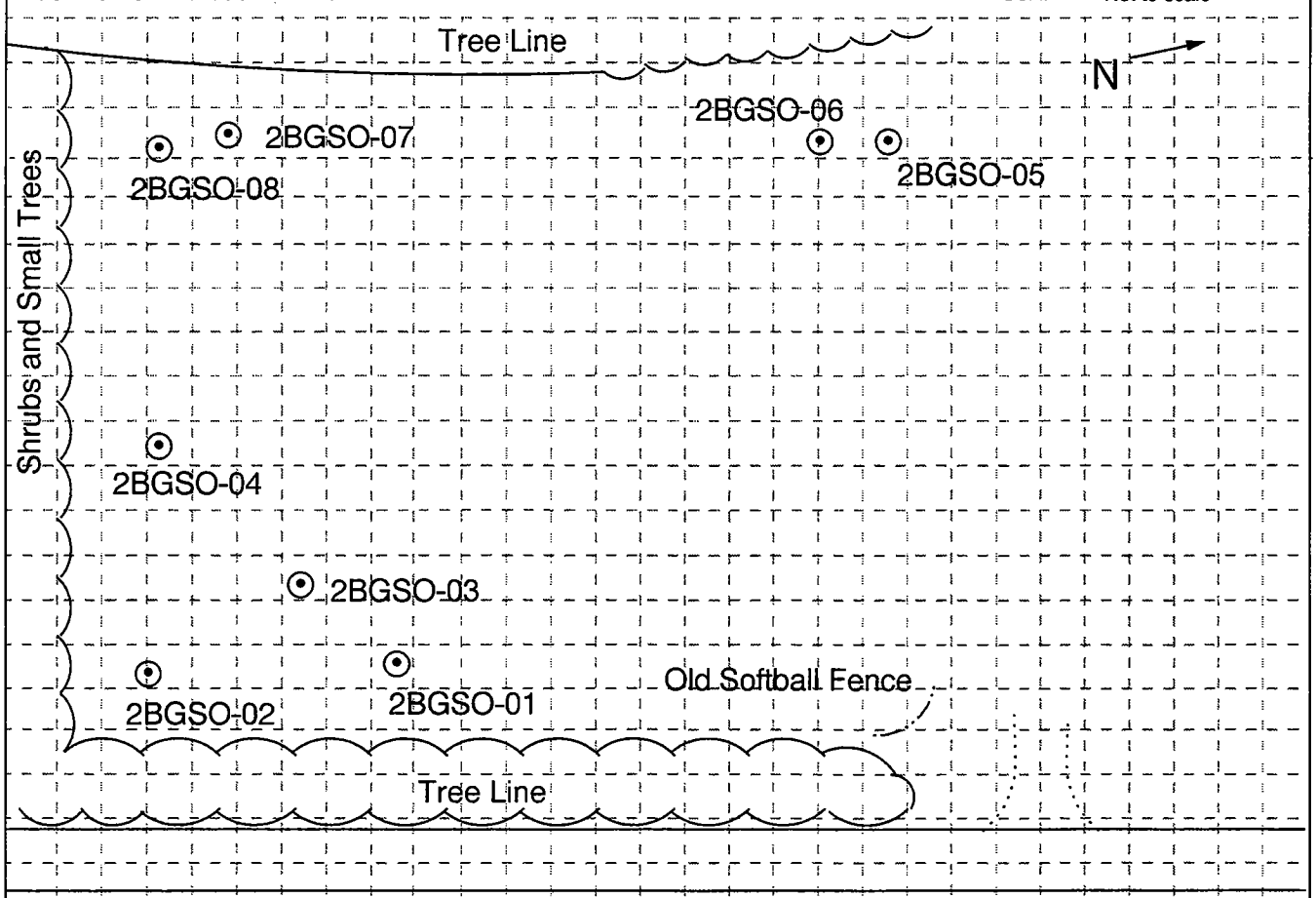
DISTRICT: Nashville COE		HOLE NUMBER: 2BGSO-05
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: Alliance	SHEET 1 OF 2 SHEETS
3. PROJECT: PBOW	4. LOCATION: Erie County	
5. NAME OF DRILLER: Paul D. McAdams	6. MANUFACTURER'S DESIGNATION OF DRILL: Dietrich D-50	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Split Spoons, 8-1/2" O.D. Augers	8. HOLE LOCATION: Reservior #2 Burn Ground	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10/2/96	11. DATE COMPLETED: 10/2/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 7.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	X	X	SVOC/Pect/PCBs	Nitroaromatics	Cyanide	

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X			Wesley White

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	2BGSO-05

PBOW/BORINGS/2BGS-5.DRW/MC/11-14-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. 2BGSO-05

PROJECT: PBOW | INSPECTOR: W. White | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	USCS f	BLOW COUNTS g	REMARKS h
		Soft to firm, very dark grayish brown (10 YR 3/2), clayey SILT, medium plasticity, roots, moist	0.0	S-1	ML	2,3 5,6	
	1						
		1.7					
	2	Hard to very stiff, brownish yellow (10 YR 6/6), clayey SILT, medium plasticity, moist Mottling of light gray (10 YR 7/1)	0.0	S-2	ML	3,4 4,6	
	3						
	4	4.0					
		Very stiff, strong brown (7.5 YR 5/8) mottled with light gray (7.5 YR 7/1) clayey SILT, medium plasticity, thin interbeds of sand, moist		S-3	ML	2,3 5,8	
	5						
	6	Less light gray mottling, fewer beds of sand	0.0	S-4		5,8	
	7	7.0					
		Total Depth = 7.0 Ft.					
	8						
	9						
	10						

Project: PBOW | Hole No. 2BGSO-05

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: 2BGSO-06
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: Alliance	SHEET 1 OF 2 SHEETS

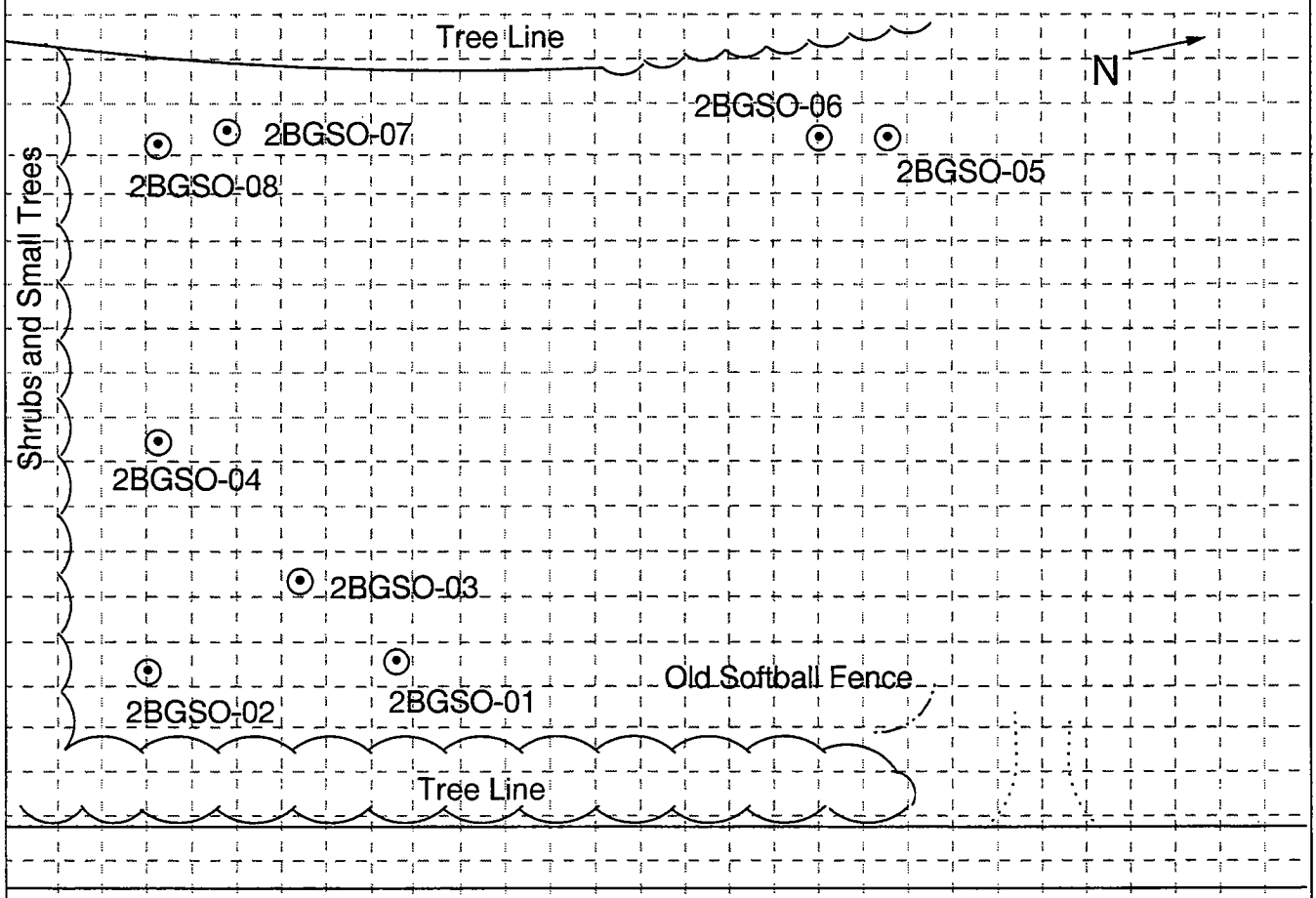
3. PROJECT: PBOW	4. LOCATION: Erie County
5. NAME OF DRILLER: Paul D. McAdams	6. MANUFACTURER'S DESIGNATION OF DRILL: Dietrich D-50
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Split Spoons, 8-1/2" O.D. Augers	8. HOLE LOCATION: Reservior #2 Burn Ground
	9. SURFACE ELEVATION:
	10. DATE STARTED: 10/2/96 / 11. DATE COMPLETED: 10/2/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 7.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC/Pect/PCBs	Nitroaromatics	Cyanide	%

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X			Wesley White

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT: PBOW	HOLE NO.: 2BGSO-06

PBOW/BORINGS/2BGS-6.DRW/MC/11-15-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. 2BGSO-06

PROJECT: PBOW | INSPECTOR: W. White | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	USCS f	BLOW COUNTS g	REMARKS h
		Soft to firm, very dark grayish brown (10 YR 3/2), clayey SILT, medium plasticity, roots, moist	0.0				
	1			S-1	ML	3,4 5,7	
		1.7					
	2	Hard to very stiff, brownish yellow (10 YR 6/6), clayey SILT, medium plasticity, moist Mottling of light gray (10 YR 7/1)	0.0				2
	3			S-2	ML	5,8 7,13	
		4.0					
	4	Very stiff, strong brown (7.5 YR 5/8) mottled with light gray (7.5 YR 7/1) clayey SILT, medium plasticity, thin interbeds of sand, moist					4
	5			S-3	ML	5,6 6,9	
	6						6
		Less light gray mottling, fewer beds of sand	0.0	S-4		9,12	
		7.0					
	7	Total Depth = 7.0 Ft.					
	8						8
	9						
	10						10

Project: PBOW | Hole No. 2BGSO-06

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: 2BGSO-07
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: Alliance	SHEET 1 OF 2 SHEETS

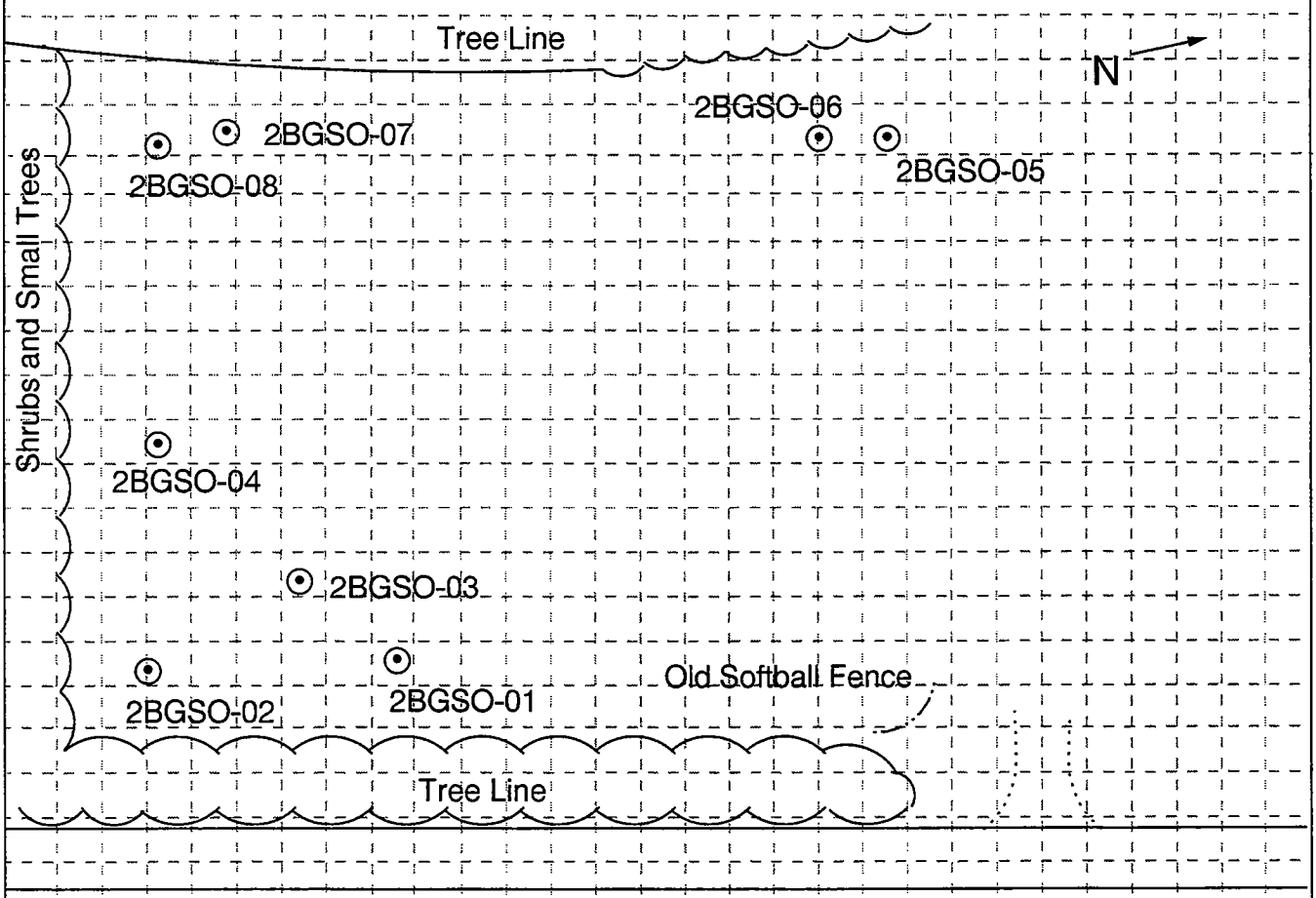
3. PROJECT: PBOW	4. LOCATION: Erie County
5. NAME OF DRILLER: Paul D. McAdams	6. MANUFACTURER'S DESIGNATION OF DRILL: Dietrich D-50
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Split Spoons, 8-1/2" O.D. Augers	8. HOLE LOCATION: Reservior #2 Burn Ground
	9. SURFACE ELEVATION:
	10. DATE STARTED: 10/2/96 / 11. DATE COMPLETED: 10/2/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED:
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED:
14. TOTAL DEPTH OF HOLE: 7.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC/Pect/PCBs	Nitroaromatics	Cyanide	%

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X			Wesley White

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	2BGSO-07

PBOW/BORINGS/2BGS-7.DRW/MC/11-15-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. 2BGSO-07

PROJECT: PBOW | INSPECTOR: W. White | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	USCS f	BLOW COUNTS g	REMARKS h
		Soft, black (10 YR 2/1), silty very fine SAND, 25% silt, well sorted, poorly graded, well rounded, moist	0.0				
	1	Burned wood and other black debris 1.5		S-1	SM	2,4 4,8	
	2	Soft to firm, yellowish brown (10 YR 5/6), very fine sandy SILT, medium plasticity, 30% very fine sand, moist 2.3	0.0		ML		2
	3	Loose, brownish yellow (10 YR 6/8), silty very fine SAND, well sorted, poorly graded, well rounded, small interbeds of silt		S-2	SP	3,5 7,8	
	4						4
	5	5.8		S-3		5,6 6,7	
	6	Soft to very stiff, light gray (10 YR 7/1) mottled with brownish yellow (10 YR 5/8), clayey SILT, medium plasticity, moist 6.2			ML		6
	7	Loose, brownish yellow (10 YR 6/8), silty very fine SAND, well graded, well rounded, poorly graded, few interbedded silt beds, dry to moist 7.0	0.0	S-4	SP	14,16	
		Total Depth = 7.0 Ft.					
	8						8
	9						
	10						10

Project: PBOW | Hole No. 2BGSO-07

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: 2BGSO-08
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: Alliance	SHEET 1 OF 2 SHEETS

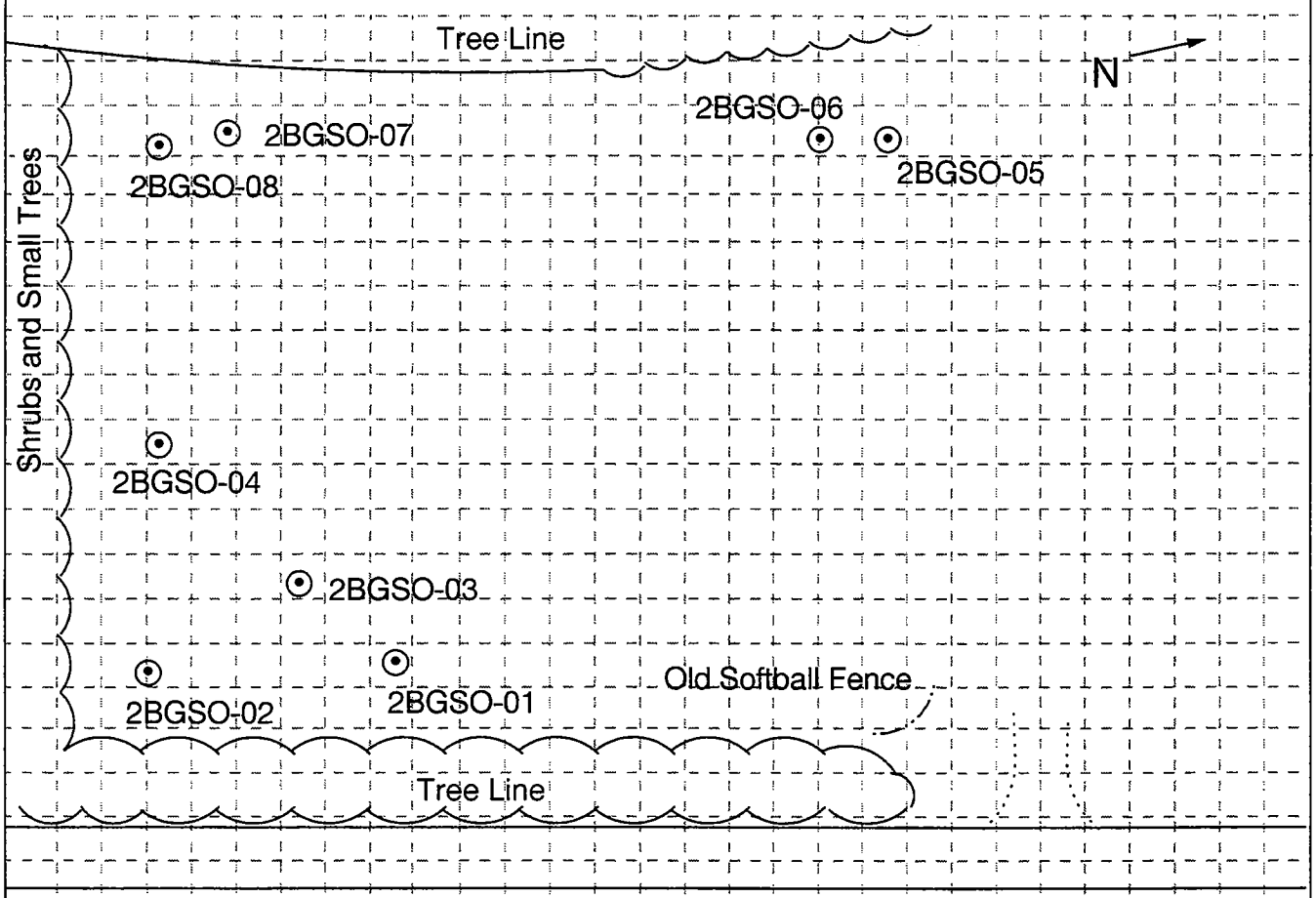
3. PROJECT: PBOW	4. LOCATION: Erie County
5. NAME OF DRILLER: Paul D. McAdams	6. MANUFACTURER'S DESIGNATION OF DRILL: Dietrich D-50
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Split Spoons, 8-1/2" O.D. Augers	8. HOLE LOCATION: Reservior #2 Burn Ground
	9. SURFACE ELEVATION:
	10. DATE STARTED: 10/2/96 / 11. DATE COMPLETED: 10/2/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED:
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED:
14. TOTAL DEPTH OF HOLE: 7.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC/Pect/PCBs	Nitroaromatics	Cyanide	%

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X			Wesley White

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	2BGSO-08

PBOW/BORINGS/2BGS-8.DRW/MC/11-15-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. 2BGSO-08

PROJECT: PBOW | INSPECTOR: W. White | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	USCS f	BLOW COUNTS g	REMARKS h
		Soft, black (10 YR 2/1), silty very fine SAND, 25% silt, well sorted, poorly graded, well rounded, moist	0.0				
	1	Burned black debris and glass		S-1	SM	4,4 6,9	
		1.5					
	2	Soft to firm, yellowish brown (10 YR 5/6), very fine sandy SILT, medium plasticity, 30% very fine sand, moist	0.0				2
	3	Few interbeds of sand		S-2		4,3 4,9	
	4				ML		4
	5			S-3		3,3 6,10	
	6		0.0	S-4		7,11	6
	7	7.0					
		Total Depth = 7.0 Ft.					
	8						8
	9						
	10						10

Project: PBOW | Hole No. 2BGSO-08

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: ABGSO-01
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS

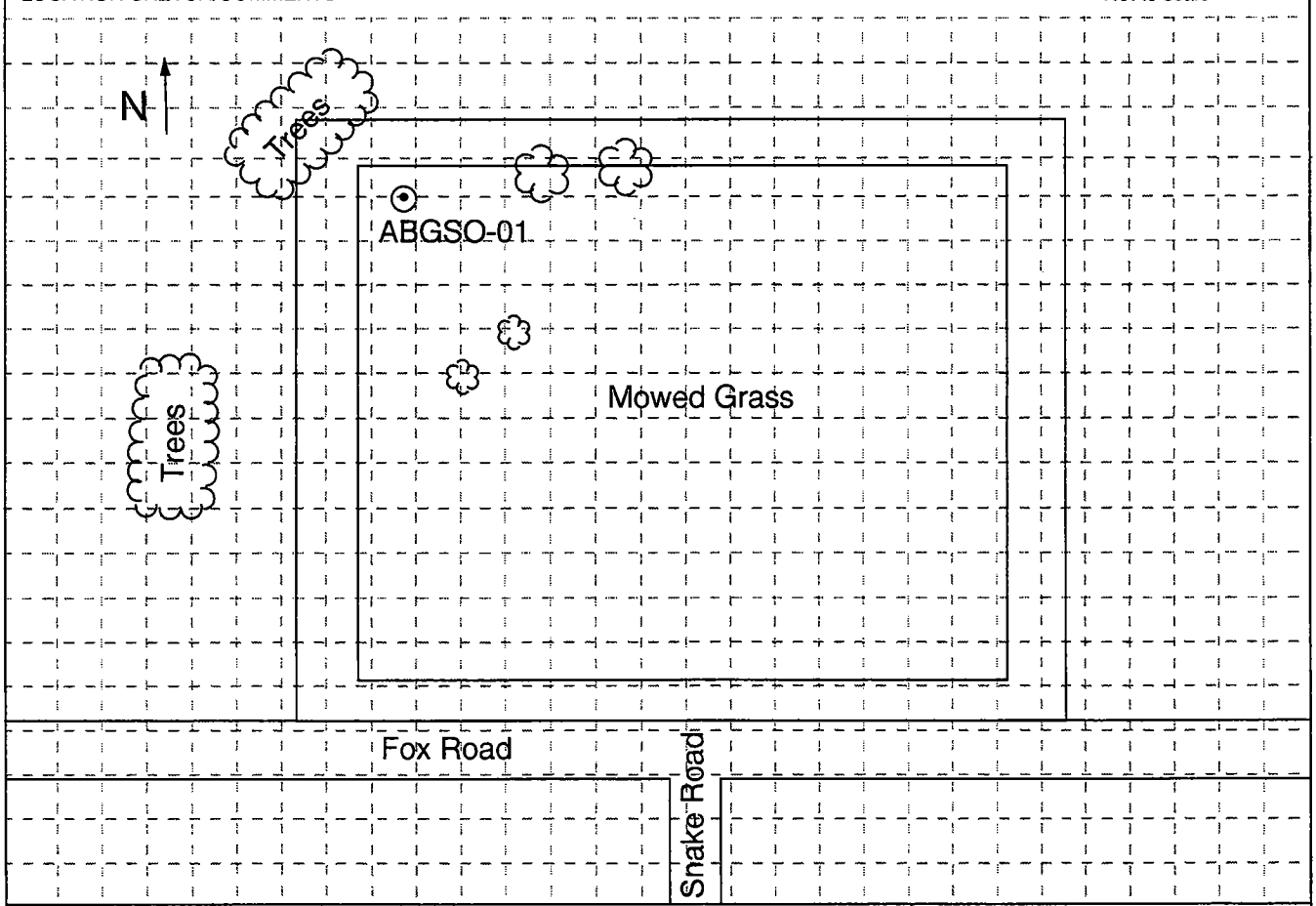
3. PROJECT: PBOW	4. LOCATION: Additional Burn Ground
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: ABGSO-01
	9. SURFACE ELEVATION:
	10. DATE STARTED: 10/3/96 / 11. DATE COMPLETED: 10/3/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 2.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Explosives Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	ABGSO-01

PBOW/BORINGS/ABGS-1.DRW/MC/11-12-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. ABGSO-01

PROJECT: PBOW

INSPECTOR: D. Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass, weeds					
		Black, homogeneous, very fine grain, sandy SILT, (30% sand), organics (roots), shale fragments, moist **ml** 1.1	0.0	NA	2010	NA	
	1	Yellowish brown, very fine grain, homogeneous sandy SILT, (40% sand), shale fragments, moist **ml** 1.6					
		Loose, yellowish brown, very fine grain, homogneous, silty SAND, very well sorted, many shale fragments, moist **sm** 2.0	0.0		2020 2021-FD 2022-FS		
	2	Auger Refusal at 2.0 Ft. Total Depth = 2.0 Ft.					
	3	Black SHALE					
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW

Hole No. ABGSO-01

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: ABGSO-02
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS

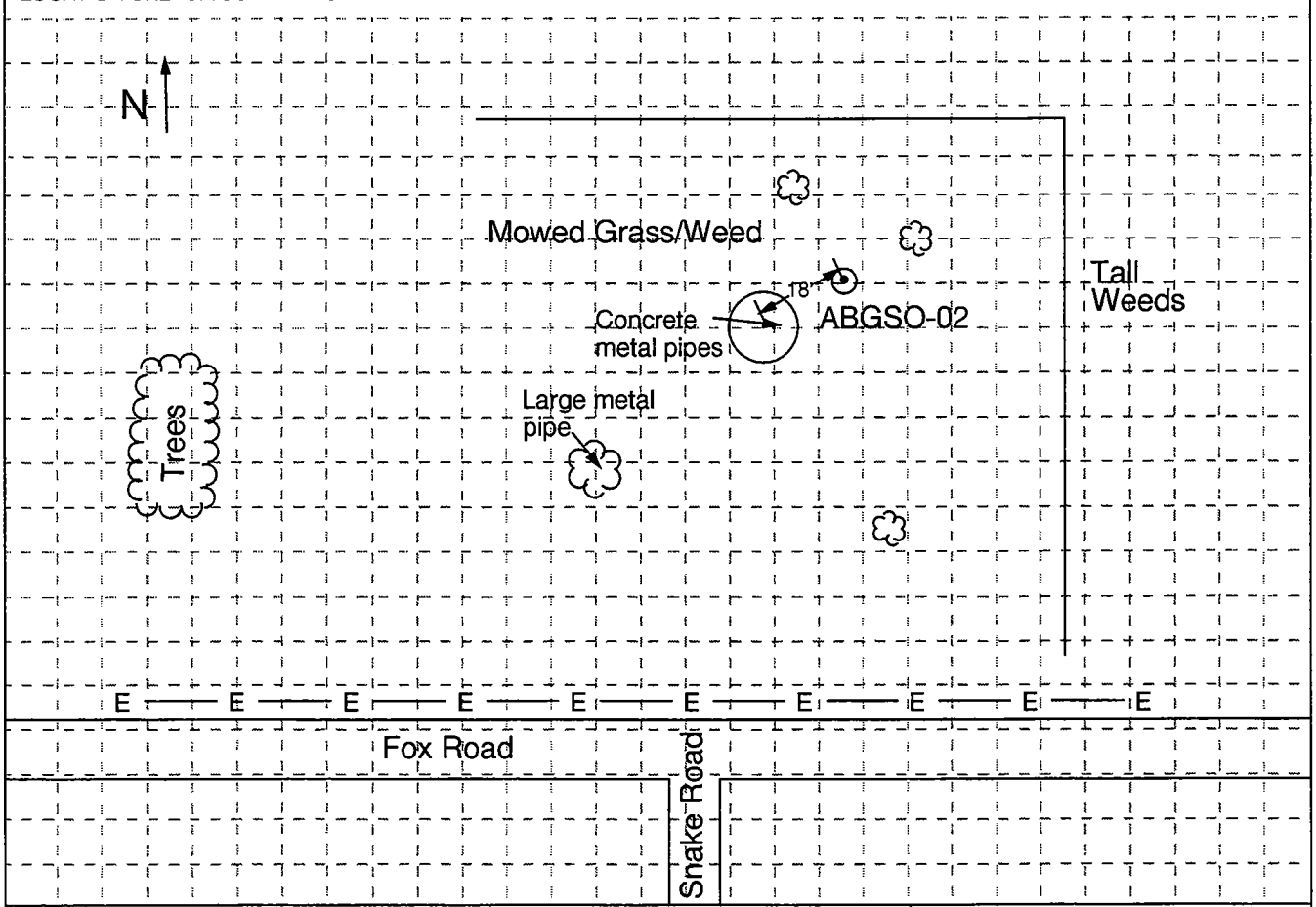
3. PROJECT: PBOW	4. LOCATION: Additional Burn Ground
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: ABGSO-02
	9. SURFACE ELEVATION:
	10. DATE STARTED: 10/3/96 / 11. DATE COMPLETED: 10/3/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Explosives Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	ABGSO-02

PBOW/BORINGS/ABGS-2.DRW/MC/11-12-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. ABGSO-02

PROJECT: PBOW | INSPECTOR: D. Kessler | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass, weeds					
		Dark brown, homogeneous, very fine grain, silty SAND, (40% silt), very well sorted, moist **sm**	0.0	NA	2030	NA	
		Silt content decreasing with depth					
	1						
		1.8					
	2	Light brown, homogeneous, very fine grain, SAND, (5% silt), very well sorted, moist **sp**	0.0		2040 2041-FD 2042-FS		
	3	Total Depth = 3.0 Ft.					
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW | Hole No. ABGSO-02

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: ABGSO-03
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS

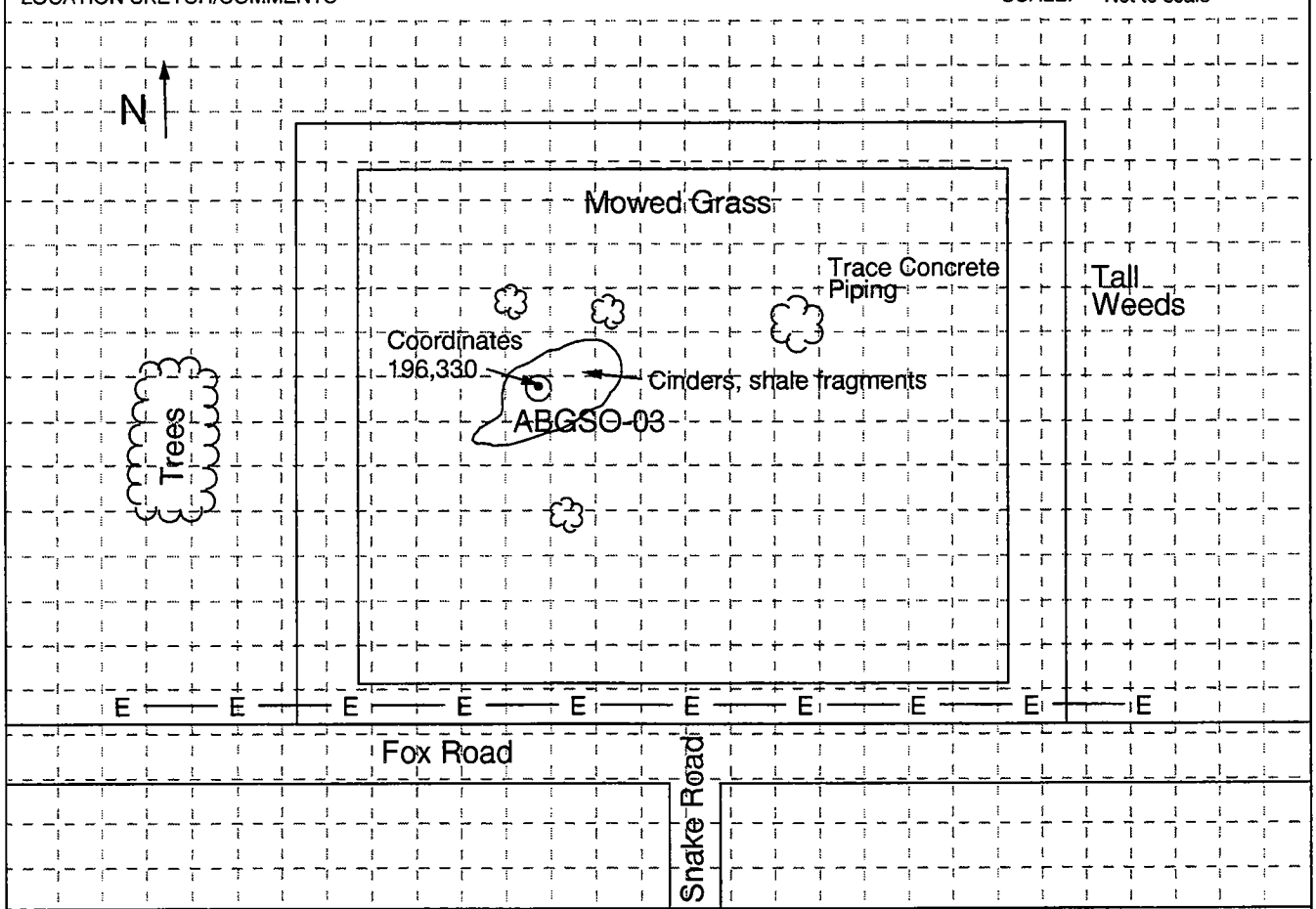
3. PROJECT: PBOW	4. LOCATION: Additional Burn Ground
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: ABGSO-03
	9. SURFACE ELEVATION:
	10. DATE STARTED: 10/3/96 / 11. DATE COMPLETED: 10/3/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Explosives Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	ABGSO-03

PBOW/BORINGS/ABGS-3.DRW/MC/11-12-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. ABGSO-03

PROJECT: PBOW

INSPECTOR: D. Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Cinders					
		CINDERS/ASH, black/dark brown, very loose shale fragments, cinders, ash at 0.1 ft., dry 0.5	0.2	NA	2050	NA	
	1	Dark brown, mottled (black), very fine grain, silty SAND and SHALE 1.2					
		Light brown, homogeneous, very fine grain, SAND, silt (<5%), very well sorted, moist					
	2	sp	0.0		2060		
	3	Total Depth = 3.0 Ft.					
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW

Hole No. ABGSO-03

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

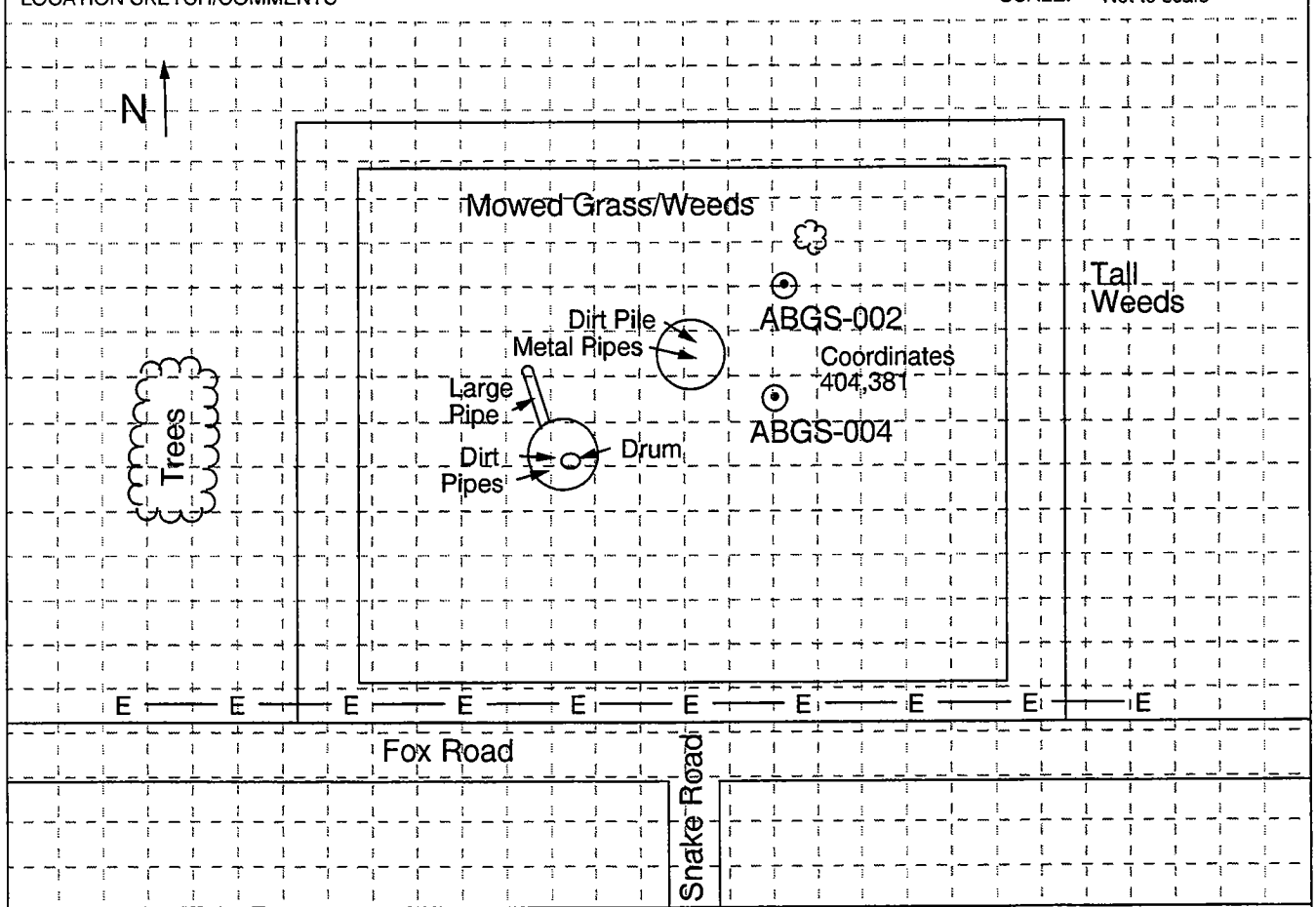
DISTRICT: Nashville COE		HOLE NUMBER: ABGSO-04
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS
3. PROJECT: PBOW	4. LOCATION: Additional Burn Ground	
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: ABGSO-04	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10/3/96	11. DATE COMPLETED: 10/3/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Explosives Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	ABGSO-04

PBOW/BORINGS/ABGS-4.DRW/MC/11-12-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. ABGSO-04

PROJECT: PBOW | INSPECTOR: D. Kessler | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass, weeds					
		Dark brown, homogeneous, very fine grain, silty SAND, (30% silt), very well sorted, moist **sm** 0.4	0.2	NA	2070	NA	
	1	Light brown, very loose, homogeneous, very fine graiin, SAND (<5% silt), very well sorted, moist					
	2	**sp**	0.0		2080		
	3	Total Depth = 3.0 Ft.					
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Project: PBOW | Hole No. ABGSO-04

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

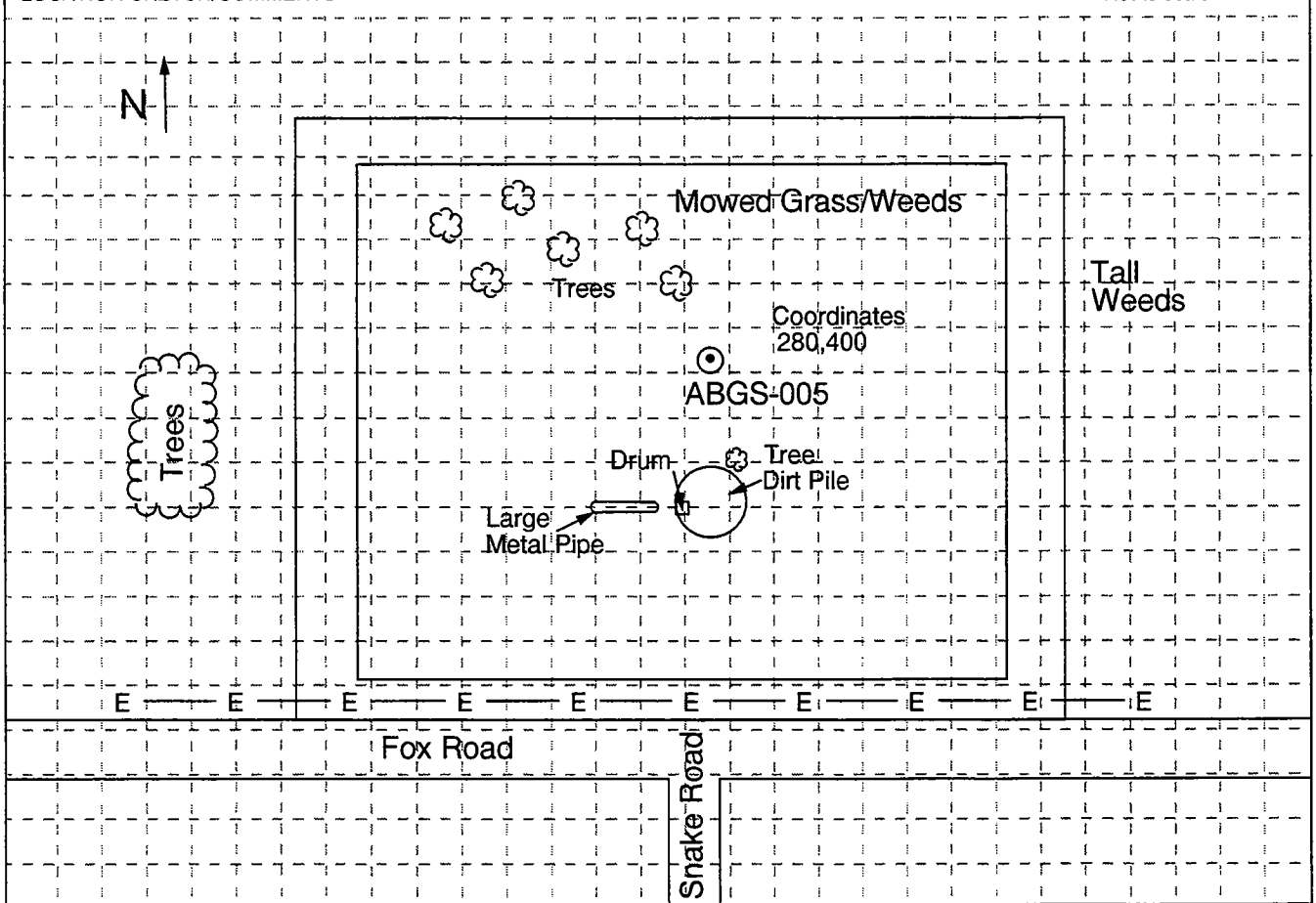
DISTRICT: Nashville COE		HOLE NUMBER: ABGSO-05
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS
3. PROJECT: PBOW	4. LOCATION: Additional Burn Ground	
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: ABGSO-05	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10/3/96	11. DATE COMPLETED: 10/3/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Explosives Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler/

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	ABGSO-05

PBOW/BORINGS/ABGS-5.DRW/MC/11-12-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. ABGSO-05

PROJECT: PBOW

INSPECTOR: D. Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass, weeds					
		Dark brown, homogeneous, very fine grain, silty SAND, (30% silt), organics (roots), moist **sm** 0.3	0.2	NA	2090	NA	
	1	Very loose, light brown, very fine grain SAND, (<5% silt), very well sorted, moist **sp**					
	2		0.1		2100		
	3	Total Depth = 3.0 Ft.					
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Project: PBOW

Hole No. ABGSO-05

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: ABGSO-06
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS

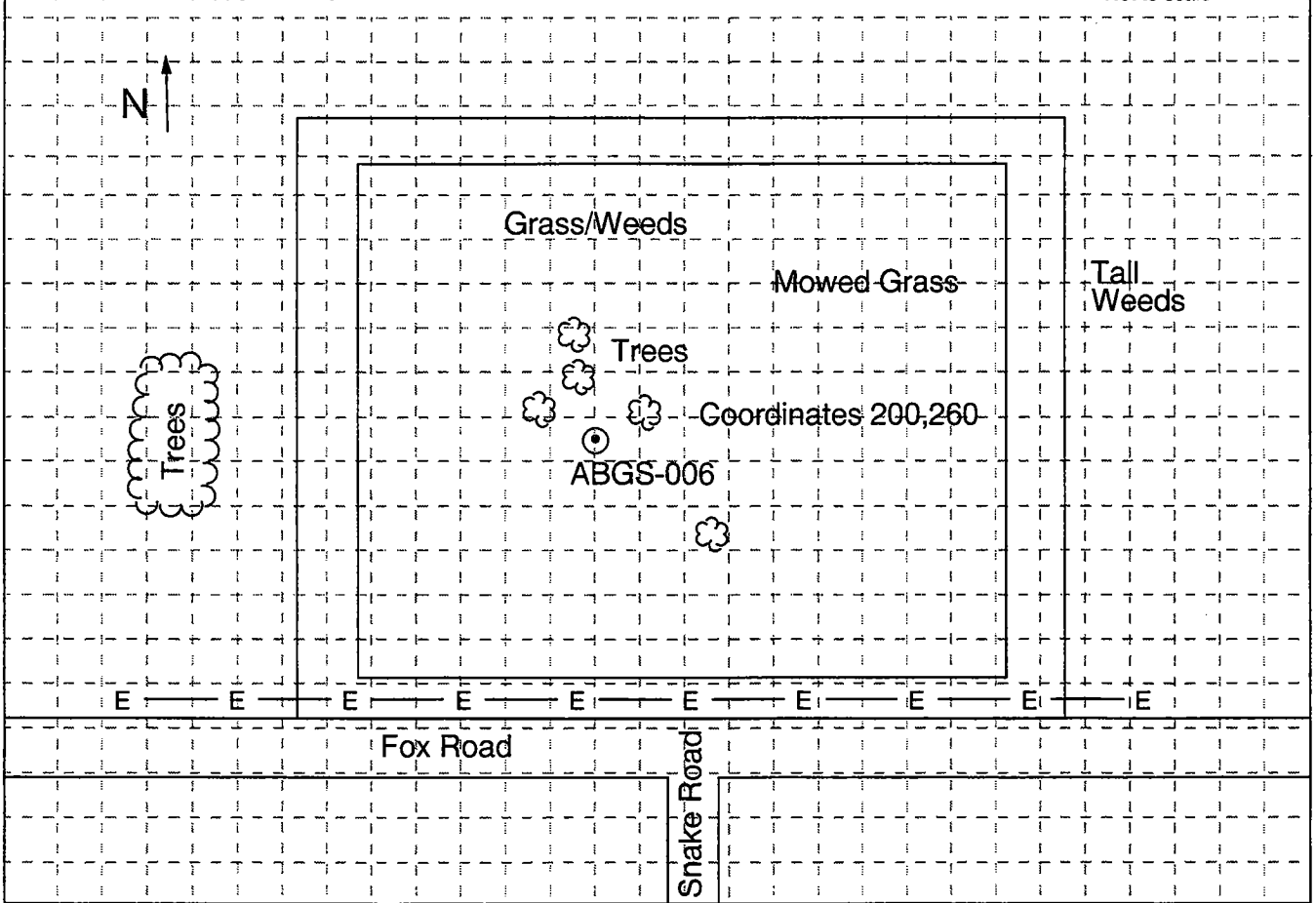
3. PROJECT: PBOW	4. LOCATION: Additional Burn Ground
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: ABGSO-06
	9. SURFACE ELEVATION:
	10. DATE STARTED: 10/3/96 / 11. DATE COMPLETED: 10/3/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: 2.5 Ft.
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Explosives Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	ABGSO-06

PBOW/BORINGS/ABGS-6.DRW/MC/11-13-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. ABGSO-06

PROJECT: PBOW | INSPECTOR: D. Kessler | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass, weeds					
		Dark brown, loose, homogeneous, very fine grain, silty SAND, (25% silt), very well sorted, moist sm 0.2	0.2	NA	2110	NA	
	1	Very loose, light brown homogeneous, very fine grain, SAND, (5% silt), very well sorted, moist sp 2.0					Burnt debris 1.1 ft. cinders, ash, large root ~1.2 ft.
	2	Black, loose, very fine to medium grain, silty SAND, (30% silt), well sorted, organics, (roots, tree branches), wet 2.5 ft. ▽ sm 3.0	0.6				Black, burnt, rusted metal chips, encountered metal object
	3	Auger Refusal = 3.0 Ft. Total Depth = 3.0 Ft. Metal object					
	4						
	5						
	6						
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	8						
	9						
	10						

Project: PBOW | Hole No. ABGSO-06

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: ABGSO-07
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS

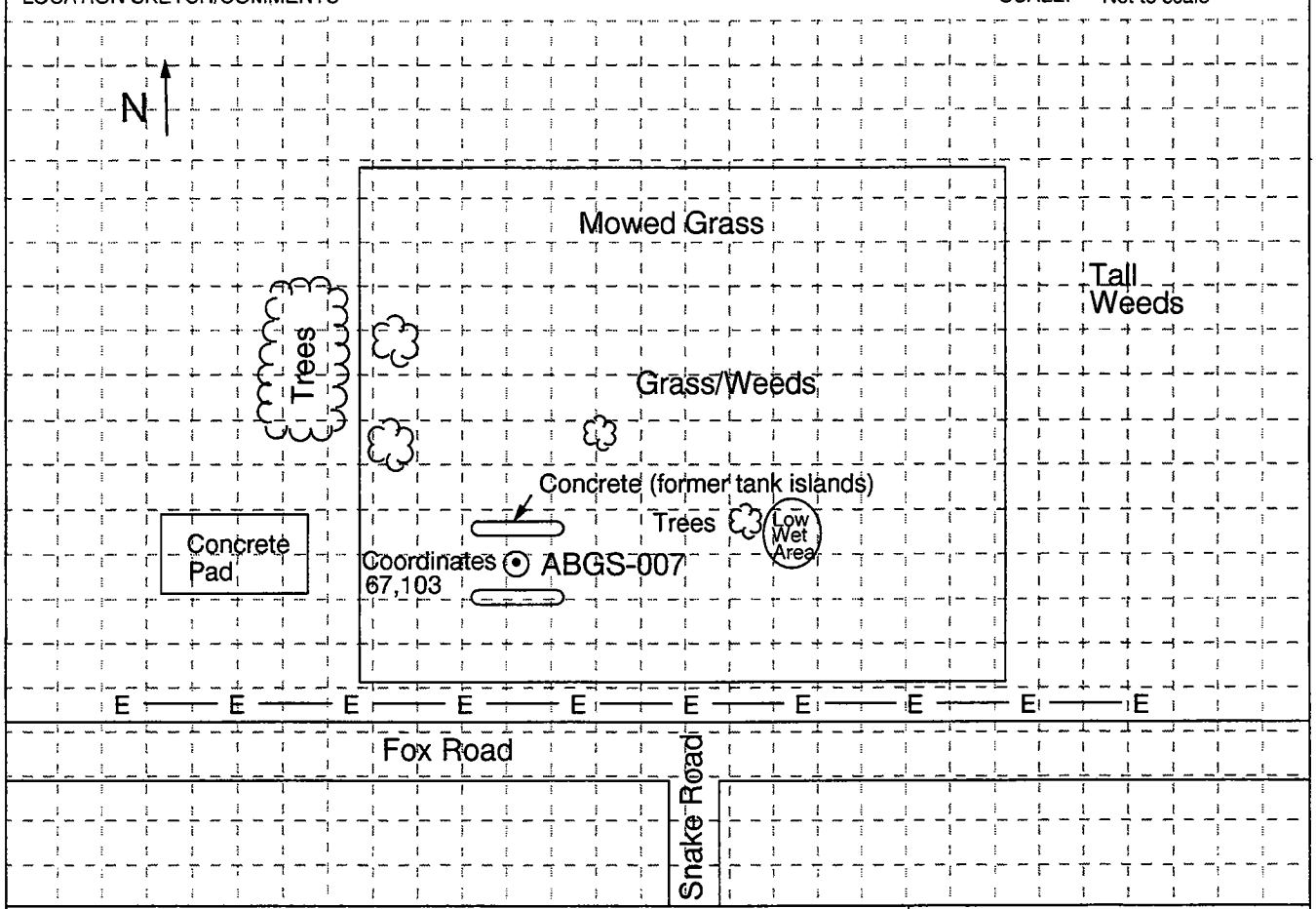
3. PROJECT: PBOW	4. LOCATION: Additional Burn Ground
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: ABGSO-07
	9. SURFACE ELEVATION:
	10. DATE STARTED: 10/4/96 / 11. DATE COMPLETED: 10/4/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Explosives Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	ABGSO-07

PBOW/BORINGS/ABGS-7.DRW/MC/11-13-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. ABGSO-07

PROJECT: PBOW | INSPECTOR: D. Kessler | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass, weeds					
		Very loose,, black, very fine grain silty SAND, (30% silt), ash/cinders, organics (roots), moist	3.4	NA	2130	NA	
	1	Silt content decreasing with depth, pebble to cobble size rocks at 1 to 1.5 ft. sm 1.5					Borehole beside buried concrete foundation at 0.5 ft.
		Very loose, light brown homogeneous, very fine grain, SAND, very well sorted, moist sp 1.8					
	2	Very loose, black, homogeneous, very fine grain SAND, (10% silt), moist sp 2.2					
		Very loose, light brown, homogeneous, very fine grain, SAND, (<5% silt), very well sorted, moist sp 3.0	0.6		2140		
	3	Total Depth = 3.0 Ft.					
	4						
	5						
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Project: PBOW | Hole No. ABGSO-07

PBOW/BORINGS/ABGS-7A.DRW/mc/11-13-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: ABGSO-08
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS

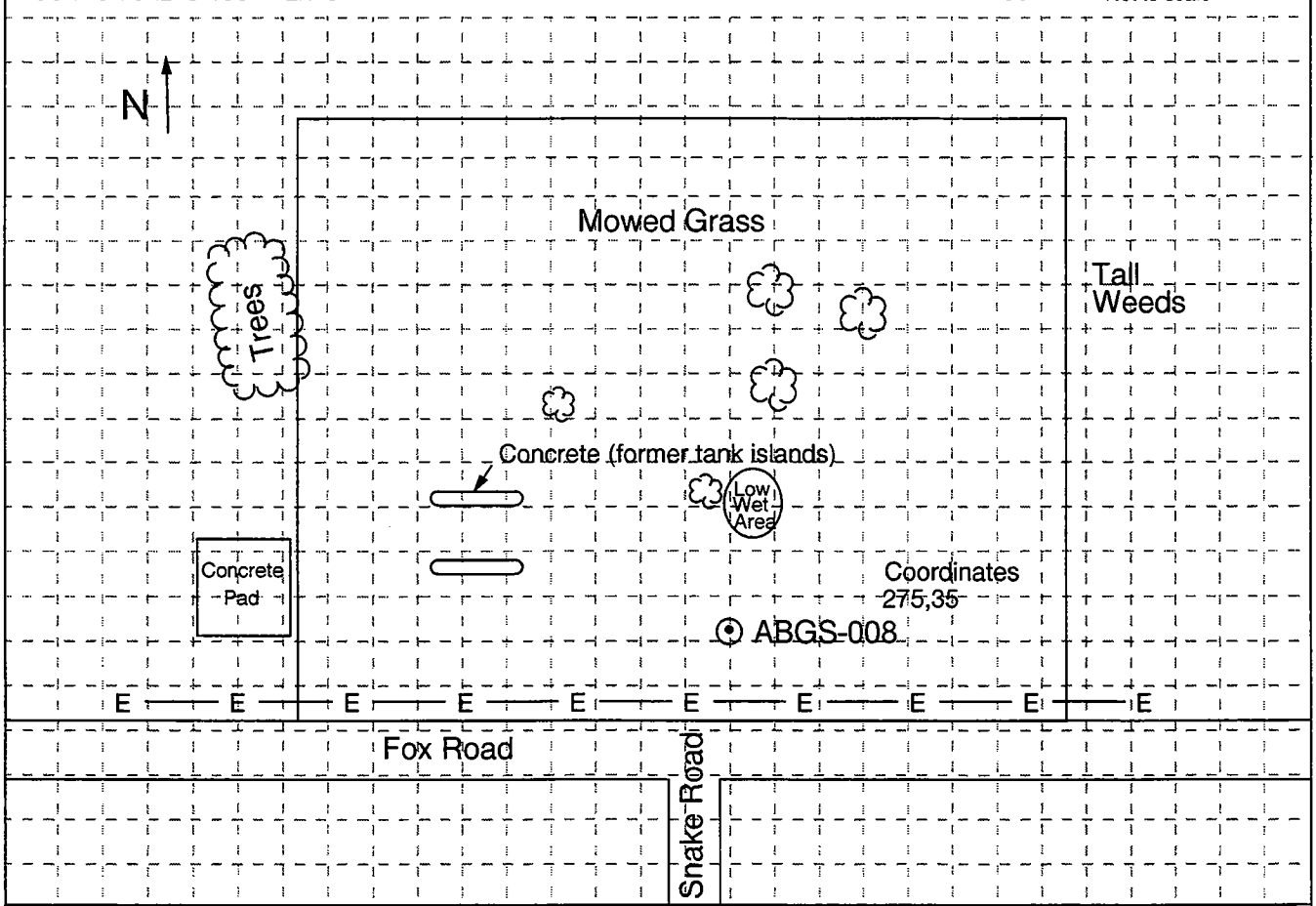
3. PROJECT: PBOW	4. LOCATION: Additional Burn Ground
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: ABGSO-08
	9. SURFACE ELEVATION:
	10. DATE STARTED: 10/4/96 / 11. DATE COMPLETED: 10/4/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Explosives Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler/

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	ABGSO-08

PBOW/BORINGS/ABGS-8.DRW/MC/11-13-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. ABGSO-08

PROJECT: PBOW | INSPECTOR: D. Kessler | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass, weeds					
		Loose, black homogeneous, very fine grain, silty SAND, (30% silt), organics, (roots) sm 0.4	4.5	NA	2150	NA	
	1	Loose, brown, mottled (black), very fine grain SAND (10% silt), very well sorted, moist grading to a lighter brown color, medium dense sp 1.8					Large 1/2" by 1" rusted metal bolt found at 0.4 ft.
	2	Very loose, black, homogeneous, very fine grain SAND, (10% silt), very well sorted, moist sp 2.5	3.8		2160		
	3	Very loose, greenish gray, homogeneous, very fine grain, SAND (10% silt), very well sorted, moist sp 3.0					∇ Encounered Groundwater at 2.8 ft.
		Total Depth = 3.0 Ft.					
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Project: PBOW | Hole No. ABGSO-08

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: ABGSO-09
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS

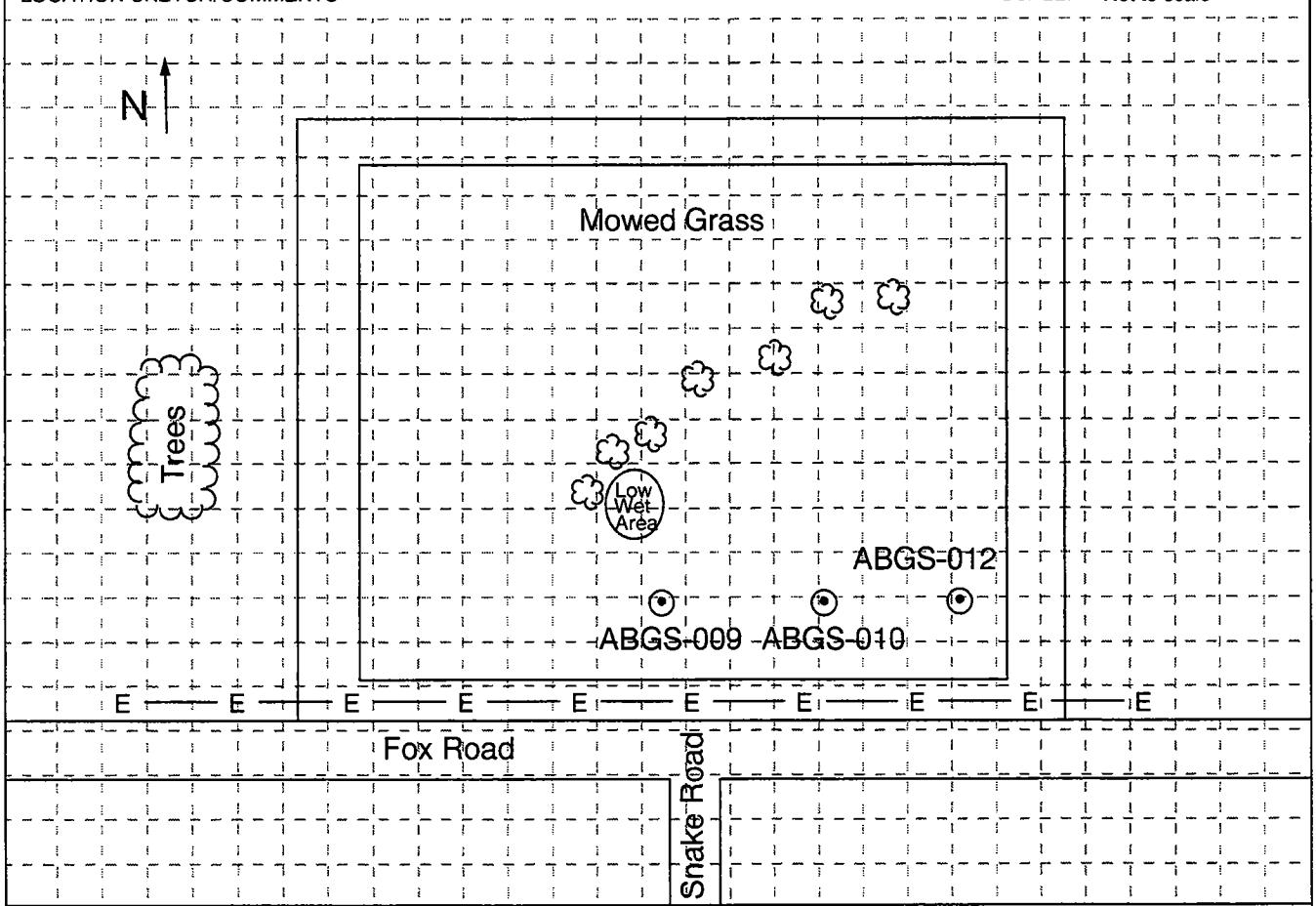
3. PROJECT: PBOW	4. LOCATION: Additional Burn Ground
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: ABGSO-09
	9. SURFACE ELEVATION:
	10. DATE STARTED: 10/3/96 / 11. DATE COMPLETED: 10/3/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Explosives Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT: PBOW	HOLE NO.: ABGSO-09

PBOW/BORINGS/ABGS-9.DRW/MC/11-13-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. ABGSO-09

PROJECT: PBOW | INSPECTOR: D. Kessler | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass, weeds					
		Loose, black, homogeneous, very fine grain, silty SAND, (30% silt), very well sorted, moist **sm** 0.5	0.2	NA	2170	NA	Large fiberglass pipe seal, glass
	1	Loose, light brown, homogeneous, very fine grain SAND (<5% silt), very well sorted, moist **sp** 1.5					
		Very loose, black, homogeneous, very fine grain, SAND, (15% silt), very well sorted, moist 2.0					
	2	Loose, greenish gray, mottled (brown streaks), very fine grain, SAND (10% silt), very well sorted, moist 3.0	0.0		2180		
	3	Total Depth = 3.0 Ft.					
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	10						

Project: PBOW | Hole No. ABGSO-09

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

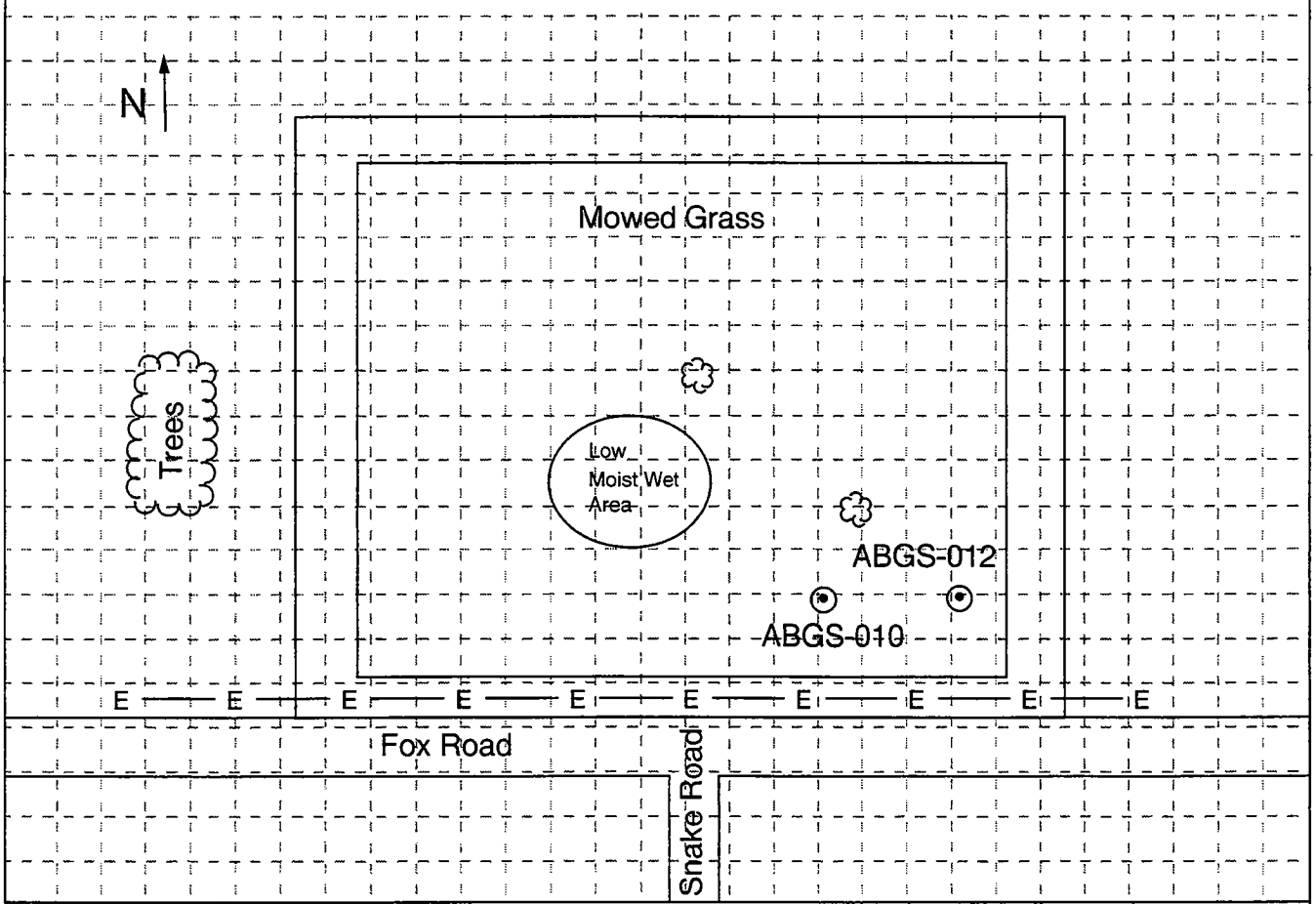
DISTRICT: Nashville COE		HOLE NUMBER: ABGSO-10
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS
3. PROJECT: PBOW	4. LOCATION: Additional Burn Ground	
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: ABGSO-10	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10/3/96	11. DATE COMPLETED: 10/3/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Explosives Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	ABGSO-10

PBOW/BORINGS/ABGS-10.DRW/MC/11-13-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. ABGSO-010

PROJECT: PBOW | INSPECTOR: D. Kessler | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass, weeds					
		Loose, black, homogeneous, very fine grain, silty SAND, (30% silt), shale fragments, organics (roots), moist **sm** 0.7	0.0	NA	2190	NA	
	1	Very loose, brown, mottled (orangish brown), very fine grain, SAND, (<5% silt), very well sorted, moist **sp** 1.0					
		Very loose, black, homogeneous, very fine grain, SAND, (15% silt), very well sorted, moist **sp** 2.0					
	2	Loose, greenish gray, mottled (brown streaks), very fine grain, SAND (10% silt), very well sorted, moist 3.0	0.2		2200		
	3	Total Depth = 3.0 Ft.					
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW | Hole No. ABGSO-010

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

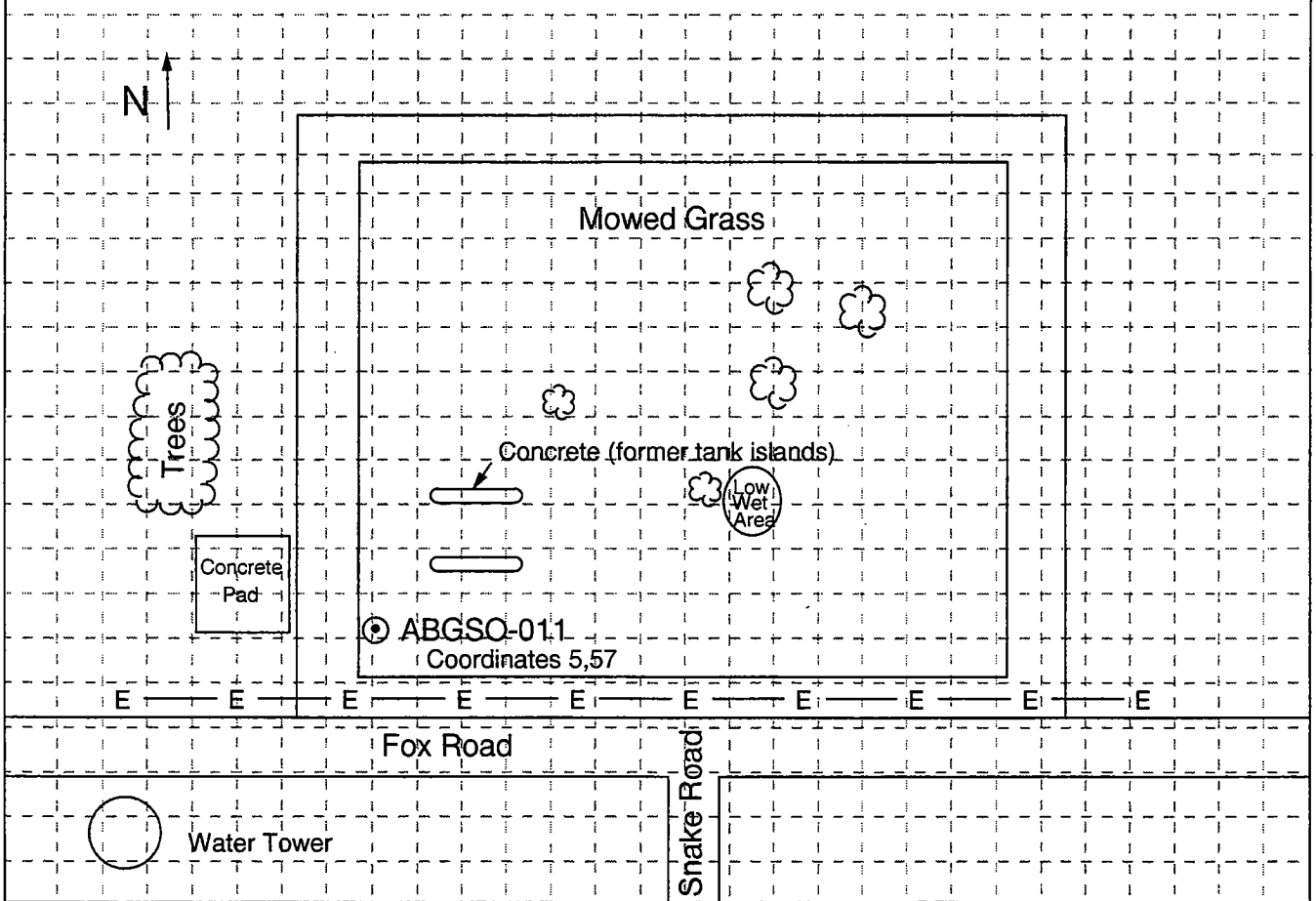
DISTRICT: Nashville COE		HOLE NUMBER: ABGSO-011
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS
3. PROJECT: PBOW	4. LOCATION: Additional Burn Ground	
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: ABGSO-011	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10/3/96	11. DATE COMPLETED: 10/3/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Explosives Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	ABGSO-011

PBOW/BORINGS/ABGS-11.DRW/MC/11-13-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. ABGSO-011

PROJECT: PBOW | INSPECTOR: D. Kessler | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Weeds					
		Blackish brown, homogeneous, very fine grain, silty SAND, (10% silt), very well sorted, organics (roots), moist, pebble size rocks **sm**		NA		NA	
		0.9	0.0		2210 2211-FD 2212-FR		
	1	Black, cinders/ash, some fine grain sand 1.0					
		Yellowish brown, homogenoeus, very fine grain, SAND, very well sorted **sp** Grading to a lighter colored sand					
	2						2
			0.2		2220		
	3	3.0					
		Total Depth = 3.0 Ft.					
	4						4
	5						
	6						6
	7						
	8						8
	9						
	10						10

Project: PBOW | Hole No. ABGSO-011

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: ABGSO-012
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS

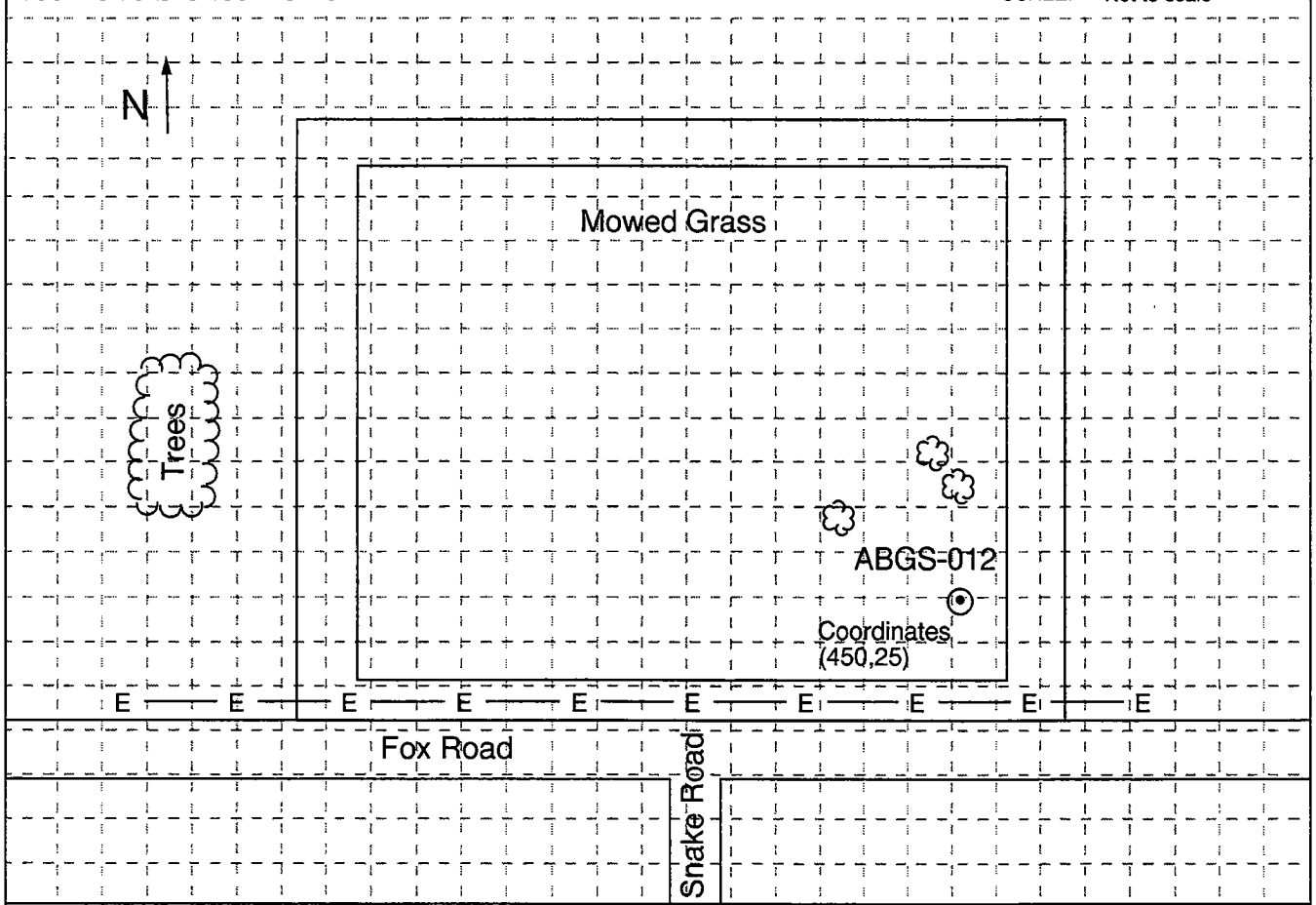
3. PROJECT: PBOW	4. LOCATION: Additional Burn Ground
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: ABGSO-012
	9. SURFACE ELEVATION:
	10. DATE STARTED: 10/3/96 / 11. DATE COMPLETED: 10/3/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Explosives Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	ABGSO-012

PBOW/BORINGS/ABGS-12.DRW/MC/11-13-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. ABGSO-012

PROJECT: PBOW | INSPECTOR: D. Kessler | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass, weeds					
		Black, loose, homogenoeus, very fine grain, sandy SILT (40% sand), organics (roots), pebbles, moist **ml** 0.5	0.0	NA	2230	NA	
		SHALE, Black 0.7					
	1	Light brown, homogeneous, very fine grain, SAND, very well sorted, moist **sp** 1.5					
		Black, homogeneous, very fine grain, silty SAND (20% silt), very well sorted, moist **sm** 2.0					
	2	Stiff, gray, homogeneous, very fine grain, silty SAND, (35% silt), very well sorted, moist **sm** 3.0	0.2		2240		
	3	Total Depth = 3.0 Ft.					
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW | Hole No. ABGSO-012

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville, TN		HOLE NUMBER: WP2SO01
1. COMPANY NAME: IT CORPORATION	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF SHEETS 2
3. PROJECT: PLUM BROOK	4. LOCATION: Waste Water Disposal Plant No. 2	
5. NAME OF DRILLER: David Kessler	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" O.D. Stainless Steel Hand Auger	8. HOLE LOCATION: WP2SO01	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10-2-96	11. DATE COMPLETED: 10-2-96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 0.5 Ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

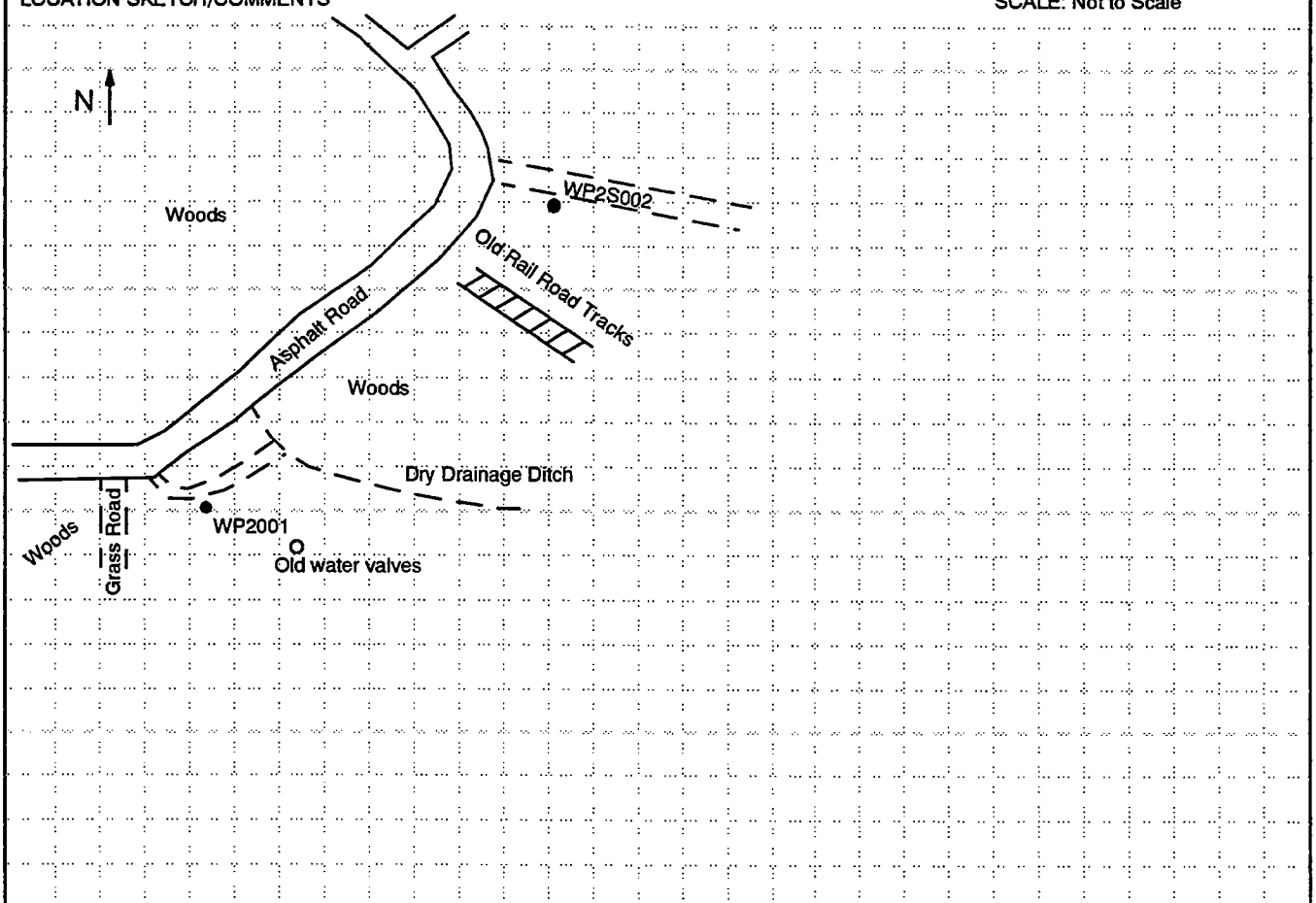
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	Pest/PCB	Total Cyanide	SVOC/Explosives	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler/

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE NO.
Plum Brook	WP2SO01

WP2S001.drw/plumbrk/pc/11-12-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. WP2SO01

PROJECT: Plum Brook

INSPECTOR: David Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass					
		Soft, black mottled(light brown), clayey SILT, organics (roots), moist ml	0.0	NA	#3210	NA	
	0.5	Total Depth= 0.5 Ft.					
	1						
	2						
	3						
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: Plum Brook

Hole No. WP2SO01

WP2SO01A.DRW/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville, TN		HOLE NUMBER: WP2SO02
1. COMPANY NAME: IT CORPORATION	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF SHEETS 2
3. PROJECT: PLUM BROOK	4. LOCATION: Waste Water Disposal Plant No. 2	
5. NAME OF DRILLER: David Kessler	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: WP2SO02	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10-2-96	11. DATE COMPLETED: 10-2-96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 5.0 Ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

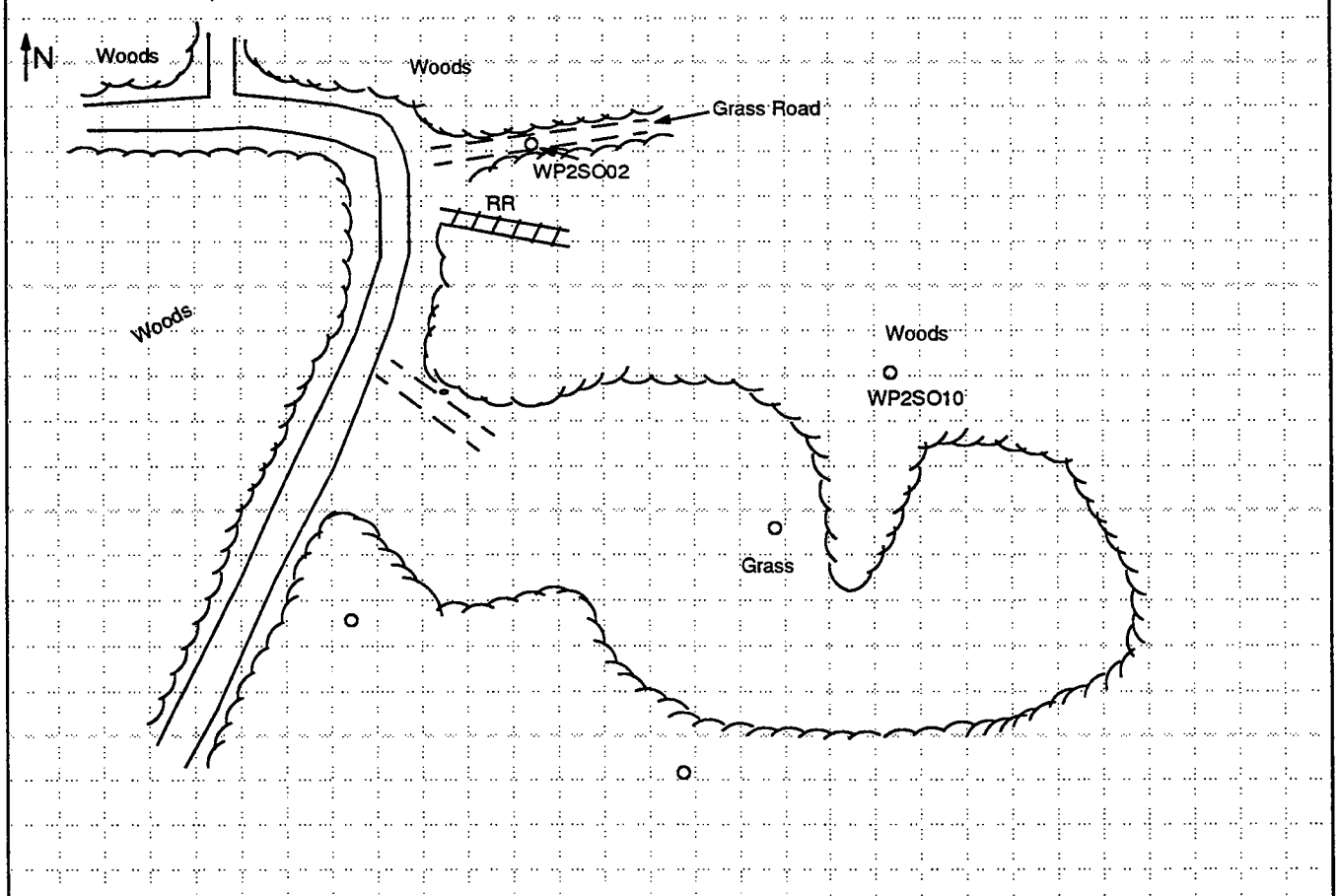
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide Explosvies	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler/

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE NO.
Plum Brook	WP2SO02

WP2SO02.DRW/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. WP2SO02

PROJECT: Plum Brook

INSPECTOR: David Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass					
	Fill:	(Soft, black, fine to cobble size grain, clayey SILT, moist) ml		NA		NA	
	0.5	0.5					
	Fill:	(Soft, light brown, homogeneous, low plasticity clayey SILT, few pebbles, moist) ml					
	1						
	1.5						
	2						
	2.5	2.8					
	3	Loose, brown/tan, very fine grain, silty SAND, (10% silt), very well sorted, moist sp					
	3.5						
	4						
	4.5	4.5	0.1		#3220		
		Light brown, very fine grain, low plasticity, sandy SILT, (20% sand), moist ml					
	5	Total Depth= 5.0 Ft.					

Project: Plum Brook

Hole No. WP2SO02

wp2so02a.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville, TN		HOLE NUMBER: WP2SO03
1. COMPANY NAME: IT CORPORATION	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS
3. PROJECT: PLUM BROOK	4. LOCATION: Waste Water Disposal Plant No. 2	
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: WP2SO03	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10-3-96	11. DATE COMPLETED: 10-3-96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 0.5 Ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

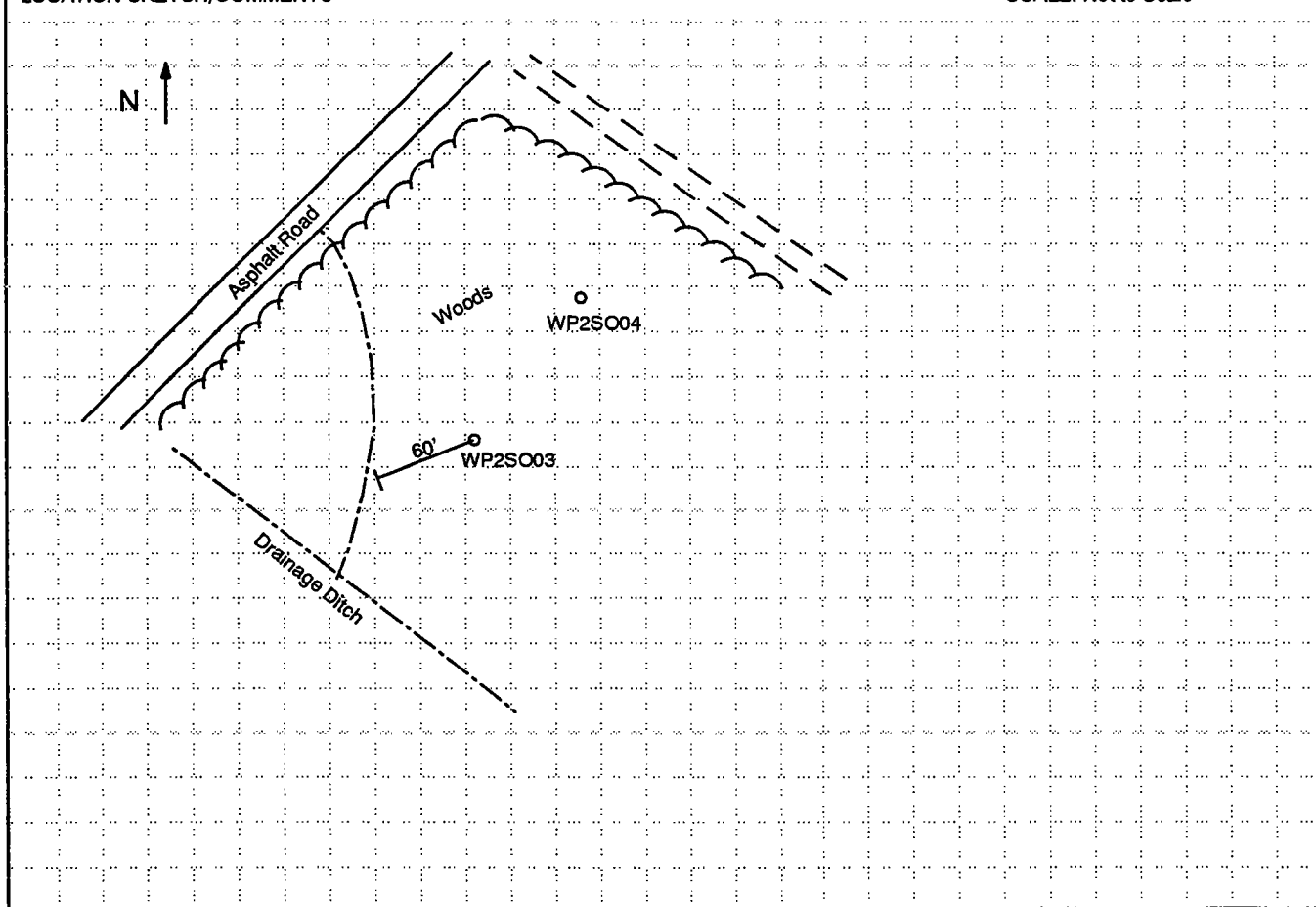
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide Explosives	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler/

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE NO.
Plum Brook	WP2SO03

wp2so03.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. WP2SO03

PROJECT: Plum Brook

INSPECTOR: David Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Dead Leaves Dark brown, homogeneous, very fine grain clayey SILT, organics (roots), shale fragments, moist ml	0.4	NA	#3230	NA	
	0.5	Total Depth= 0.5 Ft.					
	1						
	1.5						
	2						
	2.5						
	3						

Project: Plum Brook

Hole No. WP2SO03

wp2so03a.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville, TN		HOLE NUMBER: WP2SO04
1. COMPANY NAME: IT CORPORATION	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF SHEETS 2
3. PROJECT: PLUM BROOK	4. LOCATION: Waste Water Disposal Plant No. 2	
5. NAME OF DRILLER: David Kessler	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: WP2SO04	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10-2-96	11. DATE COMPLETED: 10-2-96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 5.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

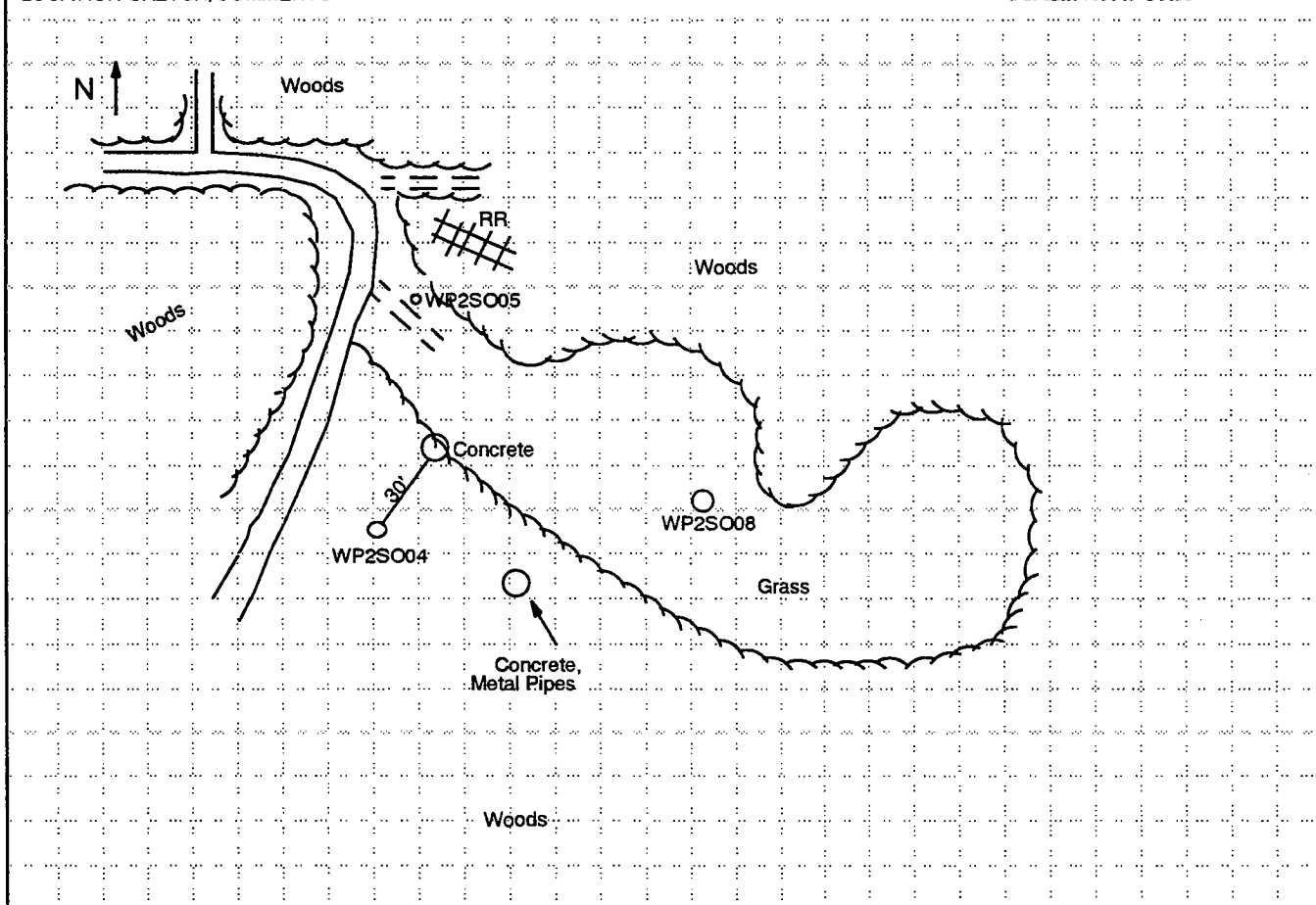
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide Explosives	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler/

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE NO.
Plum Brook	WP2SO04

WP2SO04.DRW/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. WP2SO04

PROJECT: Plum Brook

INSPECTOR: David Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Dead Leaves					
		Soft, black, homogeneous, very fine grain, sandy SILT, organics(roots), moist **ml** 0.4		NA		NA	
	0.5	Loose, light/dark brown, homogeneous, very fine grain, silty SAND, very well sorted, moist **sp** 1.1					
	1	Stiff, light brown, homogeneous, low plasticity, very fine grain, sandy SILT, (15% sand), dry **ml**					
	1.5						
	2						
	2.5						
	3						
	3.5						
	4						
	4.5		0.3		#3240 3241-FD 3242-FS		
	5	Total Depth= 5.0 Ft.					

Project: Plum Brook

Hole No. WP2SO04

wp2so04.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville, TN		HOLE NUMBER: WP2SO05
1. COMPANY NAME: IT CORPORATION	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF SHEETS 2
3. PROJECT: PLUM BROOK	4. LOCATION: Waste Water Disposal Plant No. 2	
5. NAME OF DRILLER: David Kessler	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: WP2SO05	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10-2-96	11. DATE COMPLETED: 10-2-96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 0.5 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

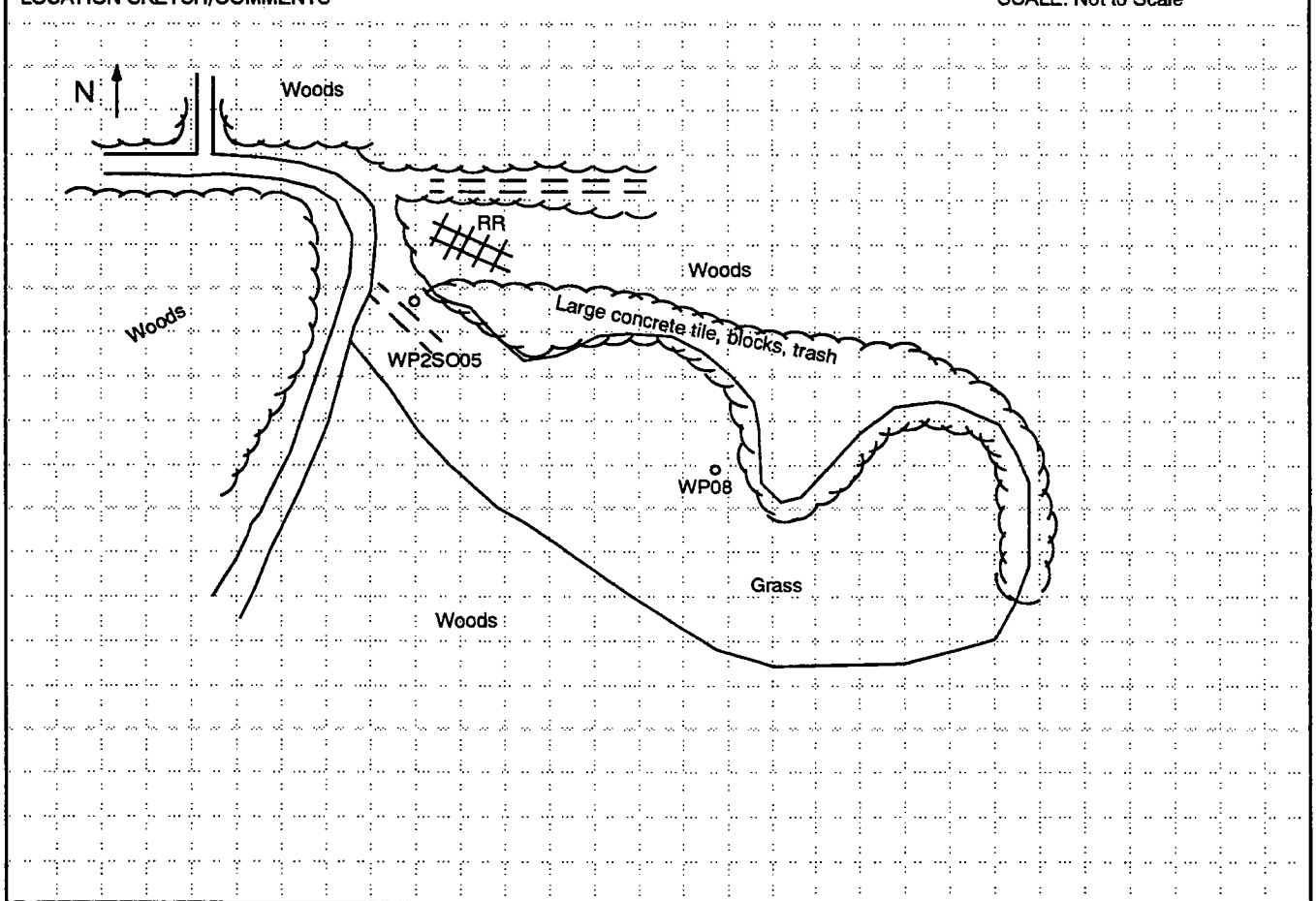
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide Explosives	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler/

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE NO.
Plum Brook	WP2SO05

wp2so05.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. WP2SO05

PROJECT: Plum Brook

INSPECTOR: David Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Soft, black, fine to boulder size, clayey SILT organics(roots), moist ml	0.3	NA	#3250	NA	
	0.5	Total Depth= 0.5 Ft.					
	1						
	1.5						

Project: Plum Brook

Hole No. WP2SO05

WP2SO05.DRW/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville, TN		HOLE NUMBER: WP2SO06
1. COMPANY NAME: IT CORPORATION	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF SHEETS 2
3. PROJECT: PLUM BROOK	4. LOCATION: Waste Water Disposal Plant No. 2	
5. NAME OF DRILLER: David Kessler	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: WP2SO06	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10-2-96	11. DATE COMPLETED: 10-2-96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 5.0 Ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

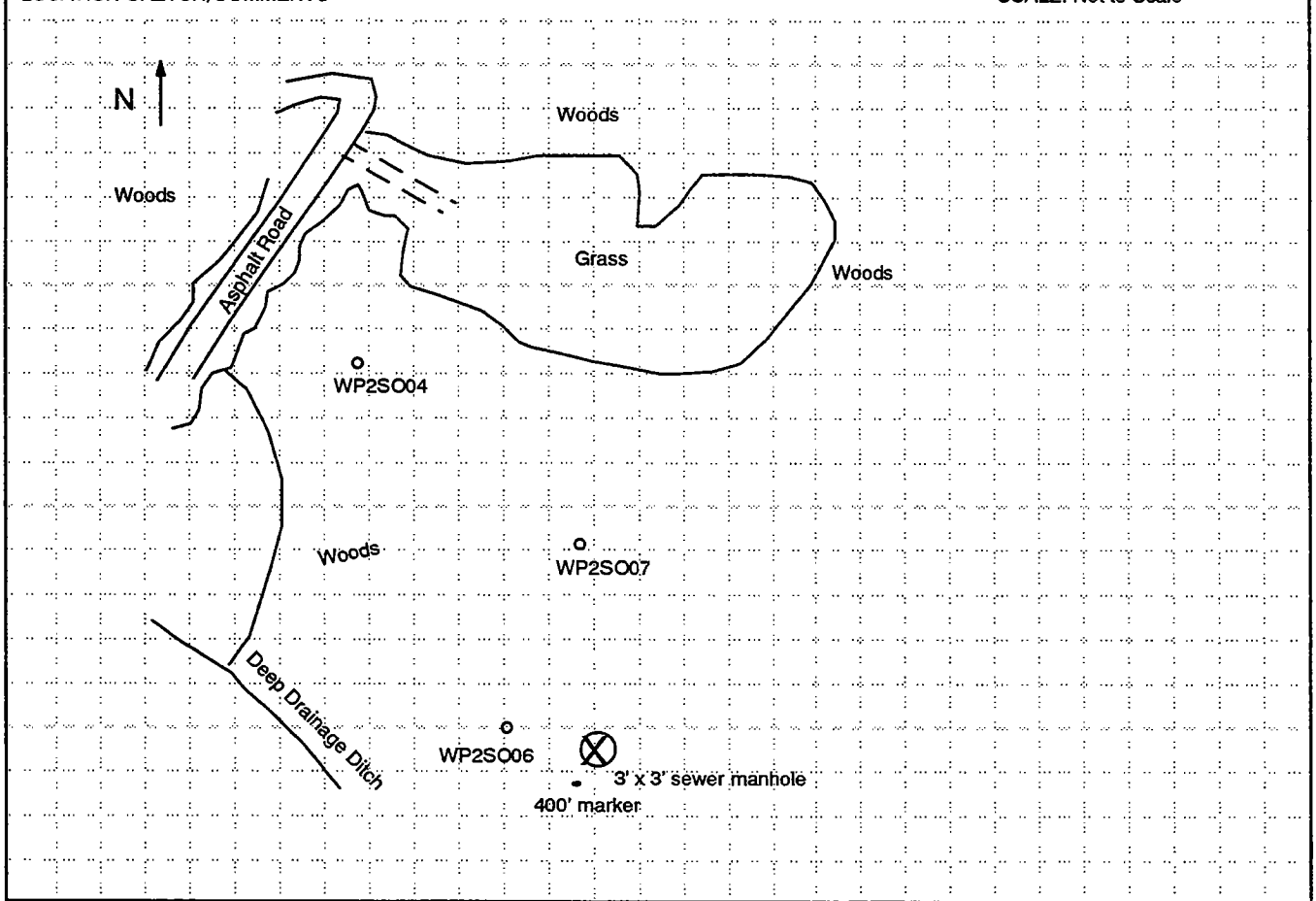
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide Explosives	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler/

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE NO.
Plum Brook	WP2SO06

WP2SO06.DRW/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. WP2SO06

PROJECT: Plum Brook

INSPECTOR: David Kessler

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Dead Leaves					
		Soft, black, homogeneous, very fine grain, sandy SILT, organics (roots), moist **ml** 0.4		NA		NA	
	0.5	Loose, light brown, very fine grain, silty SAND, very well sorted, moist **sp**					
	1						
	1.5						
	2						
	2.5	2.5					
	3	Stiff, light brown, homogeneous, low plasticity, very fine grain, sandy SILT, (15% sand), moist **ml**					
	3.5						
	4						
	4.5		0.1		#3260		
	5	Total Depth= 5.0 Ft.					

Project: Plum Brook

Hole No. WP2SO06

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville, TN		HOLE NUMBER: WP2SO07
1. COMPANY NAME: IT CORPORATION	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF SHEETS 2
3. PROJECT: PLUM BROOK	4. LOCATION: Waste Water Disposal Plant No. 2	
5. NAME OF DRILLER: David Kessler	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: WP2SO07	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10-2-96	11. DATE COMPLETED: 10-2-96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 5.0 Ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

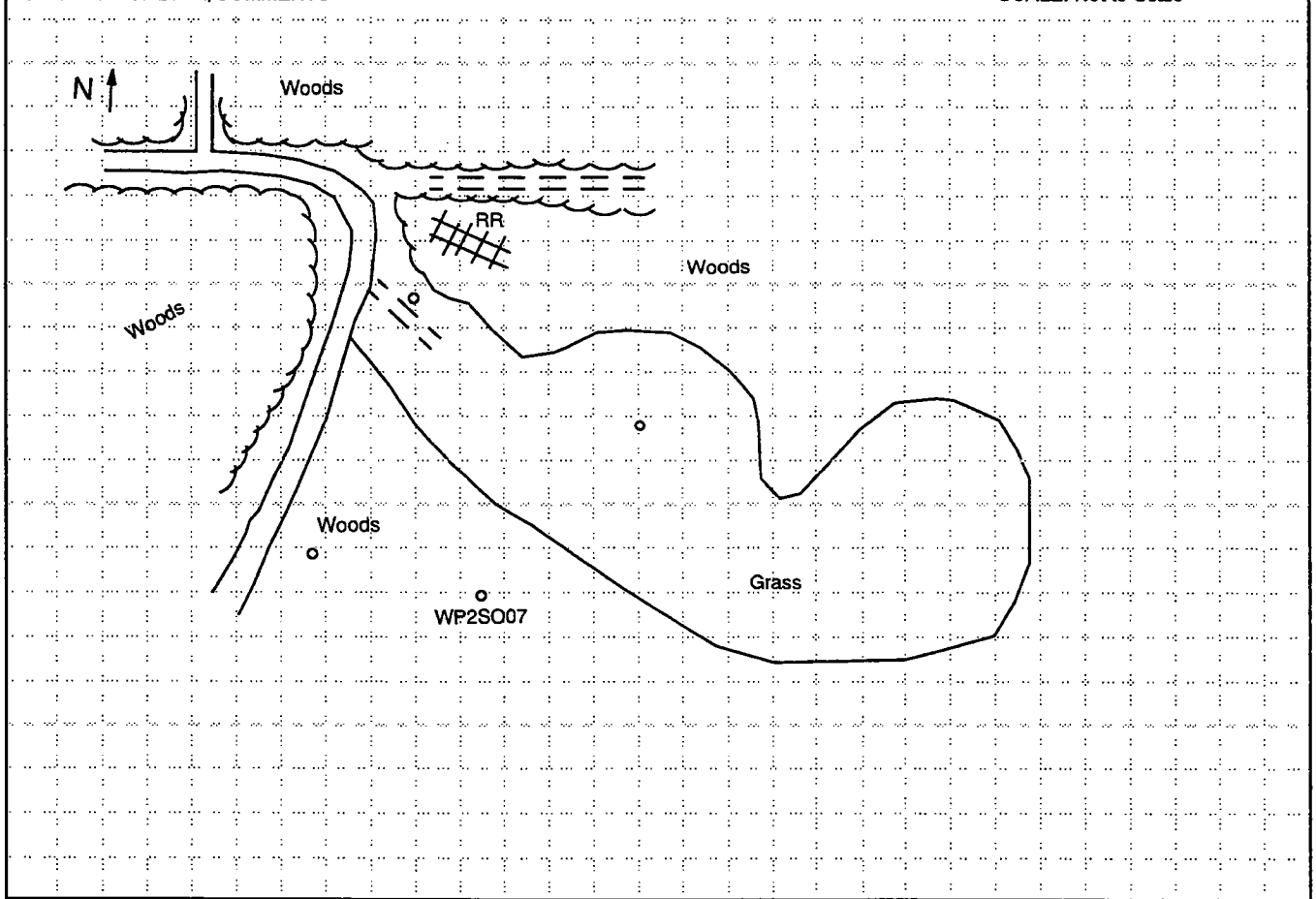
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide Explosives	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler/

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE NO.
Plum Brook	WP2SO07

wp2so07.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. WP2SO07

PROJECT: Plum Brook

INSPECTOR: David Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Dead Leaves					
		Soft, black, very fine grain, sandy SILT, organics (roots), moist ml 0.6		NA		NA	
	0.5	Soft, gray, mottled (brown), low plasticity, very fine grain, sandy SILT, some small rocks, moist ml 1.0					
	1	Loose, dark brown, very fine grain, silty SAND, (20% silt), very well sorted, moist sp 1.3					
	1.5	Loose, brown, very fine grain, silty SAND, very well sorted, (40% silt), moist					
	2						
		sp					
	2.5						
	3						
	3.5	3.5					
		Stiff, light brown, homogeneous, very fine grain, low plasticity, sandy SILT, (15% sand), moist					
	4	ml					
	4.5		0.2		#3270		
	5	Total Depth= 5.0 Ft.					

Project: Plum Brook

Hole No. WP2SO07

wp2so07a.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT Nashville, TN		HOLE NUMBER WP2SO08
1. COMPANY NAME IT CORPORATION	2. DRILL SUBCONTRACTOR IT Corporation	SHEET 1 OF SHEETS 2
3. PROJECT PLUM BROOK	4. LOCATION Waste Water Disposal Plant No. 2	
5. NAME OF DRILLER David Kessler	6. MANUFACTURER'S DESIGNATION OF DRILL Hand Auger	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT 2" Stainless Steel Hand Auger	8. HOLE LOCATION WP2SO08	
	9. SURFACE ELEVATION	
	10. DATE STARTED 10-2-96	11. DATE COMPLETED 10-2-96
12. OVERBURDEN THICKNESS NA	15. DEPTH GROUNDWATER ENCOUNTERED NA	
13. DEPTH DRILLED INTO ROCK NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED NA	
14. TOTAL DEPTH OF HOLE 0.5 Ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) NA	

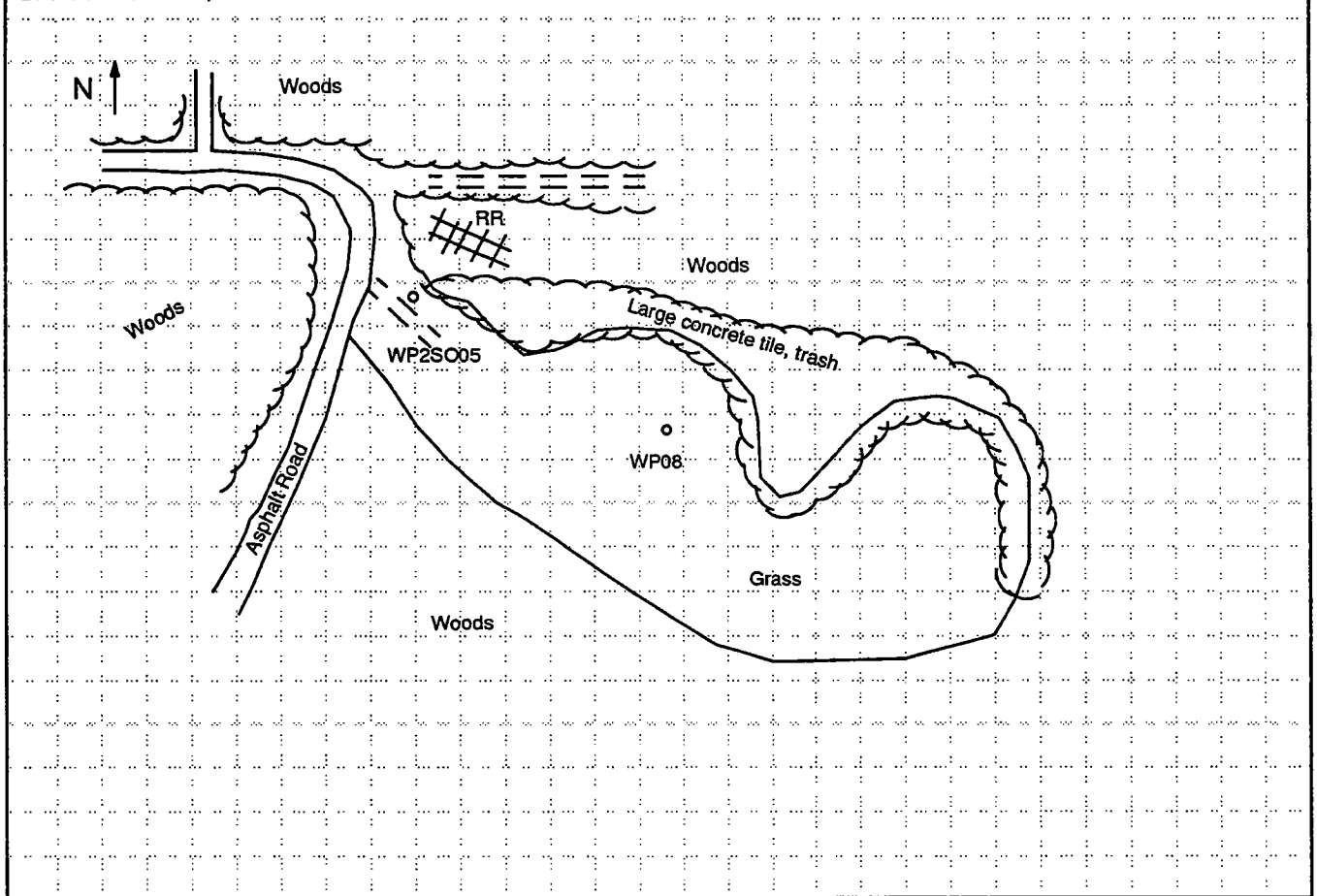
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide Explosives	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler/

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE NO.
Plum Brook	WP2SO08

wp2so08.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. WP2SO08

PROJECT: Plum Brook

INSPECTOR: David Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass					
	Fill:	Soft, black, homogeneous, clayey SILT, trace of sand, organics(roots), moist ml 0.2	0.1	NA	#3280	NA	
	0.5	Fill:(light brown, homogeneous, very fine grain, silty SAND, well sorted, small pebbles (1%, moist)) 0.5					
		Total Depth= 0.5 Ft.					
	1						
	1.5						
	2						
	2.5						
	3						

Project: Plum Brook

Hole No. WP2SO08

WP2SO08.DRW/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville, TN		HOLE NUMBER: WP2SO09
1. COMPANY NAME: IT CORPORATION	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF SHEETS 2
3. PROJECT: PLUM BROOK	4. LOCATION: Waste Water Disposal Plant No. 2	
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: WP2SO09	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10-3-96	11. DATE COMPLETED: 10-3-96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 0.5 Ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

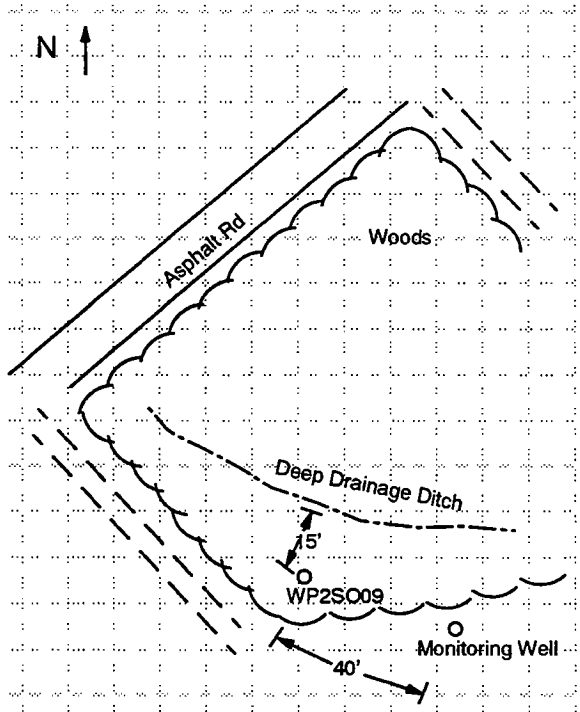
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide Explosives	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler/

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE NO.
Plum Brook	WP2SO09

wp2so09.drw/plumbrk/pc/11/12/96

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. WP2SO09

PROJECT: Plum Brook

INSPECTOR: David Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Dead Leaves					
	0.5	Soft, very dark brown, homogeneous, low plasticity, very fine grain, clayey SILT, trace of sand (10%), organics (roots), moist **ml**	0.4	NA	#3290 #3291-MS #3292-MD	NA	
		Total Depth= 0.5 Ft.					
	1						
	1.5						
	2						
	2.5						
	3						

Project: Plum Brook

Hole No. WP2SO09

WP2SO09a.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville, TN		HOLE NUMBER: WP2SO10
1. COMPANY NAME: IT CORPORATION	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF SHEETS 2
3. PROJECT: PLUM BROOK	4. LOCATION: Waste Water Disposal Plant No. 2	
5. NAME OF DRILLER: David Kessler	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: WP2SO10	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 10-2-96	11. DATE COMPLETED: 10-2-96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

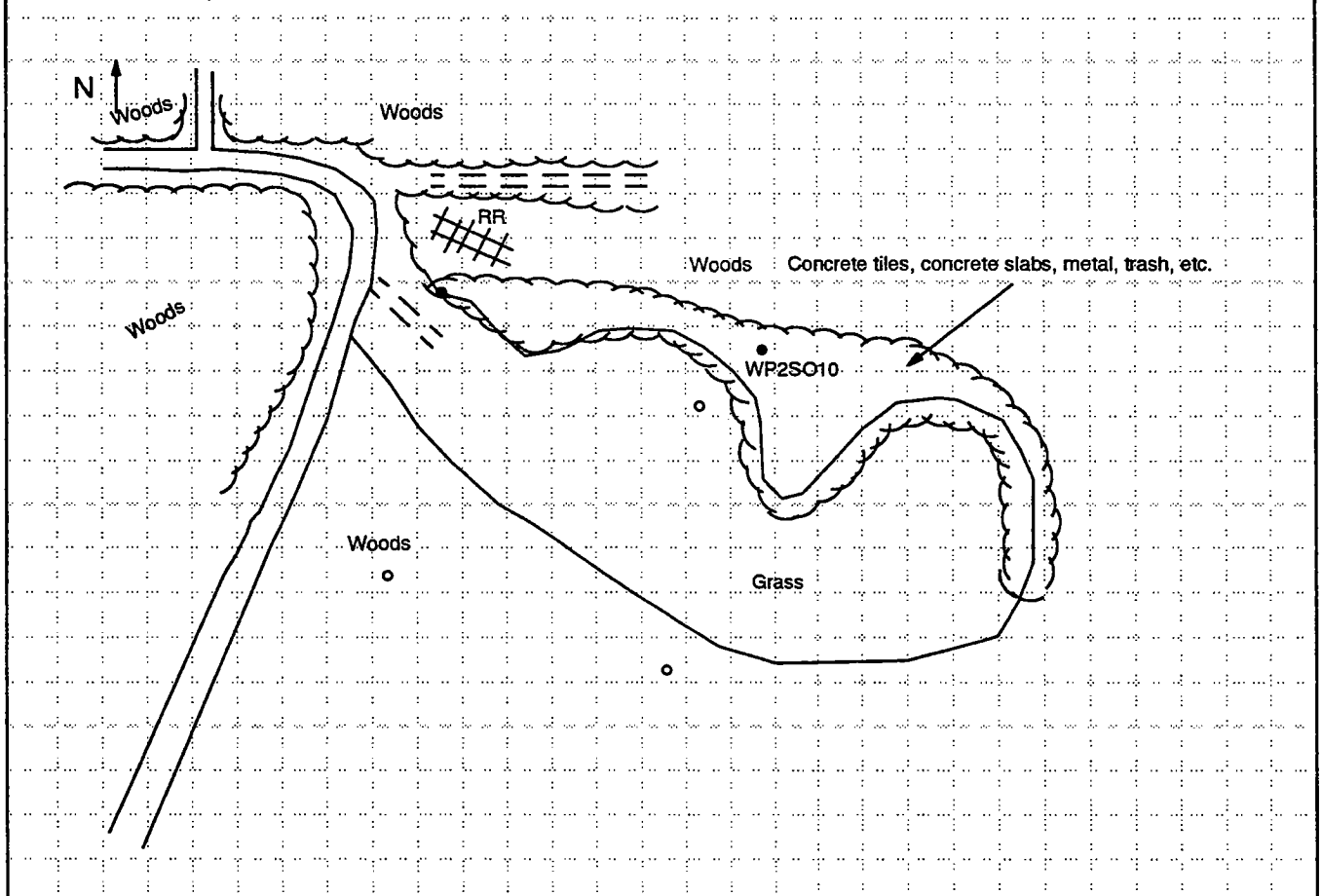
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide Explosives	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler/

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE NO.
Plum Brook	WP2SO10

WP2SO10.drw/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. WP2SO10

PROJECT: Plum Brook

INSPECTOR: David Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Grass					
	Fill:	(Dark brown, homogeneous, low plasticity, clayey SILT, fine to boulder size rock fragments, bricks, many tiny styrofoam balls, cloth tarp, moist)		NA		NA	Large boulder, ~ 1 ft by 1 ft. concrete block surrounded by ~ 8 layers of a dark olive green, decomposed cloth tarp
	0.5						
	1	ml					
	1.5						
	2		1.0		#3300		
	2.5						
	3	Auger Refusal @ 3.0 ft. Total Depth= 3.0 Ft.					

Project: Plum Brook

Hole No. WP2SO10

WP2SO10A.DRW/plumbrk/pc/11/12/96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: PH2SO-01
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS

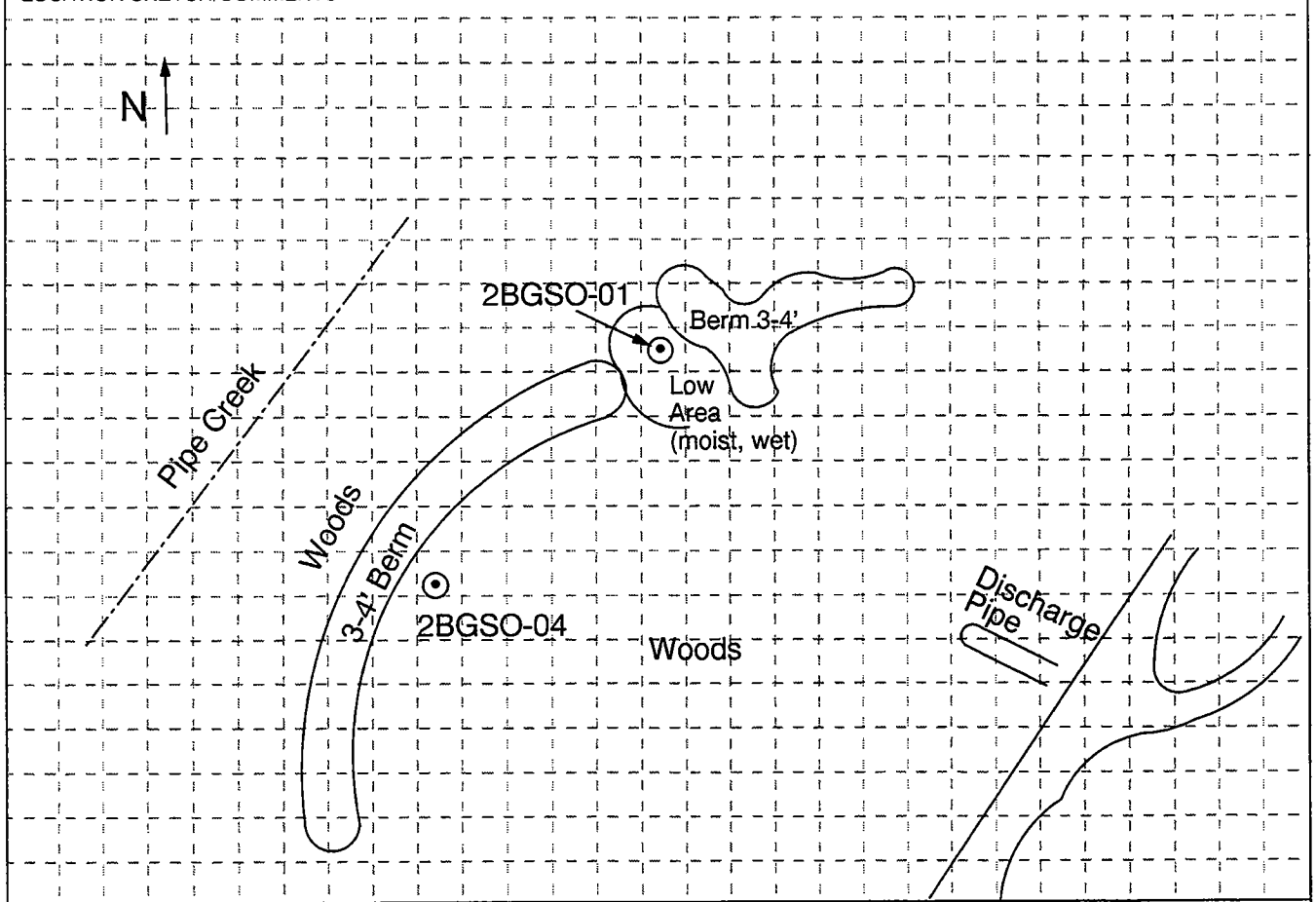
3. PROJECT: PBOW	4. LOCATION: Erie County
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: Power House No. 2 Ash Pit
	9. SURFACE ELEVATION:
	10. DATE STARTED: 9/28/96 / 11. DATE COMPLETED: 9/28/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	PH2SO-01

PBOW/BORINGS/PH2S-1.DRW/MC/11-15-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. PH2SO-01

PROJECT: PBOW | INSPECTOR: D. Kessler | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Loose, black, homogeneous, clayey SILT, organics (roots), moist **ml**	0.0	NA	4010	NA	
	1	Sand content begins and increases with depth, color gradually changing to yellowish brown 1.8					
	2	Loose, yellowish brown, homogenoeus, silty SAND, (45% silt), very well sorted, dry **sm** 1.8	0.0		4020		
	3	Soft, brownish white, homogenoeus, clayey SILT, dry **ml**					
		Total Depth = 3.0 Ft.					
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW | Hole No. PH2SO-01

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: PH2SO-02
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: Alliance	SHEET 1 OF 2 SHEETS
3. PROJECT: PBOW	4. LOCATION: Erie County	
5. NAME OF DRILLER: David Purcell	6. MANUFACTURER'S DESIGNATION OF DRILL: NA	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" O.D. Stainless Steel Hand Auger, Split Spoon	8. HOLE LOCATION: Powerhouse #2 Ash Pit	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 9/29/96	11. DATE COMPLETED: 9/29/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

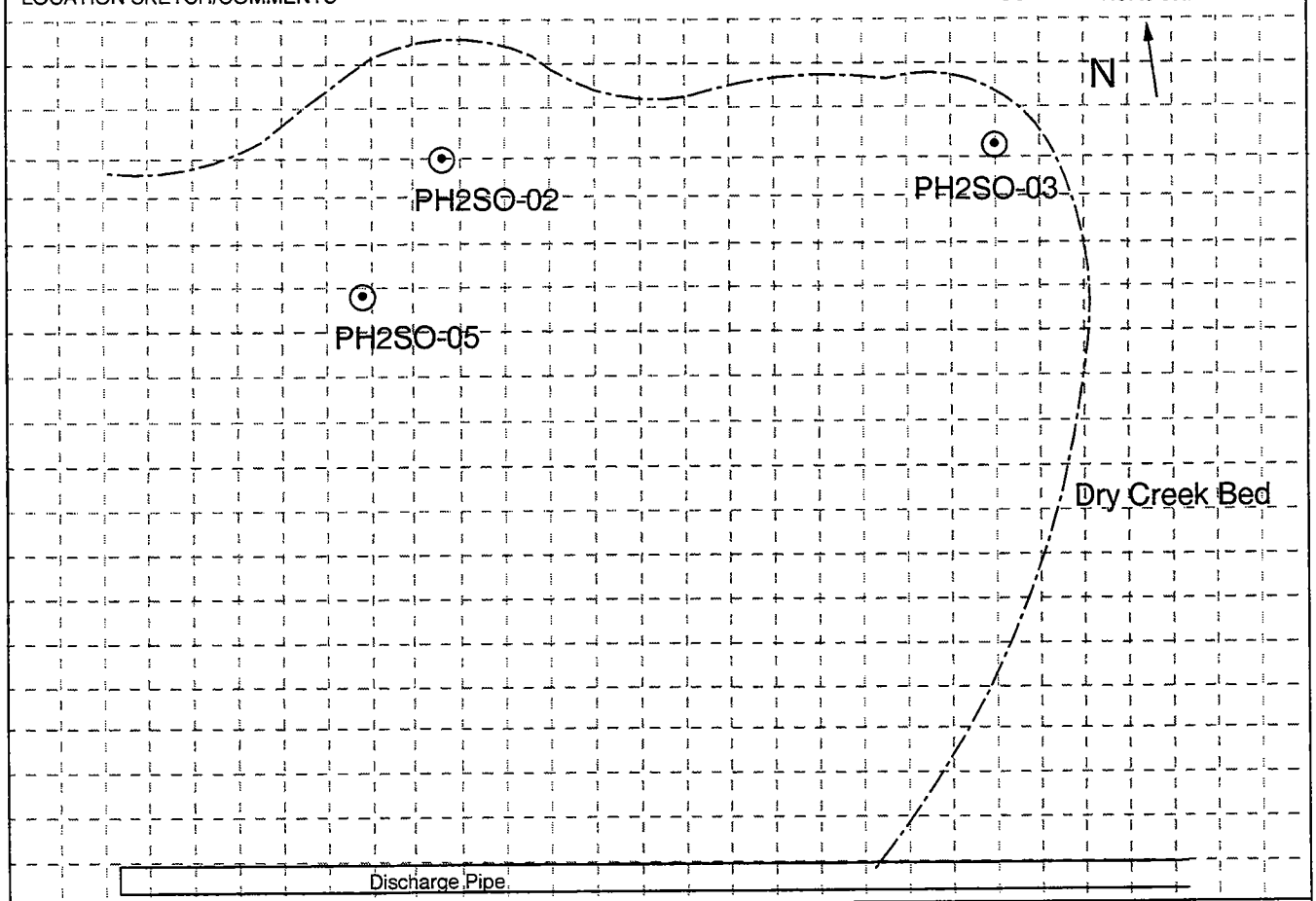
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	Pest/PCBs	SVOC	Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X			Wesley White

LOCATION SKETCH/COMMENTS

SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	PH2SO-02

PBOW/BORINGS/PH2SO-2.DRW/MC/11-15-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. PH2SO-02

PROJECT: PBOW | INSPECTOR: W. White | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	USCS g	REMARKS h
		Loose, black, ash, rootlets, worms	1.5	NA	4030	fill	
	1	1.0					
		Firm, yellowish brown, clayey SILT, low to medium plasticity, moist 1.5				ML	
	2	Loose, pale brown, silty very fine SAND, well sorted, poorly graded, well rounded, dry to moist	3.5		4040	SM	
		Interbedded sand and silt layers (small) 3.0					
	3	Total Depth = 3.0 Ft.					
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW | Hole No. PH2SO-02

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: PH2SO-03
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: Alliance	SHEET 1 OF 2 SHEETS

3. PROJECT: PBOW	4. LOCATION: Erie County
5. NAME OF DRILLER: David Purcell	6. MANUFACTURER'S DESIGNATION OF DRILL: NA
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" O.D. Stainless Steel Hand Auger, Split Spoon	8. HOLE LOCATION: Powerhouse #2 Ash Pit
	9. SURFACE ELEVATION:
	10. DATE STARTED: 9/29/96 / 11. DATE COMPLETED: 9/29/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: 1.3 ft.
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

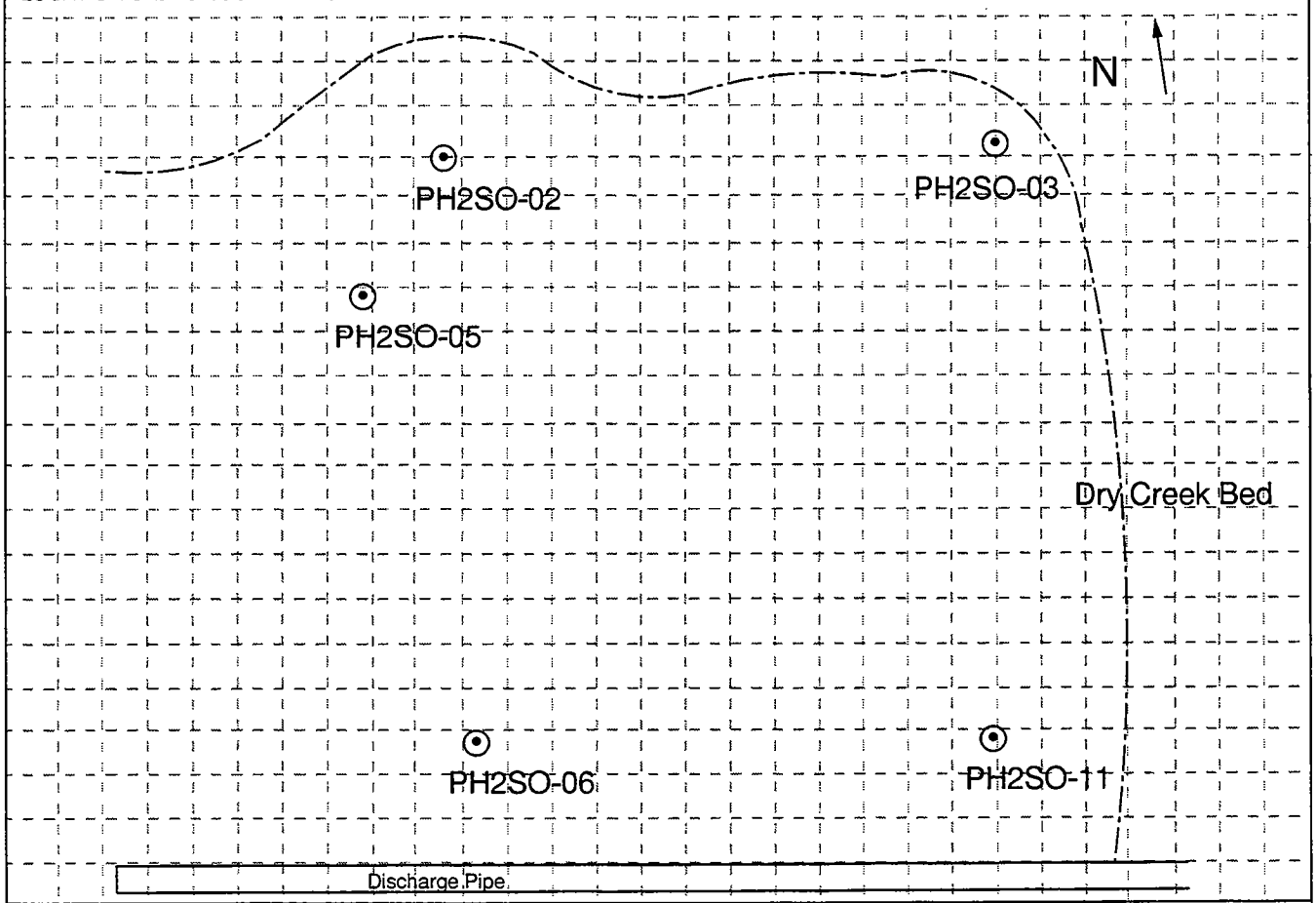
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	Pest/PCBs	SVOC	Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X			Wesley White

LOCATION SKETCH/COMMENTS

SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	PH2SO-03

PBOW/BORINGS/PH2SO-3.DRW/MC/11-15-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. PH2SO-03

PROJECT: PBOW | INSPECTOR: W. White | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	USCS g	REMARKS h
		Firm to soft, ash and clayey SILT, medium plasticity, rootlets, worms	1.5		4050	ML	
	1	1.0					
		Medium dense, yellowish brown, silty, very fine SAND, well sorted, poorly graded, moist, 10% silt, well rounded, spherical, silt decreases with depth, becoming wet at 1.5 ft.				SP	▼ Encountered Groundwater at 1.3 ft.
	2	Silt content increasing to 15%	2.5		4060		
		Few beds of very fine sandy silt					
	3	3.0					
		Total Depth = 3.0 Ft.					
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW | Hole No. PH2SO-03

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: PH2SO-04
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS

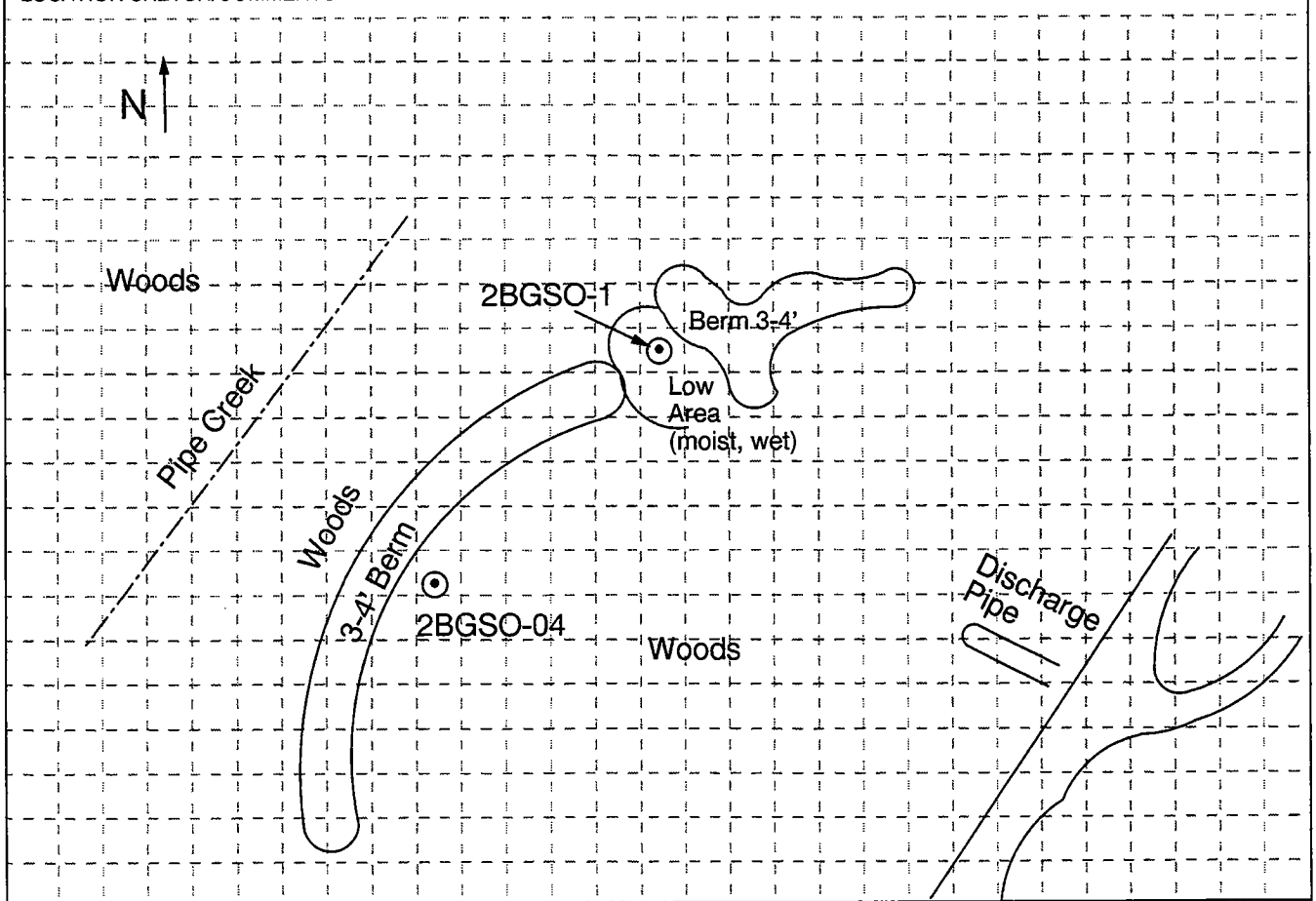
3. PROJECT: PBOW	4. LOCATION: Erie County
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: Power House No. 2 Ash Pit
	9. SURFACE ELEVATION:
	10. DATE STARTED: 9/28/96 / 11. DATE COMPLETED: 9/28/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	PH2SO-04

PBOW/BORINGS/PH2S-4.DRW/MC/11-15-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. PH2SO-04

PROJECT: PBOW

INSPECTOR: D. Kessler

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Soft, dark brown, homogeneous, clayey SILT, (35% clay), organics (roots), small black organics, moist ml	0.0	NA	4070	NA	
	1	Soil becoming mottled with light brown					
	2	Silt content 80% at 2 ft.	0.5		4080		
	3	Total Depth = 3.0 Ft.					
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW

Hole No. PH2SO-04

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

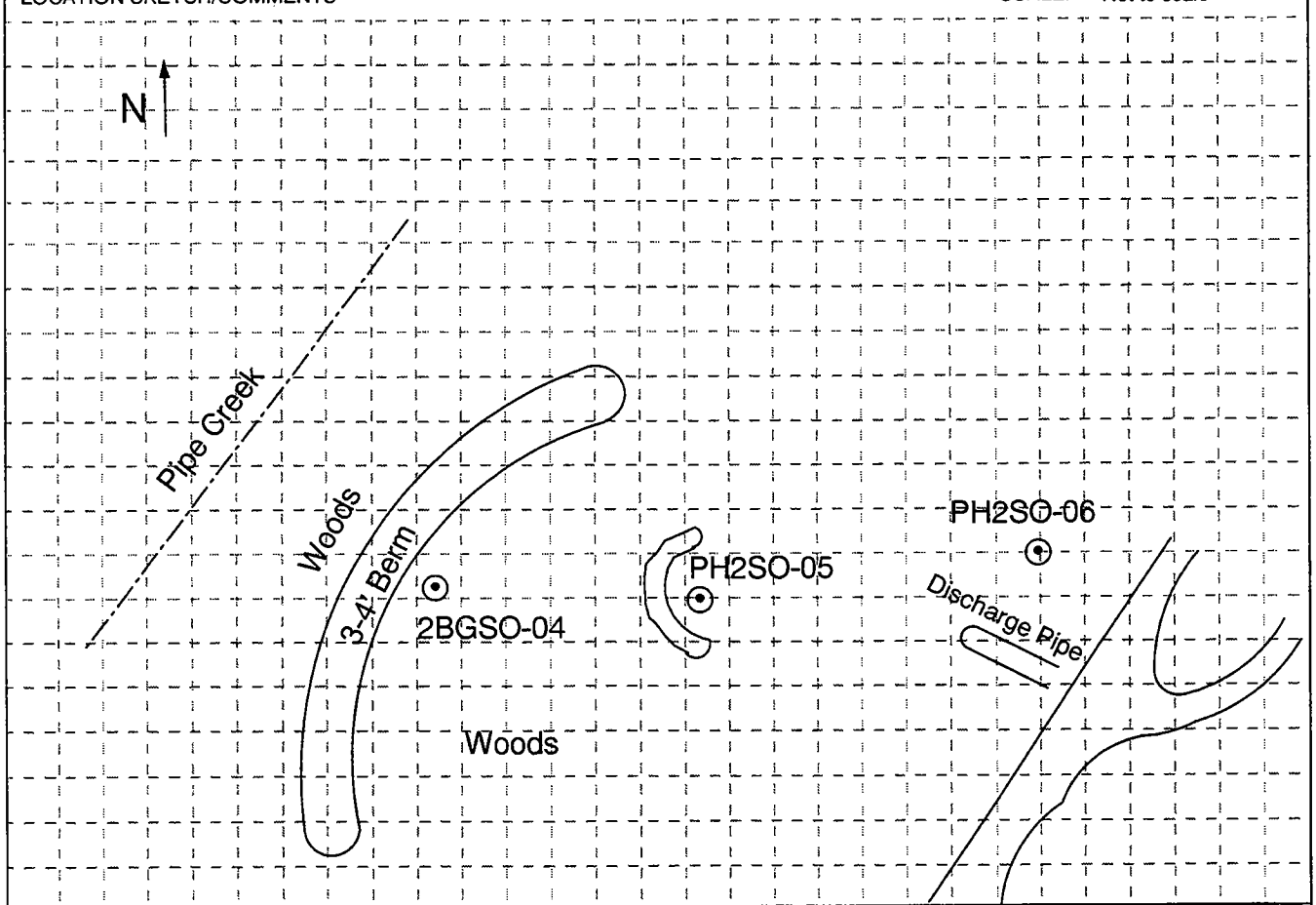
DISTRICT: Nashville COE		HOLE NUMBER: PH2SO-05
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS
3. PROJECT: PBOW	4. LOCATION: Erie County	
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: Power House No. 2 Ash Pit	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 9/28/96	11. DATE COMPLETED: 9/28/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	PH2SO-05

PBOW/BORINGS/PH2SO-5.DRW/MC/11-15-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. PH2SO-05

PROJECT: PBOW | INSPECTOR: D. Kessler | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Very loose, black, silty CINDERS, fine grain, moist **fill**	0.0	NA	4090	NA	
	1						
		1.8					
	2	Loose, light brown, homogeneous, very fine grain, silty SAND, very well sorted, dry **sm**	0.6		4100		
	3	Total Depth = 3.0 Ft.					
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW | Hole No. PH2SO-05

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: PH2SO-06
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: Alliance	SHEET 1 OF 2 SHEETS
3. PROJECT: PBOW	4. LOCATION: Erie County	
5. NAME OF DRILLER: David Purcell	6. MANUFACTURER'S DESIGNATION OF DRILL	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" O.D. Stainless Steel Hand Auger, Split Spoon	8. HOLE LOCATION: Powerhouse #2 Ash Pit	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 9/29/96	11. DATE COMPLETED: 9/29/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

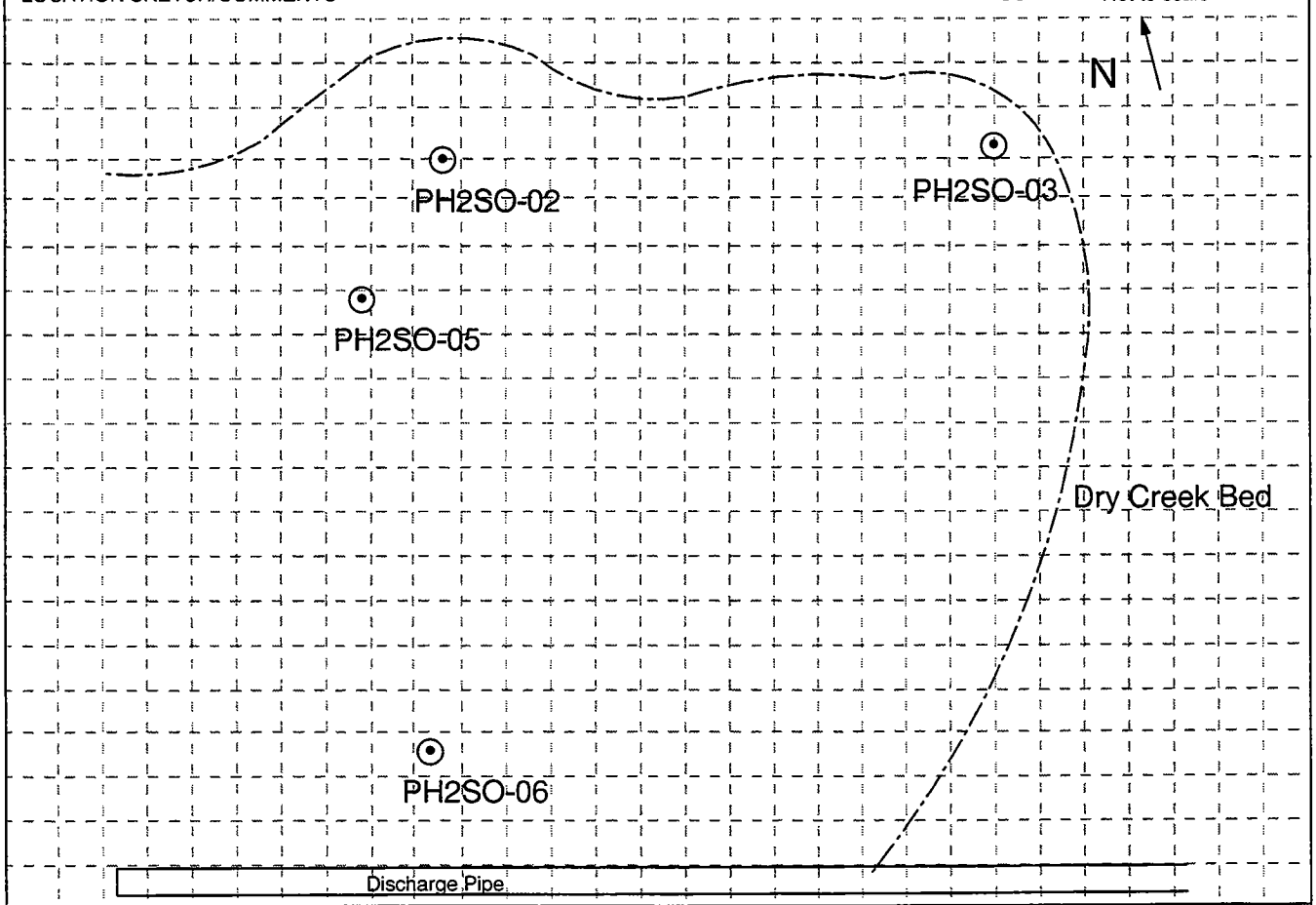
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	Pest/PCBs	SVOC	Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X			Wesley White/

LOCATION SKETCH/COMMENTS

SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	PH2SO-06

PBOW/BORINGS/PH2SO-6.DRW/MC/11-15-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. PH2SO-06

PROJECT: PBOW | INSPECTOR: W. White | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	USCS g	REMARKS h
		Loose, black, ash and cinders, sizes range from very fine grain to coarse grain sand, cinders are primarily fine to medium size gravel, dry	2.25		4110	Fill	
	1						
	2	2.0					
		Soft to firm, brown, clayey SILT, medium to low plasticity, low dry strength, moist	2.5		4120	ML	
	3	3.0					
		Total Depth = 3.0 Ft.					
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW | Hole No. PH2SO-06

HTRW DRILLING LOG

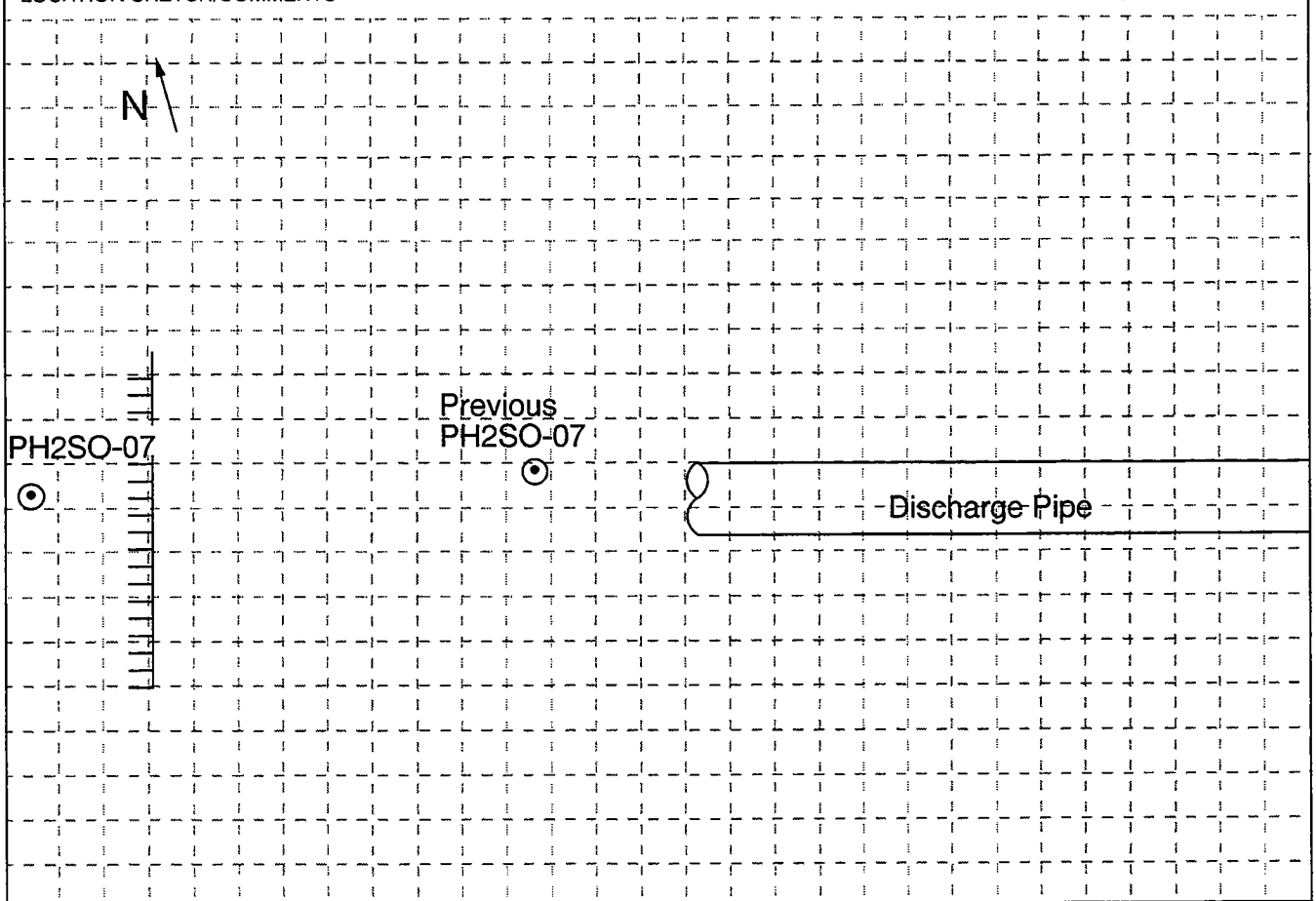
DISTRICT: Nashville COE		HOLE NUMBER: PH2SO-07
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS
3. PROJECT: PBOW	4. LOCATION: Erie County	
5. NAME OF DRILLER: David Purcell	6. MANUFACTURER'S DESIGNATION OF DRILL	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" O.D. Stainless Steel Hand Auger, Split Spoon	8. HOLE LOCATION: Power House No. 2 Ash Pit	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 9/29/96	11. DATE COMPLETED: 9/29/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	Wesley White/

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	PH2SO-07

PBOW/BORINGS/PH2SO-7.DRW/MC/11-18-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. PH2SO-07

PROJECT: PBOW | INSPECTOR: W. White | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	USCS g	REMARKS h
		Loose, black, ash, roots, dry	0.3	NA	4130	fill	
	1	1.1					
		Firm to soft, brown, clayey SILT, trace very fine sand, moist to dry, low dry strength, low to medium plasticity (below plastic limit already)				ML	
	2	2.75	2.0		4140		
		Loose, yellowish brown, silty very fine SAND, well sorted, poorly graded, dry to moist, well rounded, spherical				SM	
	3	Total Depth = 3.0 Ft.					
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW | Hole No. PH2SO-07

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: PH2SO-07A
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS

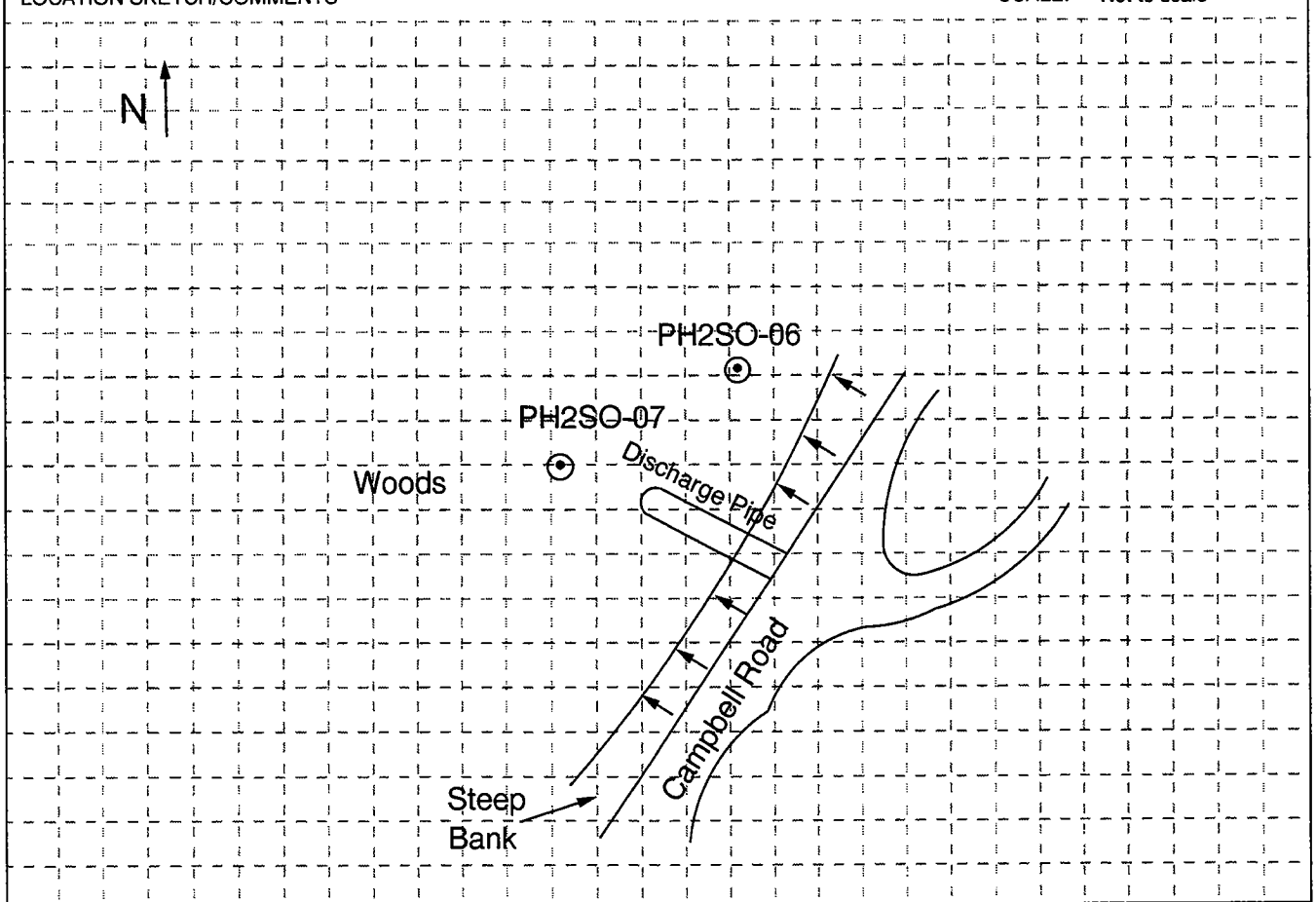
3. PROJECT: PBOW	4. LOCATION: Erie County
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: Power House No. 2 Ash Pit
	9. SURFACE ELEVATION:
	10. DATE STARTED: 9/28/96 / 11. DATE COMPLETED: 9/28/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE:	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT: PBOW	HOLE NO.: PH2SO-07A

PBOW/BORINGS/PH2SO-7A.DRW/MC/11-18-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. PH2SO-07A

PROJECT: PBOW | INSPECTOR: D. Kessler | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Loose, black, silty CINDER, fine to coarse grain, cobble size , moist	0.4	NA	4130	NA	
		Mottled with reddish colored cinder chips **fill**					
	1						
	2						
	3						Large cobble boulder size cinders
	4	Total Depth = 3.7 Ft. Abanodoned Borehole Attempted Another Borehole					Did not use this sample 0-0.5 ft.
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW | Hole No. PH2SO-07A

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: PH2SO-08
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS

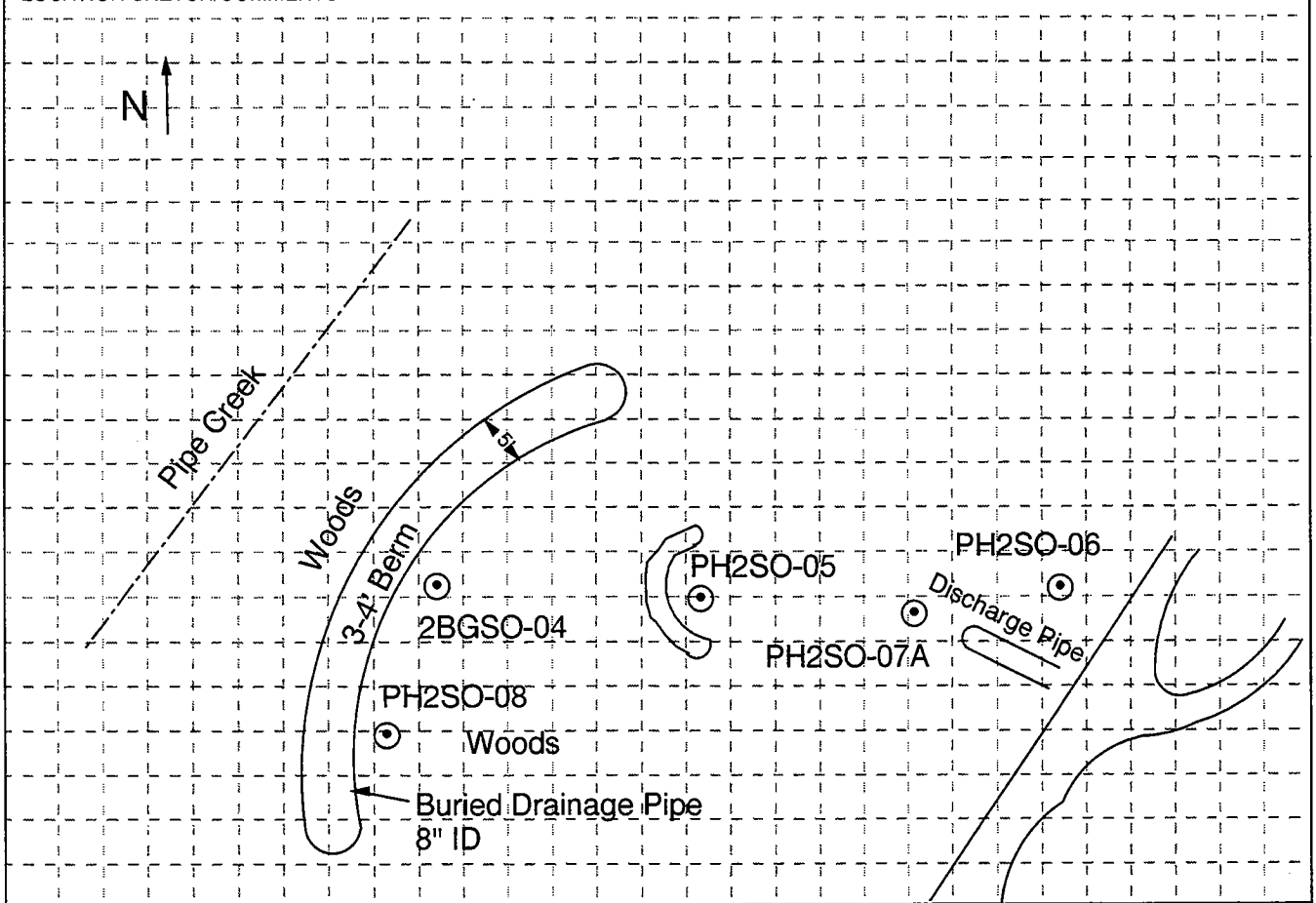
3. PROJECT: PBOW	4. LOCATION: Erie County
5. NAME OF DRILLER: Wesley White	6. MANUFACTURER'S DESIGNATION OF DRILL: Hand Auger
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Stainless Steel Hand Auger	8. HOLE LOCATION: Power House No. 2 Ash Pit
	9. SURFACE ELEVATION:
	10. DATE STARTED: 9/28/96 / 11. DATE COMPLETED: 9/28/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	David Kessler

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	PH2SO-08

PBOW/BORINGS/PH2SO-8.DRW/MC/11-18-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. PH2SO-08

PROJECT: PBOW | INSPECTOR: D. Kessler | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Soft, dark brown, homogeneous, friable, clayey SILT, very fine sand (20%) organics (roots), moist **ml**	4.0	NA	4150	NA	
	1						
		1.5					
		Medium stiff, light brown, mottled (brown), clayey SILT, moist **ml** 2.0					
	2	Loose, yellowish brown, homogeneous, very fine grain, silty SAND (30% silt), moist, very well sorted **sm**	0.0		4160		
	3	Total Depth = 3.0 Ft.					
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW | Hole No. PH2SO-08

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

DISTRICT: Nashville COE		HOLE NUMBER: PH2SO-09
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS

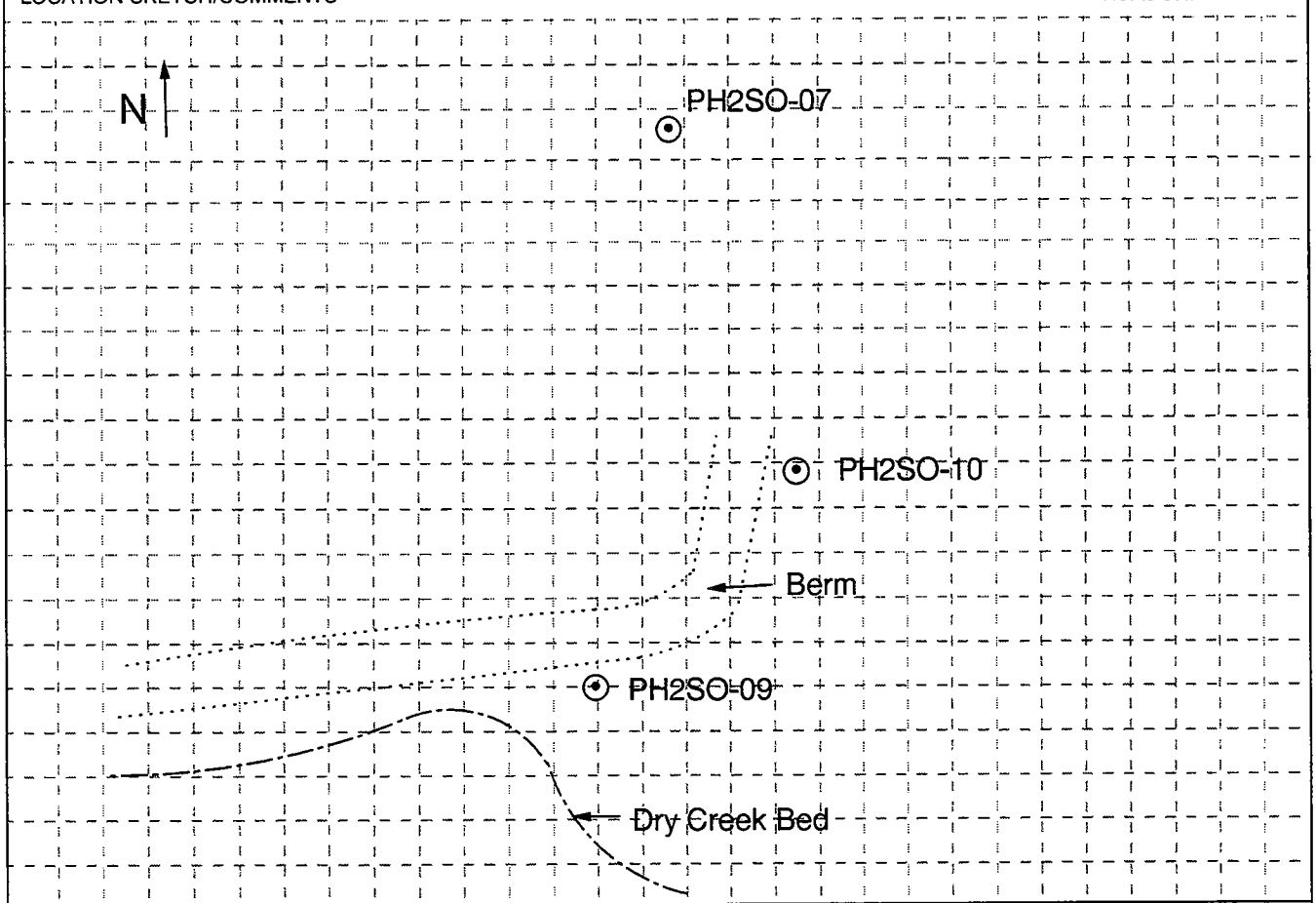
3. PROJECT: PBOW	4. LOCATION: Erie County
5. NAME OF DRILLER: David Purcell	6. MANUFACTURER'S DESIGNATION OF DRILL: NA
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" O.D. Stainless Steel Hand Auger, Split Spoon	8. HOLE LOCATION: Power House No. 2 Ash Pit
	9. SURFACE ELEVATION:
	10. DATE STARTED: 9/29/96 / 11. DATE COMPLETED: 9/29/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X	NA	NA	Wesley White

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	PH2SO-09

PBOW/BORINGS/PH2SO-9.DRW/MC/11-18-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. PH2SO-09

PROJECT: PBOW

INSPECTOR: W. White

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	USCS g	REMARKS h
		Soft, dark brown, clayey SILT, medium plasticity, moist, roots and worms	0.0	NA	4170	ML	
		0.8					
	1	Soft, reddish yellowish brown, clayey SILT, medium plasticity, trace very fine sand and black organics				ML	
	2		0.0		4180		
		3.0					
	3	Total Depth = 3.0 Ft.					
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW

Hole No. PH2SO-09

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

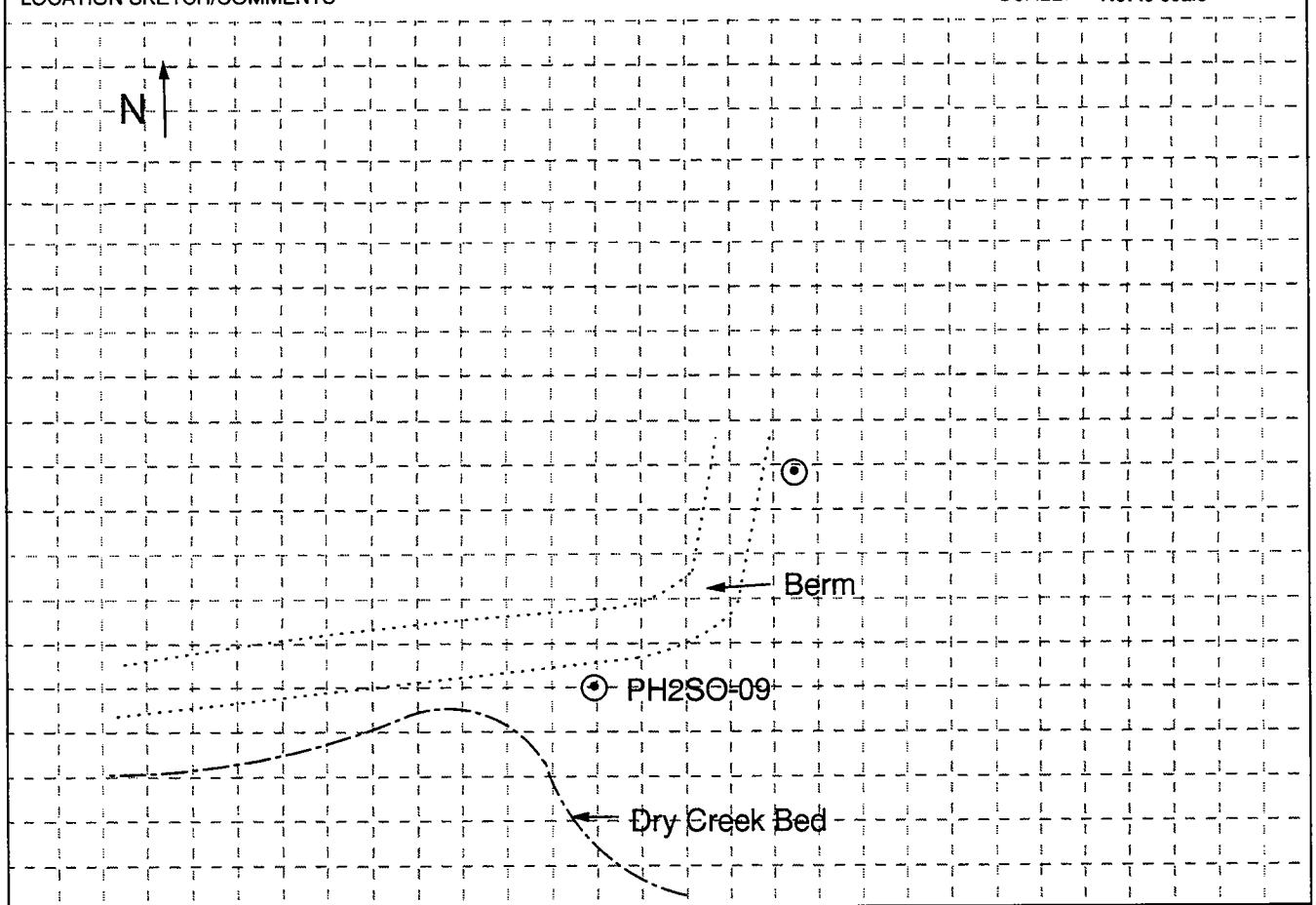
DISTRICT: Nashville COE		HOLE NUMBER: PH2SO-10
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS
3. PROJECT: PBOW	4. LOCATION: Erie County	
5. NAME OF DRILLER: David Purcell	6. MANUFACTURER'S DESIGNATION OF DRILL	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" O.D. Stainless Steel Hand Auger, Split Spoon	8. HOLE LOCATION: Power House No. 2 Ash Pit	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 9/29/96	11. DATE COMPLETED: 9/29/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes	NA	NA	Wesley White

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	PH2SO-10

PBOW/BORINGS/PH2SO-10.DRW/MC/11-18-96

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. PH2SO-10

PROJECT: PBOW

INSPECTOR: W. White

SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	USCS g	REMARKS h
		Loose, black, ash, dry to moist, roots and worms 0.5	0.0	NA	4190	fill	
	1	Soft, dark brown, clayey SILT, medium plasticity, moist to dry, few ash zones accompany roots 1.5				ML	
		Soft to firm, yellowish reddish brown, clayey SILT, medium to high plasticity, moist 2.0					
	2	Loose, yellowish brown, silty very fine SAND, well sorted, poorly graded, well rounded, dry to moist 3.0	0.0		4200	SM	
	3	Total Depth = 3.0 Ft.					
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW

Hole No. PH2SO-10

PBOW/BORINGS/PH2S-10a.DRW/mc/11-18-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

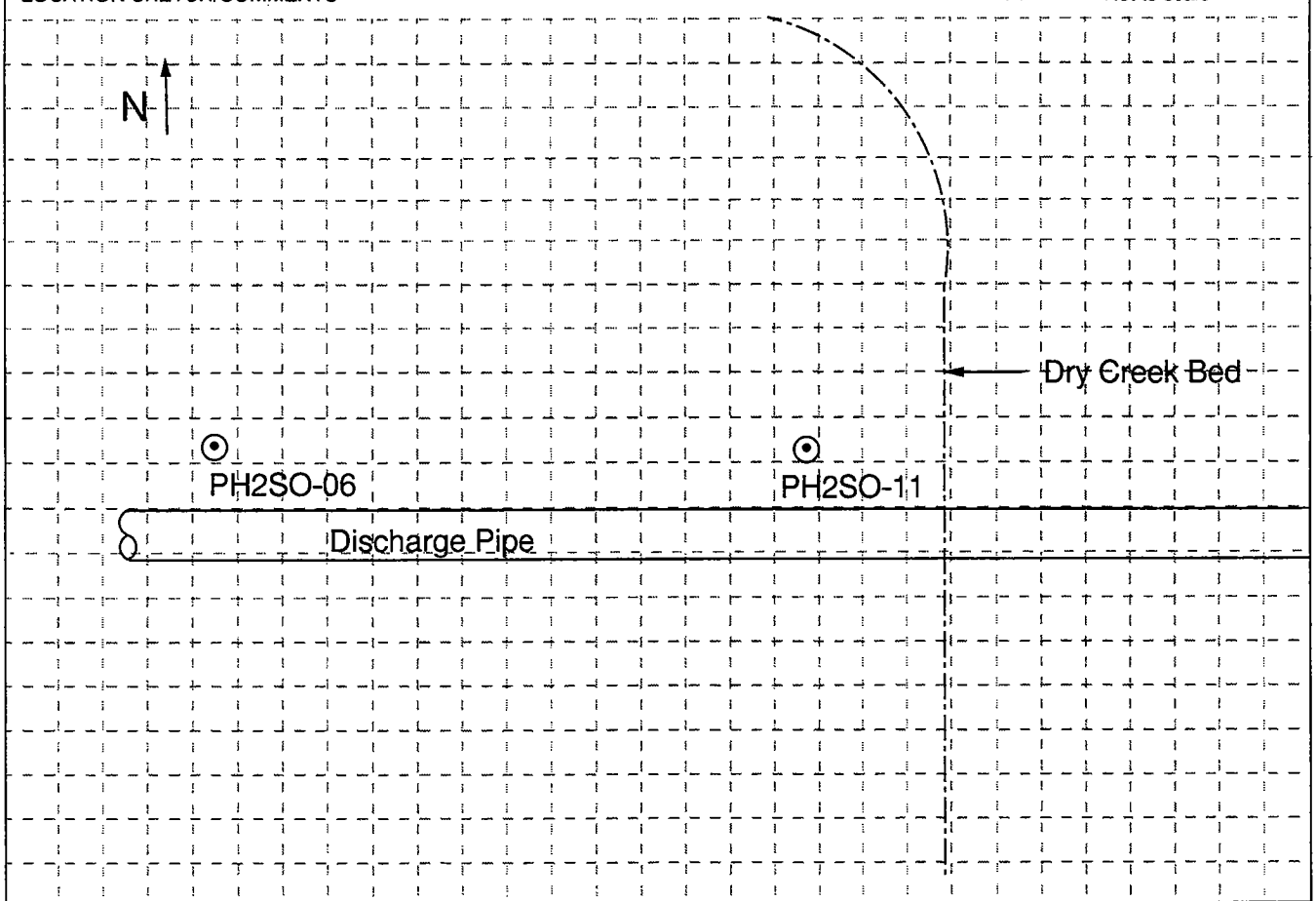
DISTRICT: Nashville COE		HOLE NUMBER: PH2SO-11
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS
3. PROJECT: PBOW	4. LOCATION: Erie County	
5. NAME OF DRILLER: David Purcell	6. MANUFACTURER'S DESIGNATION OF DRILL:	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" O.D. SS Hand Auger; SS Spoon	8. HOLE LOCATION: Power House No. 2 Ash Pit	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 9/29/96	11. DATE COMPLETED: 9/29/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 3.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes			Wesley White

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	PH2SO-10

PBOW/BORINGS/PH2SO-11.DRW/MC/11-18-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. PH2SO-11

PROJECT: PBOW | INSPECTOR: W. White | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	USCS g	REMARKS h
		Loose, black, ash and clayey SILT, low to medium plasticity depending on the ash content, moist, roots 1.0	3.0	NA	4210	fill	
	1	Firm to soft, brown, clayey SILT, medium plasticity, trace sand, moist 1.5				ML	
		Medium dense, yellowish brown, silty very fine SAND, 20% silt, well sorted, poorly graded, well rounded, moist 2.0				SM	
	2	Firm to soft, brown, clayey SILT, trace very fine sand, medium plasticity, moist 3.0	2.5		4220	ML	
	3	Total Depth = 3.0 Ft.					
	4						
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW | Hole No. PH2SO-11

IT INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG

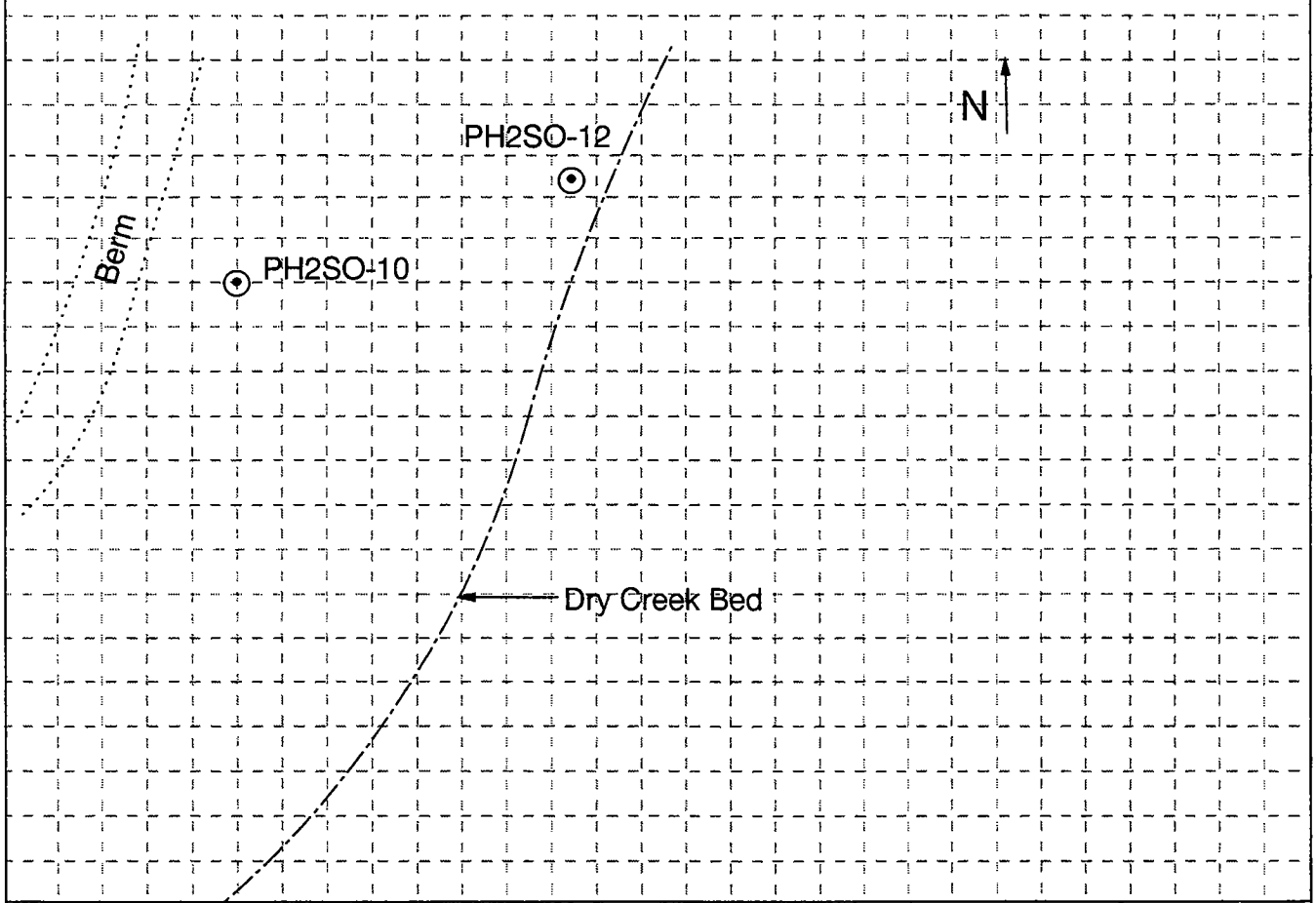
DISTRICT: Nashville COE		HOLE NUMBER: PH2SO-12
1. COMPANY NAME: IT Corporation	2. DRILL SUBCONTRACTOR: IT Corporation	SHEET 1 OF 2 SHEETS
3. PROJECT: PBOW	4. LOCATION: Erie County	
5. NAME OF DRILLER: David Purcell	6. MANUFACTURER'S DESIGNATION OF DRILL: NA	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" O.D. Stainless Steel Hand Auger, Split Spoon	8. HOLE LOCATION: Power House No. 2 Ash Pit	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 9/29/96	11. DATE COMPLETED: 9/29/96
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA	
14. TOTAL DEPTH OF HOLE: 4.0 ft.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
	X	X	SVOC	Pest/PCB	Total Cyanide	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Yes			Wesley White

LOCATION SKETCH/COMMENTS — SCALE: Not to scale



PROJECT	HOLE NO.
PBOW	PH2SO-12

PBOW/BORINGS/PH2SO-12.DRW/MC/11-18-96

INTERNATIONAL TECHNOLOGY CORPORATION

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. PH2SO-12

PROJECT: PBOW | INSPECTOR: W. White | SHEET 2 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	USCS g	REMARKS h
		Loose, black, ash, rootlets, worms	0.5	NA	4230		
	1					fill	
	2	Loose, brownish red, ash					
		Loose, black, ash 2.8					
	3	Loose, pale brown, silty very fine SAND, well sorted, poorly graded, well rounded, dry to moist, 10% silt	0.0		4240	SM	
	4	4.0					
		Total Depth = 4.0 Ft.					
	5						
	6						
	7						
	8						
	9						
	10						

Project: PBOW | Hole No. PH2SO-12

INTERNATIONAL TECHNOLOGY CORPORATION

APPENDIX E

LAND SURVEY DATA

RESERVOIR #2 BURNING GROUND (NASA PBS COORDINATES)

PT #	Y	X	ELEV	POSITION
130	30205.577	17298.323	640.190	2BGSO-01
147	30127.600	17302.737	640.100	2BGSO-02
138	30177.311	17261.535	639.990	2BGSO-03
148	30128.664	17226.956	639.790	2BGSO-04
145	30342.241	17146.420	638.990	2BGSO-05
144	30331.674	17133.710	638.820	2BGSO-06
143	30176.862	17115.432	638.970	2BGSO-07
142	30161.465	17108.388	639.140	2BGSO-08

GEOPHYSICAL SURVEY GRID CORNER (FIELD LOCATED)

128	30344.643	17342.438	639.940	COR	ENE
129	30364.842	17323.115	639.630	COR	WNE
134	30115.032	17335.158	640.010	COR	SE
141	30142.379	17086.053	638.520	COR	SW
146	30371.664	17123.386	638.860	COR	NW

TRENCH LOCATIONS

139	30182.742	17264.854	640.040	T1NE
140	30196.578	17268.139	640.160	T1SW
136	30126.125	17265.351	640.000	T2NE
137	30149.100	17266.587	639.960	T2SW
131	30165.770	17309.126	639.880	T3NE
132	30144.520	17305.537	639.700	T3SW
133	30127.336	17321.163	640.000	T4NE
135	30138.863	17293.144	640.090	T4SW

RESERVOIR #2 BURNING GROUND (OHIO STATE COORDINATES)

PT #	Y	X	ELEV	POSITION
130	622219.115	1913176.535	639.870	2BGSO-01
147	622141.060	1913179.074	639.780	2BGSO-02
138	622191.742	1913139.081	639.670	2BGSO-03
148	622143.944	1913103.346	639.470	2BGSO-04
145	622359.379	1913027.971	638.670	2BGSO-05
144	622349.121	1913015.012	638.500	2BGSO-06
143	622194.804	1912993.021	638.650	2BGSO-07
142	622179.582	1912985.609	638.820	2BGSO-08

GEOPHYSICAL SURVEY GRID CORNER (FIELD LOCATED)

128	622357.069	1913223.976	639.620	COR	ENE
129	622377.726	1913205.146	639.310	COR	WNE
134	622127.717	1913211.181	639.690	COR	SE
141	622161.040	1912962.823	638.200	COR	SW
146	622389.345	1913005.653	638.540	COR	NW

TRENCH LOCATIONS

140	622210.844	1913146.146	639.84	T1NE
139	622197.092	1913142.529	639.72	T1SW
137	622163.420	1913143.453	639.64	T2NE
136	622140.484	1913141.666	639.68	T2SW
131	622179.062	1913186.378	639.56	T3NE
132	622157.906	1913182.280	639.38	T3SW
135	622152.548	1913169.755	639.77	T4NE
133	622140.353	1913197.487	639.68	T4SW

ADDITIONAL BURN GROUND (NASA PBS COORDINATES)

PT #	Y	X	ELEV	POSITION
160	30188.241	25398.595	659.720	ABGSO-01
163	30150.964	25777.549	662.500	ABGSO-02
166	30069.186	25596.056	660.160	ABGSO-03
164	30122.910	25801.242	662.480	ABGSO-04
162	30139.536	25678.017	660.590	ABGSO-05
167	29999.550	25598.345	659.830	ABGSO-06
158	29842.198	25467.650	659.770	ABGSO-07
156	29774.520	25676.742	658.540	ABGSO-08
155	29771.021	25730.439	658.790	ABGSO-09
154	29764.366	25776.579	658.880	ABGSO-10
159	29794.122	25405.722	660.680	ABGSO-11
153	29766.361	25850.905	658.810	ABGSO-12

GEOPHYSICAL SURVEY GRID CORNER (FIELD LOCATED)

165	30241.324	25897.196	663.240	NE	CORNER
161	30236.830	25397.168	660.490	NW	CORNER
152	29741.078	25901.248	658.100	SE	CORNER
157	29737.449	25400.976	660.720	SW	CORNER

ADDITIONAL BURN GROUND (OHIO STATE COORDINATES)

PT #	Y	X	ELEV	POSITION
160	622007.131	1921273.461	659.400	ABGSO-01
163	621960.761	1921651.382	662.180	ABGSO-02
166	621883.374	1921467.989	659.840	ABGSO-03
164	621932.148	1921674.392	662.160	ABGSO-04
162	621951.729	1921551.611	660.270	ABGSO-05
167	621813.708	1921468.603	659.510	ABGSO-06
158	621659.554	1921334.175	659.450	ABGSO-07
156	621586.876	1921541.565	658.220	ABGSO-08
155	621582.088	1921595.159	658.470	ABGSO-09
154	621574.327	1921641.122	658.560	ABGSO-10
159	621612.983	1921271.114	660.360	ABGSO-11
153	621574.535	1921715.469	658.490	ABGSO-12

GEOPHYSICAL SURVEY GRID CORNER (FIELD LOCATED)

165	622048.213	1921773.157	662.920	NE	CORNER
161	622055.737	1921273.201	660.170	NW	CORNER
152	621548.051	1921765.186	657.780	SE	CORNER
157	621556.445	1921265.008	660.400	SW	CORNER

WASTE WATER DISPOSAL PLANT #2 (NASA PBS COORDINATES)

PT #	Y	X	ELEV	POSITION
206	30946.095	14410.499	640.700	WP2SO-001
222	31240.555	14879.210	641.660	WP2SO-002
208	30929.390	14603.365	640.740	WP2SO-003
213	30999.500	14668.276	638.540	WP2SO-004
217	31095.262	14798.859	638.410	WP2SO-005
209	30852.442	14618.711	642.810	WP2SO-006
214	30934.431	14716.387	641.970	WP2SO-007
216	31024.187	14834.990	638.070	WP2SO-008
211	30719.741	14544.507	642.660	WP2SO-009
219	31023.241	14959.788	639.120	WP2SO-010

WASTE WATER DISPOSAL PLANT #2 (OHIO STATE COORDINATES)

PT #	Y	X	ELEV	POSITION
206	623028.760	1910307.551	640.380	WP2SO-001
222	623311.850	1910783.169	641.340	WP2SO-002
208	623007.426	1910499.946	640.420	WP2SO-003
213	623075.951	1910566.518	638.220	WP2SO-004
217	623168.541	1910699.355	638.090	WP2SO-005
209	622930.137	1910513.437	642.490	WP2SO-006
214	623009.750	1910613.048	641.650	WP2SO-007
216	623096.623	1910733.765	637.750	WP2SO-008
211	622799.268	1910436.072	642.340	WP2SO-009
219	623092.678	1910858.495	638.800	WP2SO-010

POWER HOUSE #2 ASH PIT (NASA PBS COORDINATES)

PT #	Y	X	ELEV	POSITION
119	31004.355	15360.495	626.450	SO1
111	30920.178	15520.550	629.090	SO2
110	30868.868	15573.202	628.980	SO3
120	30912.062	15251.568	629.680	SO4
117	30875.905	15438.031	632.260	SO5
112	30843.657	15504.083	631.170	SO6
116	30834.171	15404.520	631.810	SO7
121	30850.426	15190.496	630.170	SO8
115	30709.069	15348.602	630.470	SO9
114	30744.251	15432.164	631.120	SO10
107	30806.194	15541.231	631.160	SO11
109	30729.504	15489.978	629.760	SO12

POWER HOUSE #2 ASH PIT (OHIO STATE COORDINATES)

PT #	Y	X	ELEV	POSITION
119	623064.170	1911258.604	626.130	PH2SO-01
111	622976.177	1911416.578	628.770	PH2SO-02
110	622923.621	1911467.978	628.660	PH2SO-03
120	622974.529	1911147.499	629.360	PH2SO-04
117	622933.904	1911333.025	631.940	PH2SO-05
112	622900.080	1911398.278	630.850	PH2SO-06
116	622892.990	1911298.523	631.490	PH2SO-07
121	622914.382	1911084.967	629.850	PH2SO-08
115	622769.276	1911239.619	630.150	PH2SO-09
114	622802.438	1911323.996	630.800	PH2SO-010
107	622861.737	1911434.512	630.840	PH2SO-011
109	622786.307	1911381.434	629.440	PH2SO-012

APPENDIX F

DATA VALIDATION SUMMARY

Data Validation Summary

The complete validation report will provided upon request. The summary attached describes the process used for validation and a general overall view of the resulting data qualifications. The sample delivery groups are defined as follows:

- PB001- contains groundwater data discussed in the Groundwater Investigation Report submitted under separate cover.

- PB002- contains soil data from samples collected at the Power House No.2 Ash Pit locations SO01, SO02, SO03, SO04, SO05, SO06, SO07, SO08 and SO09.

- PB003- contains soil data from samples collected at the Power House No.2 Ash Pit locations SO10, SO11 and SO12 and Reservoir No.2 Burning Ground locations SO01, SO02, SO03, SO04, SO05, SO06, SO07 and SO08 .

- PB004- contains groundwater data discussed in the Groundwater Investigation Report submitted under separate cover.

- PB005- contains soil data from samples collected at the reservoir No.2 Burning Ground locations SO03, SO04, SO05, SO06, SO07 and SO08 and Waste Water Disposal Plant No.2 locations SO01, SO02, SO04, SO05 and SO06.

- PB006- contains soil data from the Waste Water Disposal Plant No.2 locations SO07, SO08 and SO10 and the Additional Burn Ground locations SO01, SO02, SO03, SO04, SO05, SO06, SO07 and SO08.

- PB007- contains soil data from samples collected at the Additional Burn Ground locations SO09, SO10, SO11 and SO12 and Waste Water Disposal Plant No.2 locations SO03 and SO09.

- PB008- contains groundwater data discussed in the Groundwater Investigation Report submitted under separate cover.

- PB009- contains groundwater data discussed in the Groundwater Investigation Report submitted under separate cover.

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PLUM BROOK ORDNANCE WORKS
DATA VALIDATION SUMMARY

December 1996
Revised 1/27/97

One-hundred percent (100%) of the sample data from Plum Brook collected in September and October 1996 was validated according to the Level III *National Functional Guidelines for Organic and Inorganic Data Review* or equivalent. Analyses consisted of Volatiles, Semivolatiles, Pesticide/PCBs, Explosives, Metals, Cyanide, and Wet Chemistry.

Analysis of the soil samples, and to a more limited extent, the groundwater samples, revealed severe matrix problems. For the soils, the problems appeared to be related to the high organic content of the soils being analyzed. The effects were manifested by high surrogate recoveries and low internal standard (IS) area count. A subsequent test run by the analytical laboratory of the three soil types from the sampling event confirmed that the soil type with the highest organic content (a dark peat) caused the high surrogate, low IS counts. Data from this test run was provided to the validators for review. The result was a decision to lower the IS count control limits from 50% to 30% for the organic constituents. For the pesticide/PCB analysis the DCB surrogate recovery QC limits established by the laboratory were 60-150%, the validation reviewer choose to add qualifiers only if the recovery was below the 30% limit specified in the EPA guidance document.

Volatiles. Methylene chloride was found in the method blank associated with nineteen samples from PB001, PB002, PB005, and PB006. These samples required that the compound be raised to the CRQL and qualified as nondetect "U". The same is true for chloroform from five samples in PB009.

Toluene was qualified as nondetect "U" in one sample each from PB004 and PB007. Methylene chloride was found in the associated trip blanks in PB001, PB002, PB003 and was qualified as "U" in 14 samples. Acetone, 2-butanone, and 2-hexanone were rejected due to Relative Response Factors (RRFs) <0.05 in the initial and continuing calibration standards in samples in PB001, PB004, PB008, and PB009. Finally, a combination of low IS area counts (<30%) and high surrogates resulted in 29 of the original samples being rejected in favor of the dilution reanalysis in seven of the nine SDGs. Detects in the dilution samples were qualified as estimated, "J". High surrogate recoveries in the original samples resulted in estimated "J" qualifiers being added to those compounds.

Semivolatiles. In PB001 two samples were analyzed outside the instrument tune time resulting in the original samples being rejected and the reanalysis qualified as J for the detected compounds associated with the perylene-IS. One other sample had a perylene-IS at 10% and had all associated compounds qualified as estimated "UJ". Four additional samples from PB003 and PB008 also had low perylene standard counts and were qualified as estimated "UJ". The percent difference in the continuing calibration standard resulted in 3-nitroaniline, benzo(k)fluoranthene, carbazole and 2-methylnaphthalene being qualified as J in one sample from PB001, one sample from PB002, 2 samples from PB006, and 5 samples from PB007, respectively. In PB006 there were 17 samples that had di-n-butyl phthalate raised to the CRQL and qualified as nondetect "U" due to the compound occurring in the associated method blank. Throughout the semivolatile analyses there were a variety of compounds that exceeded the calibration range in the original samples. These were rejected in favor of the value resulting from dilution.

Pesticide/PCBs. In PB001, PB002, and PB003, 20 samples had endrin ketone qualified as estimated "UJ" due to the percent difference in the continuing calibration that exceeded the 25% limit. The same is true for methoxychlor in six samples from PB002, 10 samples from PB008, and 10 samples from PB009; for 4, 4'-DDD in three samples from PB008 and three samples from PB009. In PB005 one sample had all the pesticide compounds qualified as estimated "UJ" due to a TCX surrogate recovery of 19%. Also one sample from PB008 was qualified as estimated "UJ" since both the TCX and DCB surrogates were outside the QC limits.

Explosives. In PB001, sample 5080 was qualified as estimated "UJ" due to low surrogate recovery. One sample in PB008 was qualified as estimated "J" for detects and "UJ" for nondetects due to exceeding acceptable extraction times. In PB008, two samples had 2-nitrotoluene qualified estimated "J" because the presence in the sample and the method blank could not be confirmed since this analyte coelutes with the surrogate on the confirmation column. Five reanalysis samples in PB008 were rejected "R" in favor of their original analyses due to re-extraction outside acceptable holding times. In PB009 3-nitrotoluene in one sample, 2-nitrotoluene in three samples, and 1,3,5-trinitrobenzene in one sample were all qualified as estimated "J" because their presence could not be confirmed since these analytes coelute with the surrogate on the confirmation column. In PB008 1, 3-dinitobenzene was qualified in one sample as nondetect "U" due to contamination in the associated method blank.

Metals. In SDG PB009, a continuing calibration verification sample (CCV5) had extremely high recoveries for iron, manganese, antimony, barium, beryllium, chromium, potassium, nickel, sodium, and zinc. Per requirements in the *National Functional Guidelines for Inorganic Data Review*, associated samples with detects were qualified as unusable "R".

Samples in all SDGs except for SDG PB009 required qualification for at least one analyte due to matrix spike/matrix spike duplicate recoveries which were outside of acceptable control limits (75%-125%). Analytes requiring qualification included aluminum, antimony, chromium, copper, lead, magnesium, manganese, nickel, potassium, silver, sodium, thallium, vanadium, and zinc. In addition, all samples in SDG PB001 were qualified as estimated ("J" for detects, "UJ" for nondetects) for sodium due to poor results in the ICP serial dilution QC analysis.

Several samples in SDGs PB002, PB003, PB006, and PB007 required qualification as nondetect for lead and/or zinc due to contamination in associated equipment rinsate blanks. Several field duplicate pairs also reported significant differences in reported values. Several analytes were reported in one sample and not detected in the duplicate pairs, and several analytes exceeded recommended relative percent difference criteria (50% for water samples, 100% for soil samples). Affected analytes included aluminum, arsenic, copper, iron, lead, and zinc.

Wet Chemistry No qualifications were required for the wet chemistry analyses (cyanide). The data packages did not include calibration data forms, but the raw data indicated that appropriate procedures were followed, and correlation coefficient requirements were met. The SDGs containing water samples did not include raw calculations of ICV and CCV recoveries, but based on the standards used in the other SDGs, it appeared that recovery limits were acceptable, and no qualifications were required. In order to effectively assess the data, it is important that future data sets include the appropriate QC information.

APPENDIX G

LABORATORY ANALYTICAL DATA SUMMARY

PLUM[illegible]OOK

Additional Burning Ground

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				2010		2020		2030	
Sample Location:				ABGSO01		ABGSO01		ABGSO02	
Sample Date:				03-OCT-96		03-OCT-96		03-OCT-96	
Depth				0-.5		1.5-2		0-.5	
ABG:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
BENZO(A)ANTHRACENE		MG/KG	0.88						
BENZO(A)PYRENE		MG/KG	0.088						
BENZO(B)FLUORANTHENE		MG/KG	0.88						
DIBENZ(A,H)ANTHRACENE		MG/KG	0.088						

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Additional Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				2070		2080		2090	
Sample Location:				ABGSO04		ABGSO04		ABGSO05	
Sample Date:				03-OCT-96		03-OCT-96		03-OCT-96	
Depth				0-.5		2-3		0-.5	
ABG:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
BENZO(A)ANTHRACENE		MG/KG	0.88						
BENZO(A)PYRENE		MG/KG	0.088						
BENZO(B)FLUORANTHENE		MG/KG	0.88						
DIBENZ(A,H)ANTHRACENE		MG/KG	0.088						

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Additional Burning Ground

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				2130		2140		2150	
Sample Location:				ABGSO07		ABGSO07		ABGSO08	
Sample Date:				04-OCT-96		04-OCT-96		04-OCT-96	
Depth				0-.5		2-3		0-.5	
ABG:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
BENZO(A)ANTHRACENE		MG/KG	0.88					1.8	
BENZO(A)PYRENE		MG/KG	0.088	.13	J			1.3	
BENZO(B)FLUORANTHENE		MG/KG	0.88					1.7	
DIBENZ(A,H)ANTHRACENE		MG/KG	0.088					.35	J

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Additional Burning Ground

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				2190		2200		2210	
Sample Location:				ABGSO10		ABGSO10		ABGSO11	
Sample Date:				03-OCT-96		03-OCT-96		03-OCT-96	
Depth				0-.5		2-3		.5-1	
ABG:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
BENZO(A)ANTHRACENE		MG/KG	0.88						
BENZO(A)PYRENE		MG/KG	0.088	.24	J				
BENZO(B)FLUORANTHENE		MG/KG	0.88						
DIBENZ(A,H)ANTHRACENE		MG/KG	0.088						

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Additional Burning Ground

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				2010		2020		2030	
Sample Location:				ABGSO01		ABGSO01		ABGSO02	
Sample Date:				03-OCT-96		03-OCT-96		03-OCT-96	
Depth				0-.5		1.5-2		0-.5	
ABG:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083						

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Additional Burning Ground

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				2040		2050		2060	
Sample Location:				ABGSO02		ABGSO03		ABGSO03	
Sample Date:				03-OCT-96		03-OCT-96		03-OCT-96	
Depth				2-3		0-.5		2-3	
ABG:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083			.11			

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Additional Burning Ground

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				2070		2080		2090	
Sample Location:				ABGSO04		ABGSO04		ABGSO05	
Sample Date:				03-OCT-96		03-OCT-96		03-OCT-96	
Depth				0-.5		2-3		0-.5	
ABG:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083	.25					

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Additional Burning Ground

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				2100		2110		2120	
Sample Location:				ABGSO05		ABGSO06		ABGSO06	
Sample Date:				03-OCT-96		03-OCT-96		03-OCT-96	
Depth				2-3		0-.5		2-3	
ABG:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083						

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Additional Burning Ground

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				2130		2140		2150	
Sample Location:				ABGSO07		ABGSO07		ABGSO08	
Sample Date:				04-OCT-96		04-OCT-96		04-OCT-96	
Depth				0-.5		2-3		0-.5	
ABG:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083					19	

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Additional Burning Ground

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				2160		2170		2180	
Sample Location:				ABGSO08		ABGSO09		ABGSO09	
Sample Date:				04-OCT-96		03-OCT-96		03-OCT-96	
Depth				2-3		0-.5		2-3	
ABG:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083			7.4			

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Additional Burning Ground

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				2190		2200		2210	
Sample Location:				ABGSO10		ABGSO10		ABGSO11	
Sample Date:				03-OCT-96		03-OCT-96		03-OCT-96	
Depth				0-.5		2-3		.5-1	
ABG:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083	.6					

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Additional Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				2220		2230		2240	
Sample Location:				ABGSO11		ABGSO12		ABGSO12	
Sample Date:				03-OCT-96		03-OCT-96		03-OCT-96	
Depth				2-3		0-.5		2-3	
ABG:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083			.18			

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Additional Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				2010		2020		2030	
Sample Location:				ABGSO01		ABGSO01		ABGSO02	
Sample Date:				03-OCT-96		03-OCT-96		03-OCT-96	
Depth				0-.5		1.5-2		0-.5	
ABG:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800			9880			
ARSENIC		MG/KG	.43	16.8		6.1		1.9	
BERYLLIUM		MG/KG	0.15			0.66			
CADMIUM		MG/KG	3.9						
CALCIUM		MG/KG		2800		47100		834	
CHROMIUM		MG/KG	39						
COPPER		MG/KG	310						
IRON		MG/KG	2300	25200		32700		6620	
LEAD		MG/KG	400						
MAGNESIUM		MG/KG		1080		21900		644	
MANGANESE		MG/KG	160	331	J	1830	J		
POTASSIUM		MG/KG		1310		783			
THALLIUM		MG/KG	0.51	2.7					
ZINC		MG/KG	2300						

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Additional Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				2040		2050		2060	
Sample Location:				ABGSO02		ABGSO03		ABGSO03	
Sample Date:				03-OCT-96		03-OCT-96		03-OCT-96	
Depth				2-3		0-.5		2-3	
ABG:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800	9680					
ARSENIC		MG/KG	.43	3.0		39.1		2.9	
BERYLLIUM		MG/KG	0.15						
CADMIUM		MG/KG	3.9						
CALCIUM		MG/KG		714		1270		1270	
CHROMIUM		MG/KG	39						
COPPER		MG/KG	310						
IRON		MG/KG	2300	11700		27600		9960	
LEAD		MG/KG	400						
MAGNESIUM		MG/KG		889				839	
MANGANESE		MG/KG	160						
POTASSIUM		MG/KG				800			
THALLIUM		MG/KG	0.51			1.2			
ZINC		MG/KG	2300						

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Additional Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				2070		2080		2090	
Sample Location:				ABGSO04		ABGSO04		ABGSO05	
Sample Date:				03-OCT-96		03-OCT-96		03-OCT-96	
Depth				0-.5		2-3		0-.5	
ABG:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800						
ARSENIC		MG/KG	.43	12.2		3.5		1.8	
BERYLLIUM		MG/KG	0.15						
CADMIUM		MG/KG	3.9						
CALCIUM		MG/KG		13000		979		806	
CHROMIUM		MG/KG	39						
COPPER		MG/KG	310						
IRON		MG/KG	2300	17500		12000		7900	
LEAD		MG/KG	400						
MAGNESIUM		MG/KG		2020		855		668	
MANGANESE		MG/KG	160			284	J		
POTASSIUM		MG/KG		842					
THALLIUM		MG/KG	0.51						
ZINC		MG/KG	2300						

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Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				2100		2110		2120	
Sample Location:				ABGSO05		ABGSO06		ABGSO06	
Sample Date:				03-OCT-96		03-OCT-96		03-OCT-96	
Depth				2-3		0-.5		2-3	
ABG:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800						
ARSENIC		MG/KG	.43	3.6		6.2		4.8	
BERYLLIUM		MG/KG	0.15						
CADMIUM		MG/KG	3.9						
CALCIUM		MG/KG		1360		591		15600	
CHROMIUM		MG/KG	39						
COPPER		MG/KG	310						
IRON		MG/KG	2300	11800		14800		13100	
LEAD		MG/KG	400						
MAGNESIUM		MG/KG		877		608		2280	
MANGANESE		MG/KG	160						
POTASSIUM		MG/KG						1050	
THALLIUM		MG/KG	0.51						
ZINC		MG/KG	2300						

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Additional Burning Ground

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				2130		2140		2150	
Sample Location:				ABGSO07		ABGSO07		ABGSO08	
Sample Date:				04-OCT-96		04-OCT-96		04-OCT-96	
Depth				0-.5		2-3		0-.5	
ABG:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800						
ARSENIC		MG/KG	.43	7.6		1.9		19.8	
BERYLLIUM		MG/KG	0.15						
CADMIUM		MG/KG	3.9					9.2	
CALCIUM		MG/KG		16100		3700		1640	
CHROMIUM		MG/KG	39						
COPPER		MG/KG	310					401	
IRON		MG/KG	2300	14500		8300		130000	
LEAD		MG/KG	400					690	
MAGNESIUM		MG/KG		2820		1010			
MANGANESE		MG/KG	160					537	J
POTASSIUM		MG/KG						770	
THALLIUM		MG/KG	0.51					3.1	
ZINC		MG/KG	2300						

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Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				2160		2170		2180	
Sample Location:				ABGSO08		ABGSO09		ABGSO09	
Sample Date:				04-OCT-96		03-OCT-96		03-OCT-96	
Depth				2-3		0-.5		2-3	
ABG:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800						
ARSENIC		MG/KG	.43	2.1		23.7		2.3	
BERYLLIUM		MG/KG	0.15			1.0			
CADMIUM		MG/KG	3.9			8.8			
CALCIUM		MG/KG		5040		3980		15400	
CHROMIUM		MG/KG	39			40.3			
COPPER		MG/KG	310			2720			
IRON		MG/KG	2300	12700		159000		8500	
LEAD		MG/KG	400			556	J		
MAGNESIUM		MG/KG		1640		1170		7290	
MANGANESE		MG/KG	160			1020			
POTASSIUM		MG/KG				1680			
THALLIUM		MG/KG	0.51			5.5	J		
ZINC		MG/KG	2300			2720			

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Additional Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				2190		2200		2210	
Sample Location:				ABGSO10		ABGSO10		ABGSO11	
Sample Date:				03-OCT-96		03-OCT-96		03-OCT-96	
Depth				0-.5		2-3		.5-1	
ABG:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800						
ARSENIC		MG/KG	.43	19.9		2.8			
BERYLLIUM		MG/KG	0.15	0.63					
CADMIUM		MG/KG	3.9						
CALCIUM		MG/KG		1380		13600			
CHROMIUM		MG/KG	39						
COPPER		MG/KG	310						
IRON		MG/KG	2300	32300		9350			
LEAD		MG/KG	400						
MAGNESIUM		MG/KG				6290			
MANGANESE		MG/KG	160						
POTASSIUM		MG/KG		2080					
THALLIUM		MG/KG	0.51	2.5	J				
ZINC		MG/KG	2300						

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Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				2220		2230		2240	
Sample Location:				ABGSO11		ABGSO12		ABGSO12	
Sample Date:				03-OCT-96		03-OCT-96		03-OCT-96	
Depth				2-3		0-.5		2-3	
ABG:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800			9370			
ARSENIC		MG/KG	.43			13.7			
BERYLLIUM		MG/KG	0.15			0.80			
CADMIUM		MG/KG	3.9						
CALCIUM		MG/KG				3800		8920	
CHROMIUM		MG/KG	39						
COPPER		MG/KG	310						
IRON		MG/KG	2300			29900		6830	
LEAD		MG/KG	400						
MAGNESIUM		MG/KG				1160		4720	
MANGANESE		MG/KG	160						
POTASSIUM		MG/KG				1700			
THALLIUM		MG/KG	0.51			1.5	J		
ZINC		MG/KG	2300						

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Additional Burning Ground
Data Summary - Soils

Report Date: 02/17/97

ABG:VOLATILES	Units	2010 ABGSO01 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2020 ABGSO01 03-OCT-96 1.5 - 2 Result	Lab Qlfr	Val Qlfr	2030 ABGSO02 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
1,1,2-TRICHLOROETHANE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
1,1-DICHLOROETHANE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
1,1-DICHLOROETHENE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
1,2-DICHLOROETHANE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
1,2-DICHLOROETHENE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
1,2-DICHLOROPROPANE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
2-BUTANONE	UG/KG	24	U	U	24	U	U	22	U	U
2-HEXANONE	UG/KG	24	U	U	24	U	U	22	U	U
4-METHYL-2-PENTANONE	UG/KG	24	U	U	24	U	U	22	U	U
ACETONE	UG/KG	24	U	U	24	U	U	22	U	U
BENZENE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
BROMODICHLOROMETHANE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
BROMOFORM	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
BROMOMETHANE	UG/KG	12	U	U	12	U	U	11	U	U
CARBON DISULFIDE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
CARBON TETRACHLORIDE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
CHLOROBENZENE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
CHLOROETHANE	UG/KG	12	U	U	12	U	U	11	U	U
CHLOROFORM	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
CHLOROMETHANE	UG/KG	12	U	U	12	U	U	11	U	U
DIBROMOCHLOROMETHANE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
ETHYLBENZENE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
METHYLENE CHLORIDE	UG/KG	6.0	J B	U	6.0	J B	U	5.6	J B	U
STYRENE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
TETRACHLOROETHENE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
TOLUENE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
TOTAL XYLENES	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U

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ABG:VOLATILES	Units	2040 ABGSO02 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2050 ABGSO03 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2060 ABGSO03 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
1,1,2-TRICHLOROETHANE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
1,1-DICHLOROETHANE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
1,1-DICHLOROETHENE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
1,2-DICHLOROETHANE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
1,2-DICHLOROETHENE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
1,2-DICHLOROPROPANE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
2-BUTANONE	UG/KG	23	U	U	100	U	U	25	U	U
2-HEXANONE	UG/KG	23	U	U	100	U	U	25	U	U
4-METHYL-2-PENTANONE	UG/KG	23	U	U	100	U	U	25	U	U
ACETONE	UG/KG	23	U	U	76	J	J	25	U	U
BENZENE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
BROMODICHLOROMETHANE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
BROMOFORM	UG/KG	5.8	U	U	26	U	U	6.3	U	U
BROMOMETHANE	UG/KG	12	U	U	52	U	U	13	U	U
CARBON DISULFIDE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
CARBON TETRACHLORIDE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
CHLOROBENZENE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
CHLOROETHANE	UG/KG	12	U	U	52	U	U	13	U	U
CHLOROFORM	UG/KG	5.8	U	U	26	U	U	6.3	U	U
CHLOROMETHANE	UG/KG	12	U	U	52	U	U	13	U	U
DIBROMOCHLOROMETHANE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
ETHYLBENZENE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
METHYLENE CHLORIDE	UG/KG	5.8	J B	U	26	U	U	6.3	J B	U
STYRENE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
TETRACHLOROETHENE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
TOLUENE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
TOTAL XYLENES	UG/KG	5.8	U	U	26	U	U	6.3	U	U

ABG:VOLATILES	Units	2070 ABGSO04 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2080 ABGSO04 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2090 ABGSO05 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
1,1,2-TRICHLOROETHANE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
1,1-DICHLOROETHANE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
1,1-DICHLOROETHENE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
1,2-DICHLOROETHANE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
1,2-DICHLOROETHENE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
1,2-DICHLOROPROPANE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
2-BUTANONE	UG/KG	110	U	U	23	U	U	23	U	U
2-HEXANONE	UG/KG	110	U	U	23	U	U	23	U	U
4-METHYL-2-PENTANONE	UG/KG	110	U	U	23	U	U	23	U	U
ACETONE	UG/KG	110	U	U	23	U	U	23	U	U
BENZENE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
BROMODICHLOROMETHANE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
BROMOFORM	UG/KG	28	U	U	5.7	U	U	5.8	U	U
BROMOMETHANE	UG/KG	56	U	U	11	U	U	12	U	U
CARBON DISULFIDE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
CARBON TETRACHLORIDE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
CHLOROBENZENE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
CHLOROETHANE	UG/KG	56	U	U	11	U	U	12	U	U
CHLOROFORM	UG/KG	28	U	U	5.7	U	U	5.8	U	U
CHLOROMETHANE	UG/KG	56	U	U	11	U	U	12	U	U
DIBROMOCHLOROMETHANE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
ETHYLBENZENE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
METHYLENE CHLORIDE	UG/KG	28	U	U	5.7	J B	U	5.8	J B	U
STYRENE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
TETRACHLOROETHENE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
TOLUENE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
TOTAL XYLENES	UG/KG	28	U	U	5.7	U	U	5.8	U	U

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ABG:VOLATILES	Units	2100 ABGSO05 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2110 ABGSO06 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2120 ABGSO06 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
1,1,2-TRICHLOROETHANE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
1,1-DICHLOROETHANE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
1,1-DICHLOROETHENE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
1,2-DICHLOROETHANE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
1,2-DICHLOROETHENE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
1,2-DICHLOROPROPANE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
2-BUTANONE	UG/KG	24	U	U	23	U	U	140	U	U
2-HEXANONE	UG/KG	24	U	U	23	U	U	140	U	U
4-METHYL-2-PENTANONE	UG/KG	24	U	U	23	U	U	140	U	U
ACETONE	UG/KG	24	U	U	23	U	U	110	J	J
BENZENE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
BROMODICHLOROMETHANE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
BROMOFORM	UG/KG	6.1	U	U	5.8	U	U	36	U	U
BROMOMETHANE	UG/KG	12	U	U	12	U	U	72	U	U
CARBON DISULFIDE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
CARBON TETRACHLORIDE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
CHLOROBENZENE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
CHLOROETHANE	UG/KG	12	U	U	12	U	U	72	U	U
CHLOROFORM	UG/KG	6.1	U	U	5.8	U	U	36	U	U
CHLOROMETHANE	UG/KG	12	U	U	12	U	U	72	U	U
DIBROMOCHLOROMETHANE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
ETHYLBENZENE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
METHYLENE CHLORIDE	UG/KG	6.1	J B	U	5.8	J B	U	36	U	U
STYRENE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
TETRACHLOROETHENE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
TOLUENE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
TOTAL XYLENES	UG/KG	6.1	U	U	5.8	U	U	36	U	U

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ABG:VOLATILES	Units	2130 ABGSO07 04-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2140 ABGSO07 04-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2150 ABGSO08 04-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
1,1,2-TRICHLOROETHANE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
1,1-DICHLOROETHANE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
1,1-DICHLOROETHENE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
1,2-DICHLOROETHANE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
1,2-DICHLOROETHENE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
1,2-DICHLOROPROPANE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
2-BUTANONE	UG/KG	24	U	U	25	U	U	130	U	U
2-HEXANONE	UG/KG	24	U	U	25	U	U	130	U	U
4-METHYL-2-PENTANONE	UG/KG	24	U	U	25	U	U	130	U	U
ACETONE	UG/KG	24	U	U	25	U	U	130	U	U
BENZENE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
BROMODICHLOROMETHANE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
BROMOFORM	UG/KG	6.0	U	U	6.2	U	U	32	U	U
BROMOMETHANE	UG/KG	12	U	U	12	U	U	64	U	U
CARBON DISULFIDE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
CARBON TETRACHLORIDE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
CHLOROBENZENE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
CHLOROETHANE	UG/KG	12	U	U	12	U	U	64	U	U
CHLOROFORM	UG/KG	6.0	U	U	6.2	U	U	32	U	U
CHLOROMETHANE	UG/KG	12	U	U	12	U	U	64	U	U
DIBROMOCHLOROMETHANE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
ETHYLBENZENE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
METHYLENE CHLORIDE	UG/KG	3.5	J	J	6.2	U	U	32	U	U
STYRENE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
TETRACHLOROETHENE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
TOLUENE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
TOTAL XYLENES	UG/KG	6.0	U	U	6.2	U	U	32	U	U

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ABG:VOLATILES	Units	2160 ABGSO08 04-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2170 ABGSO09 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2180 ABGSO09 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
1,1,2-TRICHLOROETHANE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
1,1-DICHLOROETHANE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
1,1-DICHLOROETHENE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
1,2-DICHLOROETHANE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
1,2-DICHLOROETHENE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
1,2-DICHLOROPROPANE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
2-BUTANONE	UG/KG	24	U	U	120	U	U	25	U	U
2-HEXANONE	UG/KG	24	U	U	120	U	U	25	U	U
4-METHYL-2-PENTANONE	UG/KG	24	U	U	120	U	U	25	U	U
ACETONE	UG/KG	50			74	J	J	25	U	U
BENZENE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
BROMODICHLOROMETHANE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
BROMOFORM	UG/KG	6.1	U	U	30	U	U	6.2	U	U
BROMOMETHANE	UG/KG	12	U	U	60	U	U	12	U	U
CARBON DISULFIDE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
CARBON TETRACHLORIDE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
CHLOROBENZENE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
CHLOROETHANE	UG/KG	12	U	U	60	U	U	12	U	U
CHLOROFORM	UG/KG	6.1	U	U	30	U	U	6.2	U	U
CHLOROMETHANE	UG/KG	12	U	U	60	U	U	12	U	U
DIBROMOCHLOROMETHANE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
ETHYLBENZENE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
METHYLENE CHLORIDE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
STYRENE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
TETRACHLOROETHENE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
TOLUENE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
TOTAL XYLENES	UG/KG	6.1	U	U	30	U	U	6.2	U	U

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ABG:VOLATILES	Units	2190 ABGSO10 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2200 ABGSO10 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2210 ABGSO11 03-OCT-96 .5 - 1 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
1,1,2-TRICHLOROETHANE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
1,1-DICHLOROETHANE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
1,1-DICHLOROETHENE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
1,2-DICHLOROETHANE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
1,2-DICHLOROETHENE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
1,2-DICHLOROPROPANE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
2-BUTANONE	UG/KG	120	U	U	24	U	U	23	U	U
2-HEXANONE	UG/KG	120	U	U	24	U	U	23	U	U
4-METHYL-2-PENTANONE	UG/KG	120	U	U	24	U	U	23	U	U
ACETONE	UG/KG	73	J	J	24	U	U	23	U	U
BENZENE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
BROMODICHLOROMETHANE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
BROMOFORM	UG/KG	30	U	U	6.1	U	U	5.7	U	U
BROMOMETHANE	UG/KG	59	U	U	12	U	U	11	U	U
CARBON DISULFIDE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
CARBON TETRACHLORIDE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
CHLOROBENZENE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
CHLOROETHANE	UG/KG	59	U	U	12	U	U	11	U	U
CHLOROFORM	UG/KG	30	U	U	6.1	U	U	5.7	U	U
CHLOROMETHANE	UG/KG	59	U	U	12	U	U	11	U	U
DIBROMOCHLOROMETHANE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
ETHYLBENZENE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
METHYLENE CHLORIDE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
STYRENE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
TETRACHLOROETHENE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
TOLUENE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
TOTAL XYLENES	UG/KG	30	U	U	6.1	U	U	5.7	U	U

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ABG:VOLATILES	Units	2220 ABGSO11 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2230 ABGSO12 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2240 ABGSO12 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	5.7	U	U	33	U	U	6.1	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	5.7	U	U	33	U	U	6.1	U	U
1,1,2-TRICHLOROETHANE	UG/KG	5.7	U	U	33	U	U	6.1	U	U
1,1-DICHLOROETHANE	UG/KG	5.7	U	U	33	U	U	6.1	U	U
1,1-DICHLOROETHENE	UG/KG	1.7	J	J	33	U	U	6.1	U	U
1,2-DICHLOROETHANE	UG/KG	5.7	U	U	33	U	U	6.1	U	U
1,2-DICHLOROETHENE	UG/KG	5.7	U	U	33	U	U	6.1	U	U
1,2-DICHLOROPROPANE	UG/KG	5.7	U	U	33	U	U	6.1	U	U
2-BUTANONE	UG/KG	23	U	U	130	U	U	24	U	U
2-HEXANONE	UG/KG	23	U	U	130	U	U	24	U	U
4-METHYL-2-PENTANONE	UG/KG	23	U	U	130	U	U	24	U	U
ACETONE	UG/KG	22	J	J	77	J	J	24	U	U
BENZENE	UG/KG	2.5	J	J	33	U	U	6.1	U	U
BROMODICHLOROMETHANE	UG/KG	5.7	U	U	33	U	U	6.1	U	U
BROMOFORM	UG/KG	5.7	U	U	33	U	U	6.1	U	U
BROMOMETHANE	UG/KG	11	U	U	65	U	U	12	U	U
CARBON DISULFIDE	UG/KG	5.7	U	U	33	U	U	6.1	U	U
CARBON TETRACHLORIDE	UG/KG	5.7	U	U	33	U	U	6.1	U	U
CHLOROBENZENE	UG/KG	2.5	J	J	33	U	U	6.1	U	U
CHLOROETHANE	UG/KG	11	U	U	65	U	U	12	U	U
CHLOROFORM	UG/KG	5.7	U	U	33	U	U	6.1	U	U
CHLOROMETHANE	UG/KG	11	U	U	65	U	U	12	U	U
DIBROMOCHLOROMETHANE	UG/KG	5.7	U	U	33	U	U	6.1	U	U
ETHYLBENZENE	UG/KG	5.7	U	U	33	U	U	6.1	U	U
METHYLENE CHLORIDE	UG/KG	5.7	U	U	33	U	U	6.1	U	U
STYRENE	UG/KG	5.7	U	U	33	U	U	6.1	U	U
TETRACHLOROETHENE	UG/KG	5.7	U	U	33	U	U	6.1	U	U
TOLUENE	UG/KG	5.7	J	U	33	U	U	6.1	U	U
TOTAL XYLENES	UG/KG	5.7	U	U	33	U	U	6.1	U	U

Sample No:		2010			2020			2030		
Sample Location:		ABGSO01			ABGSO01			ABGSO02		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			1.5 - 2			0 - .5		
ABG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
VINYL CHLORIDE	UG/KG	12	U	U	12	U	U	11	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	6.0	U	U	6.0	U	U	5.6	U	U

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Sample No:		2040			2050			2060		
Sample Location:		ABGSO02			ABGSO03			ABGSO03		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
VINYL CHLORIDE	UG/KG	12	U	U	52	U	U	13	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	5.8	U	U	26	U	U	6.3	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	5.8	U	U	26	U	U	6.3	U	U

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Sample No:		2070			2080			2090		
Sample Location:		ABGSO04			ABGSO04			ABGSO05		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			2 - 3			0 - .5		
ABG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
VINYL CHLORIDE	UG/KG	56	U	U	11	U	U	12	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	28	U	U	5.7	U	U	5.8	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	28	U	U	5.7	U	U	5.8	U	U

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Sample No:		2100			2110			2120		
Sample Location:		ABGSO05			ABGSO06			ABGSO06		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
VINYL CHLORIDE	UG/KG	12	U	U	12	U	U	72	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	6.1	U	U	5.8	U	U	36	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	6.1	U	U	5.8	U	U	36	U	U

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Sample No:		2130			2140			2150		
Sample Location:		ABGSO07			ABGSO07			ABGSO08		
Sample Date:		04-OCT-96			04-OCT-96			04-OCT-96		
Depth		0 - .5			2 - 3			0 - .5		
ABG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
VINYL CHLORIDE	UG/KG	12	U	U	12	U	U	64	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	6.0	U	U	6.2	U	U	32	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	6.0	U	U	6.2	U	U	32	U	U

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Sample No:		2160			2170			2180		
Sample Location:		ABGSO08			ABGSO09			ABGSO09		
Sample Date:		04-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
VINYL CHLORIDE	UG/KG	12	U	U	60	U	U	12	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	6.1	U	U	30	U	U	6.2	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	6.1	U	U	30	U	U	6.2	U	U

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Sample No:		2190			2200			2210		
Sample Location:		ABGSO10			ABGSO10			ABGSO11		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			2 - 3			.5 - 1		
ABG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
VINYL CHLORIDE	UG/KG	59	U	U	12	U	U	11	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	30	U	U	6.1	U	U	5.7	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	30	U	U	6.1	U	U	5.7	U	U

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Sample No:		2220			2230			2240		
Sample Location:		ABGSO11			ABGSO12			ABGSO12		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	2.4	J	J	33	U	U	6.1	U	U
VINYL CHLORIDE	UG/KG	11	U	U	65	U	U	12	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	5.7	U	U	33	U	U	6.1	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	5.7	U	U	33	U	U	6.1	U	U

ABG:SEMIVOLATILES	Units	2010 ABGSO01 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2020 ABGSO01 03-OCT-96 1.5 - 2 Result	Lab Qlfr	Val Qlfr	2030 ABGSO02 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	400	U	U	400	U	U	370	U	U
1,2-DICHLOROBENZENE	UG/KG	400	U	U	400	U	U	370	U	U
1,3-DICHLOROBENZENE	UG/KG	400	U	U	400	U	U	370	U	U
1,4-DICHLOROBENZENE	UG/KG	400	U	U	400	U	U	370	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	400	U	U	400	U	U	370	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	400	U	U	400	U	U	370	U	U
2,4-DICHLOROPHENOL	UG/KG	400	U	U	400	U	U	370	U	U
2,4-DIMETHYLPHENOL	UG/KG	400	U	U	400	U	U	370	U	U
2,4-DINITROPHENOL	UG/KG	1900	U	U	1900	U	U	1800	U	U
2,4-DINITROTOLUENE	UG/KG	400	U	U	400	U	U	370	U	U
2,6-DINITROTOLUENE	UG/KG	400	U	U	400	U	U	370	U	U
2-CHLORONAPHTHALENE	UG/KG	400	U	U	400	U	U	370	U	U
2-CHLOROPHENOL	UG/KG	400	U	U	400	U	U	370	U	U
2-METHYLNAPHTHALENE	UG/KG	85	J	J	400	U	U	370	U	U
2-METHYLPHENOL	UG/KG	400	U	U	400	U	U	370	U	U
2-NITROANILINE	UG/KG	1900	U	U	1900	U	U	1800	U	U
2-NITROPHENOL	UG/KG	400	U	U	400	U	U	370	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	1900	U	U	1900	U	U	1800	U	U
3-NITROANILINE	UG/KG	1900	U	U	1900	U	U	1800	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	1900	U	U	1900	U	U	1800	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	400	U	U	400	U	U	370	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	400	U	U	400	U	U	370	U	U
4-CHLOROANILINE	UG/KG	400	U	U	400	U	U	370	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	400	U	U	400	U	U	370	U	U
4-METHYLPHENOL	UG/KG	400	U	U	400	U	U	370	U	U
4-NITROANILINE	UG/KG	1900	U	U	1900	U	U	1800	U	U
4-NITROPHENOL	UG/KG	1900	U	U	1900	U	U	1800	U	U
ACENAPHTHENE	UG/KG	400	U	U	400	U	U	370	U	U
ACENAPHTHYLENE	UG/KG	400	U	U	400	U	U	370	U	U

ABG:SEMIVOLATILES	Units	2040 ABGSO02 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2050 ABGSO03 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2060 ABGSO03 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	380	U	U	350	U	U	410	U	U
1,2-DICHLOROBENZENE	UG/KG	380	U	U	350	U	U	410	U	U
1,3-DICHLOROBENZENE	UG/KG	380	U	U	350	U	U	410	U	U
1,4-DICHLOROBENZENE	UG/KG	380	U	U	350	U	U	410	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	380	U	U	350	U	U	410	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	380	U	U	350	U	U	410	U	U
2,4-DICHLOROPHENOL	UG/KG	380	U	U	350	U	U	410	U	U
2,4-DIMETHYLPHENOL	UG/KG	380	U	U	350	U	U	410	U	U
2,4-DINITROPHENOL	UG/KG	1900	U	U	1700	U	U	2000	U	U
2,4-DINITROTOLUENE	UG/KG	380	U	U	350	U	U	410	U	U
2,6-DINITROTOLUENE	UG/KG	380	U	U	350	U	U	410	U	U
2-CHLORONAPHTHALENE	UG/KG	380	U	U	350	U	U	410	U	U
2-CHLOROPHENOL	UG/KG	380	U	U	350	U	U	410	U	U
2-METHYLNAPHTHALENE	UG/KG	380	U	U	67	J	J	410	U	U
2-METHYLPHENOL	UG/KG	380	U	U	350	U	U	410	U	U
2-NITROANILINE	UG/KG	1900	U	U	1700	U	U	2000	U	U
2-NITROPHENOL	UG/KG	380	U	U	350	U	U	410	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	1900	U	U	1700	U	U	2000	U	U
3-NITROANILINE	UG/KG	1900	U	U	1700	U	U	2000	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	1900	U	U	1700	U	U	2000	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	380	U	U	350	U	U	410	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	380	U	U	350	U	U	410	U	U
4-CHLOROANILINE	UG/KG	380	U	U	350	U	U	410	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	380	U	U	350	U	U	410	U	U
4-METHYLPHENOL	UG/KG	380	U	U	350	U	U	410	U	U
4-NITROANILINE	UG/KG	1900	U	U	1700	U	U	2000	U	U
4-NITROPHENOL	UG/KG	1900	U	U	1700	U	U	2000	U	U
ACENAPHTHENE	UG/KG	380	U	U	350	U	U	410	U	U
ACENAPHTHYLENE	UG/KG	380	U	U	350	U	U	410	U	U

ABG:SEMIVOLATILES	Units	2070 ABGSO04 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2080 ABGSO04 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2090 ABGSO05 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	370	U	U	380	U	U	380	U	U
1,2-DICHLOROBENZENE	UG/KG	370	U	U	380	U	U	380	U	U
1,3-DICHLOROBENZENE	UG/KG	370	U	U	380	U	U	380	U	U
1,4-DICHLOROBENZENE	UG/KG	370	U	U	380	U	U	380	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	370	U	U	380	U	U	380	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	370	U	U	380	U	U	380	U	U
2,4-DICHLOROPHENOL	UG/KG	370	U	U	380	U	U	380	U	U
2,4-DIMETHYLPHENOL	UG/KG	370	U	U	380	U	U	380	U	U
2,4-DINITROPHENOL	UG/KG	1800	U	U	1800	U	U	1800	U	U
2,4-DINITROTOLUENE	UG/KG	370	U	U	380	U	U	380	U	U
2,6-DINITROTOLUENE	UG/KG	370	U	U	380	U	U	380	U	U
2-CHLORONAPHTHALENE	UG/KG	370	U	U	380	U	U	380	U	U
2-CHLOROPHENOL	UG/KG	370	U	U	380	U	U	380	U	U
2-METHYLNAPHTHALENE	UG/KG	370	U	U	380	U	U	380	U	U
2-METHYLPHENOL	UG/KG	370	U	U	380	U	U	380	U	U
2-NITROANILINE	UG/KG	1800	U	U	1800	U	U	1800	U	U
2-NITROPHENOL	UG/KG	370	U	U	380	U	U	380	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	1800	U	U	1800	U	U	1800	U	U
3-NITROANILINE	UG/KG	1800	U	U	1800	U	U	1800	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	1800	U	U	1800	U	U	1800	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	370	U	U	380	U	U	380	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	370	U	U	380	U	U	380	U	U
4-CHLOROANILINE	UG/KG	370	U	U	380	U	U	380	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	370	U	U	380	U	U	380	U	U
4-METHYLPHENOL	UG/KG	370	U	U	380	U	U	380	U	U
4-NITROANILINE	UG/KG	1800	U	U	1800	U	U	1800	U	U
4-NITROPHENOL	UG/KG	1800	U	U	1800	U	U	1800	U	U
ACENAPHTHENE	UG/KG	370	U	U	380	U	U	380	U	U
ACENAPHTHYLENE	UG/KG	370	U	U	380	U	U	380	U	U

ABG:SEMIVOLATILES	Units	2100 ABGSO05 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2110 ABGSO06 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2120 ABGSO06 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	400	U	U	380	U	U	480	U	U
1,2-DICHLOROBENZENE	UG/KG	400	U	U	380	U	U	480	U	U
1,3-DICHLOROBENZENE	UG/KG	400	U	U	380	U	U	480	U	U
1,4-DICHLOROBENZENE	UG/KG	400	U	U	380	U	U	480	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	400	U	U	380	U	U	480	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	400	U	U	380	U	U	480	U	U
2,4-DICHLOROPHENOL	UG/KG	400	U	U	380	U	U	480	U	U
2,4-DIMETHYLPHENOL	UG/KG	400	U	U	380	U	U	480	U	U
2,4-DINITROPHENOL	UG/KG	2000	U	U	1900	U	U	2300	U	U
2,4-DINITROTOLUENE	UG/KG	400	U	U	380	U	U	480	U	U
2,6-DINITROTOLUENE	UG/KG	400	U	U	380	U	U	480	U	U
2-CHLORONAPHTHALENE	UG/KG	400	U	U	380	U	U	480	U	U
2-CHLOROPHENOL	UG/KG	400	U	U	380	U	U	480	U	U
2-METHYLNAPHTHALENE	UG/KG	400	U	U	380	U	U	480	U	U
2-METHYLPHENOL	UG/KG	400	U	U	380	U	U	480	U	U
2-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2300	U	U
2-NITROPHENOL	UG/KG	400	U	U	380	U	U	480	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	2000	U	U	1900	U	U	2300	U	U
3-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2300	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	2000	U	U	1900	U	U	2300	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	400	U	U	380	U	U	480	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	400	U	U	380	U	U	480	U	U
4-CHLOROANILINE	UG/KG	400	U	U	380	U	U	480	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	400	U	U	380	U	U	480	U	U
4-METHYLPHENOL	UG/KG	400	U	U	380	U	U	480	U	U
4-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2300	U	U
4-NITROPHENOL	UG/KG	2000	U	U	1900	U	U	2300	U	U
ACENAPHTHENE	UG/KG	400	U	U	380	U	U	480	U	U
ACENAPHTHYLENE	UG/KG	400	U	U	380	U	U	480	U	U

ABG:SEMIVOLATILES	Units	2130 ABGSO07 04-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2140 ABGSO07 04-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2150 ABGSO08 04-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	400	U	U	410	U	U	420	U	U
1,2-DICHLOROBENZENE	UG/KG	400	U	U	410	U	U	420	U	U
1,3-DICHLOROBENZENE	UG/KG	400	U	U	410	U	U	420	U	U
1,4-DICHLOROBENZENE	UG/KG	400	U	U	410	U	U	420	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	400	U	U	410	U	U	420	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	400	U	U	410	U	U	420	U	U
2,4-DICHLOROPHENOL	UG/KG	400	U	U	410	U	U	420	U	U
2,4-DIMETHYLPHENOL	UG/KG	400	U	U	410	U	U	420	U	U
2,4-DINITROPHENOL	UG/KG	1900	U	U	2000	U	U	2000	U	U
2,4-DINITROTOLUENE	UG/KG	400	U	U	410	U	U	150	J	J
2,6-DINITROTOLUENE	UG/KG	400	U	U	410	U	U	420	U	U
2-CHLORONAPHTHALENE	UG/KG	400	U	U	410	U	U	420	U	U
2-CHLOROPHENOL	UG/KG	400	U	U	410	U	U	420	U	U
2-METHYLNAPHTHALENE	UG/KG	400	U	U	410	U	U	85	J	J
2-METHYLPHENOL	UG/KG	400	U	U	410	U	U	420	U	U
2-NITROANILINE	UG/KG	1900	U	U	2000	U	U	2000	U	U
2-NITROPHENOL	UG/KG	400	U	U	410	U	U	420	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	1900	U	U	2000	U	U	2000	U	U
3-NITROANILINE	UG/KG	1900	U	U	2000	U	U	2000	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	1900	U	U	2000	U	U	2000	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	400	U	U	410	U	U	420	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	400	U	U	410	U	U	420	U	U
4-CHLOROANILINE	UG/KG	400	U	U	410	U	U	420	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	400	U	U	410	U	U	420	U	U
4-METHYLPHENOL	UG/KG	400	U	U	410	U	U	420	U	U
4-NITROANILINE	UG/KG	1900	U	U	2000	U	U	2000	U	U
4-NITROPHENOL	UG/KG	1900	U	U	2000	U	U	2000	U	U
ACENAPHTHENE	UG/KG	400	U	U	410	U	U	200	J	J
ACENAPHTHYLENE	UG/KG	56	J	J	410	U	U	130	J	J

ABG:SEMIVOLATILES	Units	2160 ABGSO08 04-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2170 ABGSO09 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2180 ABGSO09 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	400	U	U	400	U	U	410	U	U
1,2-DICHLOROBENZENE	UG/KG	400	U	U	400	U	U	410	U	U
1,3-DICHLOROBENZENE	UG/KG	400	U	U	400	U	U	410	U	U
1,4-DICHLOROBENZENE	UG/KG	400	U	U	400	U	U	410	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
2,4-DICHLOROPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
2,4-DIMETHYLPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
2,4-DINITROPHENOL	UG/KG	2000	U	U	1900	U	U	2000	U	U
2,4-DINITROTOLUENE	UG/KG	400	U	U	1800			410	U	U
2,6-DINITROTOLUENE	UG/KG	400	U	U	400	U	U	410	U	U
2-CHLORONAPHTHALENE	UG/KG	400	U	U	400	U	U	410	U	U
2-CHLOROPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
2-METHYLNAPHTHALENE	UG/KG	400	U	U	69	J	J	410	U	U
2-METHYLPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
2-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2000	U	U
2-NITROPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	2000	U	U	1900	U	U	2000	U	U
3-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2000	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	2000	U	U	1900	U	U	2000	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	400	U	U	400	U	U	410	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
4-CHLOROANILINE	UG/KG	400	U	U	400	U	U	410	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	400	U	U	400	U	U	410	U	U
4-METHYLPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
4-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2000	U	U
4-NITROPHENOL	UG/KG	2000	U	U	1900	U	U	2000	U	U
ACENAPHTHENE	UG/KG	400	U	U	400	U	U	410	U	U
ACENAPHTHYLENE	UG/KG	400	U	U	310	J	J	410	U	U

ABG:SEMIVOLATILES	Units	2190 ABGSO10 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2200 ABGSO10 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2210 ABGSO11 03-OCT-96 .5 - 1 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	390	U	U	400	U	U	380	U	U
1,2-DICHLOROBENZENE	UG/KG	390	U	U	400	U	U	380	U	U
1,3-DICHLOROBENZENE	UG/KG	390	U	U	400	U	U	380	U	U
1,4-DICHLOROBENZENE	UG/KG	390	U	U	400	U	U	380	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	390	U	U	400	U	U	380	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	390	U	U	400	U	U	380	U	U
2,4-DICHLOROPHENOL	UG/KG	390	U	U	400	U	U	380	U	U
2,4-DIMETHYLPHENOL	UG/KG	390	U	U	400	U	U	380	U	U
2,4-DINITROPHENOL	UG/KG	1900	U	U	2000	U	U	1800	U	U
2,4-DINITROTOLUENE	UG/KG	390	U	U	400	U	U	380	U	U
2,6-DINITROTOLUENE	UG/KG	390	U	U	400	U	U	380	U	U
2-CHLORONAPHTHALENE	UG/KG	390	U	U	400	U	U	380	U	U
2-CHLOROPHENOL	UG/KG	390	U	U	400	U	U	380	U	U
2-METHYLNAPHTHALENE	UG/KG	64	J	J	400	U	U	51	J	J
2-METHYLPHENOL	UG/KG	390	U	U	400	U	U	380	U	U
2-NITROANILINE	UG/KG	1900	U	U	2000	U	U	1800	U	U
2-NITROPHENOL	UG/KG	390	U	U	400	U	U	380	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	1900	U	U	2000	U	U	1800	U	U
3-NITROANILINE	UG/KG	1900	U	U	2000	U	U	1800	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	1900	U	U	2000	U	U	1800	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	390	U	U	400	U	U	380	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	390	U	U	400	U	U	380	U	U
4-CHLOROANILINE	UG/KG	390	U	U	400	U	U	380	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	390	U	U	400	U	U	380	U	U
4-METHYLPHENOL	UG/KG	390	U	U	400	U	U	380	U	U
4-NITROANILINE	UG/KG	1900	U	U	2000	U	U	1800	U	U
4-NITROPHENOL	UG/KG	1900	U	U	2000	U	U	1800	U	U
ACENAPHTHENE	UG/KG	390	U	U	400	U	U	380	U	U
ACENAPHTHYLENE	UG/KG	86	J	J	400	U	U	39	J	J

ABG:SEMIVOLATILES	Units	2220 ABGSO11 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2230 ABGSO12 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2240 ABGSO12 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	380	U	U	430	U	U	400	U	U
1,2-DICHLOROBENZENE	UG/KG	380	U	U	430	U	U	400	U	U
1,3-DICHLOROBENZENE	UG/KG	380	U	U	430	U	U	400	U	U
1,4-DICHLOROBENZENE	UG/KG	380	U	U	430	U	U	400	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	380	U	U	430	U	U	400	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	380	U	U	430	U	U	400	U	U
2,4-DICHLOROPHENOL	UG/KG	380	U	U	430	U	U	400	U	U
2,4-DIMETHYLPHENOL	UG/KG	380	U	U	430	U	U	400	U	U
2,4-DINITROPHENOL	UG/KG	1800	U	U	2100	U	U	1900	U	U
2,4-DINITROTOLUENE	UG/KG	380	U	U	430	U	U	400	U	U
2,6-DINITROTOLUENE	UG/KG	380	U	U	430	U	U	400	U	U
2-CHLORONAPHTHALENE	UG/KG	380	U	U	430	U	U	400	U	U
2-CHLOROPHENOL	UG/KG	380	U	U	430	U	U	400	U	U
2-METHYLNAPHTHALENE	UG/KG	380	U	U	430	U	U	400	U	U
2-METHYLPHENOL	UG/KG	380	U	U	430	U	U	400	U	U
2-NITROANILINE	UG/KG	1800	U	U	2100	U	U	1900	U	U
2-NITROPHENOL	UG/KG	380	U	U	430	U	U	400	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	1800	U	U	2100	U	U	1900	U	U
3-NITROANILINE	UG/KG	1800	U	U	2100	U	U	1900	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	1800	U	U	2100	U	U	1900	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	380	U	U	430	U	U	400	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	380	U	U	430	U	U	400	U	U
4-CHLOROANILINE	UG/KG	380	U	U	430	U	U	400	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	380	U	U	430	U	U	400	U	U
4-METHYLPHENOL	UG/KG	380	U	U	430	U	U	400	U	U
4-NITROANILINE	UG/KG	1800	U	U	2100	U	U	1900	U	U
4-NITROPHENOL	UG/KG	1800	U	U	2100	U	U	1900	U	U
ACENAPHTHENE	UG/KG	380	U	U	430	U	U	400	U	U
ACENAPHTHYLENE	UG/KG	380	U	U	190	J	J	400	U	U

ABG:SEMIVOLATILES	Units	2010 ABGSO01 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2020 ABGSO01 03-OCT-96 1.5 - 2 Result	Lab Qlfr	Val Qlfr	2030 ABGSO02 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	400	U	U	400	U	U	370	U	U
BENZO(a)ANTHRACENE	UG/KG	400	U	U	400	U	U	370	U	U
BENZO(a)PYRENE	UG/KG	400	U	U	400	U	U	370	U	U
BENZO(b)FLUORANTHENE	UG/KG	400	U	U	400	U	U	370	U	U
BENZO(ghi)PERYLENE	UG/KG	400	U	U	400	U	U	370	U	U
BENZO(k)FLUORANTHENE	UG/KG	400	U	U	400	U	U	370	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	400	U	U	400	U	U	370	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	400	U	U	400	U	U	370	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	400	U	U	400	U	U	370	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	400	U	U	400	U	U	370	U	U
BUTYL BENZYL PHTHALATE	UG/KG	400	U	U	400	U	U	370	U	U
CARBAZOLE	UG/KG	400	U	U	400	U	U	370	U	U
CHRYSENE	UG/KG	65	J	J	400	U	U	370	U	U
DI-n-BUTYL PHTHALATE	UG/KG	400	J B	U	540	B	U	2300	B	U
DI-n-OCTYL PHTHALATE	UG/KG	400	U	U	400	U	U	370	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	400	U	U	400	U	U	370	U	U
DIBENZOFURAN	UG/KG	400	U	U	400	U	U	370	U	U
DIETHYL PHTHALATE	UG/KG	400	U	U	400	U	U	370	U	U
DIMETHYL PHTHALATE	UG/KG	400	U	U	400	U	U	370	U	U
FLUORANTHENE	UG/KG	95	J	J	400	U	U	370	U	U
FLUORENE	UG/KG	400	U	U	400	U	U	370	U	U
HEXACHLOROBENZENE	UG/KG	400	U	U	400	U	U	370	U	U
HEXACHLOROBUTADIENE	UG/KG	400	U	U	400	U	U	370	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	1900	U	U	1900	U	U	1800	U	U
HEXACHLOROETHANE	UG/KG	400	U	U	400	U	U	370	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	400	U	U	400	U	U	370	U	U
ISOPHORONE	UG/KG	400	U	U	400	U	U	370	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	400	U	U	400	U	U	370	U	U
N-NITROSODIPHENYLAMINE	UG/KG	400	U	U	400	U	U	370	U	U

ABG:SEMIVOLATILES	Units	2040 ABGSO02 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2050 ABGSO03 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2060 ABGSO03 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	380	U	U	350	U	U	410	U	U
BENZO(a)ANTHRACENE	UG/KG	380	U	U	350	U	U	410	U	U
BENZO(a)PYRENE	UG/KG	380	U	U	350	U	U	410	U	U
BENZO(b)FLUORANTHENE	UG/KG	380	U	U	350	U	U	410	U	U
BENZO(ghi)PERYLENE	UG/KG	380	U	U	350	U	U	410	U	U
BENZO(k)FLUORANTHENE	UG/KG	380	U	U	350	U	U	410	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	380	U	U	350	U	U	410	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	380	U	U	350	U	U	410	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	380	U	U	350	U	U	410	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	380	U	U	61	J	J	410	U	U
BUTYL BENZYL PHTHALATE	UG/KG	380	U	U	350	U	U	410	U	U
CARBAZOLE	UG/KG	380	U	U	350	U	U	410	U	U
CHRYSENE	UG/KG	380	U	U	190	J	J	410	U	U
DI-n-BUTYL PHTHALATE	UG/KG	380	J B	U	350	J B	U	410	J B	U
DI-n-OCTYL PHTHALATE	UG/KG	380	U	U	350	U	U	410	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	380	U	U	350	U	U	410	U	U
DIBENZOFURAN	UG/KG	380	U	U	350	U	U	410	U	U
DIETHYL PHTHALATE	UG/KG	380	U	U	350	U	U	410	U	U
DIMETHYL PHTHALATE	UG/KG	380	U	U	350	U	U	410	U	U
FLUORANTHENE	UG/KG	380	U	U	110	J	J	410	U	U
FLUORENE	UG/KG	380	U	U	350	U	U	410	U	U
HEXACHLOROBENZENE	UG/KG	380	U	U	350	U	U	410	U	U
HEXACHLOROBUTADIENE	UG/KG	380	U	U	350	U	U	410	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	1900	U	U	1700	U	U	2000	U	U
HEXACHLOROETHANE	UG/KG	380	U	U	350	U	U	410	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	380	U	U	350	U	U	410	U	U
ISOPHORONE	UG/KG	380	U	U	350	U	U	410	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	380	U	U	350	U	U	410	U	U
N-NITROSODIPHENYLAMINE	UG/KG	380	U	U	350	U	U	410	U	U

ABG:SEMIVOLATILES	Units	2070 ABGSO04 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2080 ABGSO04 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2090 ABGSO05 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	370	U	U	380	U	U	380	U	U
BENZO(a)ANTHRACENE	UG/KG	91	J	J	380	U	U	380	U	U
BENZO(a)PYRENE	UG/KG	72	J	J	380	U	U	380	U	U
BENZO(b)FLUORANTHENE	UG/KG	110	J	J	380	U	U	380	U	U
BENZO(ghi)PERYLENE	UG/KG	56	J	J	380	U	U	380	U	U
BENZO(k)FLUORANTHENE	UG/KG	370	U	U	380	U	U	380	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	370	U	U	380	U	U	380	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	370	U	U	380	U	U	380	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	370	U	U	380	U	U	380	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	370	U	U	380	U	U	380	U	U
BUTYL BENZYL PHTHALATE	UG/KG	370	U	U	380	U	U	380	U	U
CARBAZOLE	UG/KG	370	U	U	380	U	U	380	U	U
CHRYSENE	UG/KG	110	J	J	380	U	U	380	U	U
DI-n-BUTYL PHTHALATE	UG/KG	370	J B	U	380	J B	U	380	J B	U
DI-n-OCTYL PHTHALATE	UG/KG	370	U	U	380	U	U	380	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	370	U	U	380	U	U	380	U	U
DIBENZOFURAN	UG/KG	370	U	U	380	U	U	380	U	U
DIETHYL PHTHALATE	UG/KG	370	U	U	380	U	U	380	U	U
DIMETHYL PHTHALATE	UG/KG	370	U	U	380	U	U	380	U	U
FLUORANTHENE	UG/KG	160	J	J	380	U	U	380	U	U
FLUORENE	UG/KG	370	U	U	380	U	U	380	U	U
HEXACHLOROBENZENE	UG/KG	370	U	U	380	U	U	380	U	U
HEXACHLOROBUTADIENE	UG/KG	370	U	U	380	U	U	380	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	1800	U	U	1800	U	U	1800	U	U
HEXACHLOROETHANE	UG/KG	370	U	U	380	U	U	380	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	56	J	J	380	U	U	380	U	U
ISOPHORONE	UG/KG	370	U	U	380	U	U	380	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	370	U	U	380	U	U	380	U	U
N-NITROSODIPHENYLAMINE	UG/KG	370	U	U	380	U	U	380	U	U

ABG:SEMIVOLATILES	Units	2100 ABGSO05 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2110 ABGSO06 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2120 ABGSO06 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	400	U	U	380	U	U	480	U	U
BENZO(a)ANTHRACENE	UG/KG	400	U	U	380	U	U	480	U	U
BENZO(a)PYRENE	UG/KG	400	U	U	380	U	U	480	U	U
BENZO(b)FLUORANTHENE	UG/KG	400	U	U	380	U	U	480	U	U
BENZO(ghi)PERYLENE	UG/KG	400	U	U	380	U	U	480	U	U
BENZO(k)FLUORANTHENE	UG/KG	400	U	U	380	U	U	480	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	400	U	U	380	U	U	480	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	400	U	U	380	U	U	480	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	400	U	U	380	U	U	480	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	400	U	U	380	U	U	480	U	U
BUTYL BENZYL PHTHALATE	UG/KG	400	U	U	380	U	U	480	U	U
CARBAZOLE	UG/KG	400	U	U	380	U	U	480	U	U
CHRYSENE	UG/KG	400	U	U	380	U	U	480	U	U
DI-n-BUTYL PHTHALATE	UG/KG	400	J B	U	380	J B	U	480	J B	U
DI-n-OCTYL PHTHALATE	UG/KG	400	U	U	380	U	U	480	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	400	U	U	380	U	U	480	U	U
DIBENZOFURAN	UG/KG	400	U	U	380	U	U	480	U	U
DIETHYL PHTHALATE	UG/KG	400	U	U	380	U	U	480	U	U
DIMETHYL PHTHALATE	UG/KG	400	U	U	380	U	U	480	U	U
FLUORANTHENE	UG/KG	400	U	U	380	U	U	64	J	J
FLUORENE	UG/KG	400	U	U	380	U	U	480	U	U
HEXACHLOROBENZENE	UG/KG	400	U	U	380	U	U	480	U	U
HEXACHLOROBUTADIENE	UG/KG	400	U	U	380	U	U	480	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	2000	U	U	1900	U	U	2300	U	U
HEXACHLOROETHANE	UG/KG	400	U	U	380	U	U	480	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	400	U	U	380	U	U	480	U	U
ISOPHORONE	UG/KG	400	U	U	380	U	U	480	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	400	U	U	380	U	U	480	U	U
N-NITROSODIPHENYLAMINE	UG/KG	400	U	U	380	U	U	480	U	U

ABG:SEMIVOLATILES	Units	2130 ABGSO07 04-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2140 ABGSO07 04-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2150 ABGSO08 04-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	43	J	J	410	U	U	570		
BENZO(a)ANTHRACENE	UG/KG	130	J	J	410	U	U	1800		
BENZO(a)PYRENE	UG/KG	130	J	J	410	U	U	1300		
BENZO(b)FLUORANTHENE	UG/KG	150	J	J	410	U	U	1700		
BENZO(ghi)PERYLENE	UG/KG	90	J	J	410	U	U	710		
BENZO(k)FLUORANTHENE	UG/KG	140	J	J	410	U	U	1300		
BIS(2-CHLOROETHOXY)METHANE	UG/KG	400	U	U	410	U	U	420	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	400	U	U	410	U	U	420	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	400	U	U	410	U	U	420	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	400	U	U	410	U	U	71	J	J
BUTYL BENZYL PHTHALATE	UG/KG	400	U	U	410	U	U	420	U	U
CARBAZOLE	UG/KG	400	U	U	410	U	U	740		
CHRYSENE	UG/KG	140	J	J	410	U	U	1800		
DI-n-BUTYL PHTHALATE	UG/KG	400	J B	U	410	J B	U	760	B	U
DI-n-OCTYL PHTHALATE	UG/KG	400	U	U	410	U	U	420	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	400	U	U	410	U	U	350	J	J
DIBENZOFURAN	UG/KG	400	U	U	410	U	U	130	J	J
DIETHYL PHTHALATE	UG/KG	400	U	U	410	U	U	420	U	U
DIMETHYL PHTHALATE	UG/KG	400	U	U	410	U	U	420	U	U
FLUORANTHENE	UG/KG	240	J	J	410	U	U	4500		
FLUORENE	UG/KG	400	U	U	410	U	U	260	J	J
HEXACHLOROBENZENE	UG/KG	400	U	U	410	U	U	420	U	U
HEXACHLOROBUTADIENE	UG/KG	400	U	U	410	U	U	420	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	1900	U	U	2000	U	U	2000	U	U
HEXACHLOROETHANE	UG/KG	400	U	U	410	U	U	420	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	81	J	J	410	U	U	820		
ISOPHORONE	UG/KG	400	U	U	410	U	U	420	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	400	U	U	410	U	U	420	U	U
N-NITROSODIPHENYLAMINE	UG/KG	400	U	U	410	U	U	420	U	U

ABG:SEMIVOLATILES	Units	2160 ABGSO08 04-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2170 ABGSO09 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2180 ABGSO09 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	400	U	U	500			410	U	U
BENZO(a)ANTHRACENE	UG/KG	400	U	U	1300			410	U	U
BENZO(a)PYRENE	UG/KG	400	U	U	710			410	U	U
BENZO(b)FLUORANTHENE	UG/KG	400	U	U	1200			410	U	U
BENZO(ghi)PERYLENE	UG/KG	400	U	U	460			410	U	U
BENZO(k)FLUORANTHENE	UG/KG	400	U	U	740			410	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	400	U	U	400	U	U	410	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	400	U	U	400	U	U	410	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	400	U	U	400	U	U	410	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	400	U	U	400	U	U	410	U	U
BUTYL BENZYL PHTHALATE	UG/KG	400	U	U	400	U	U	410	U	U
CARBAZOLE	UG/KG	400	U	U	170	J	J	410	U	U
CHRYSENE	UG/KG	400	U	U	1100			410	U	U
DI-n-BUTYL PHTHALATE	UG/KG	400	J B	U	58	J	J	410	U	U
DI-n-OCTYL PHTHALATE	UG/KG	400	U	U	400	U	U	410	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	400	U	U	400	U	U	410	U	U
DIBENZOFURAN	UG/KG	400	U	U	400	U	U	410	U	U
DIETHYL PHTHALATE	UG/KG	400	U	U	400	U	U	410	U	U
DIMETHYL PHTHALATE	UG/KG	400	U	U	400	U	U	410	U	U
FLUORANTHENE	UG/KG	400	U	U	2400			410	U	U
FLUORENE	UG/KG	400	U	U	87	J	J	410	U	U
HEXACHLOROBENZENE	UG/KG	400	U	U	400	U	U	410	U	U
HEXACHLOROBUTADIENE	UG/KG	400	U	U	400	U	U	410	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	2000	U	U	1900	U	U	2000	U	U
HEXACHLOROETHANE	UG/KG	400	U	U	400	U	U	410	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	400	U	U	400	U	U	410	U	U
ISOPHORONE	UG/KG	400	U	U	400	U	U	410	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	400	U	U	400	U	U	410	U	U
N-NITROSODIPHENYLAMINE	UG/KG	400	U	U	400	U	U	410	U	U

ABG:SEMIVOLATILES	Units	2190 ABGSO10 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2200 ABGSO10 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2210 ABGSO11 03-OCT-96 .5 - 1 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	390	U	U	400	U	U	380	U	U
BENZO(a)ANTHRACENE	UG/KG	390			400	U	U	83	J	J
BENZO(a)PYRENE	UG/KG	240	J	J	400	U	U	72	J	J
BENZO(b)FLUORANTHENE	UG/KG	510			400	U	U	91	J	J
BENZO(ghi)PERYLENE	UG/KG	390	U	U	400	U	U	380	U	U
BENZO(k)FLUORANTHENE	UG/KG	240	J	J	400	U	U	380	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	390	U	U	400	U	U	380	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	390	U	U	400	U	U	380	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	390	U	U	400	U	U	380	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	390	U	U	63	J	J	54	J	J
BUTYL BENZYL PHTHALATE	UG/KG	390	U	U	400	U	U	380	U	U
CARBAZOLE	UG/KG	390	U	U	400	U	U	380	U	U
CHRYSENE	UG/KG	360	J	J	400	U	U	110	J	J
DI-n-BUTYL PHTHALATE	UG/KG	390	U	U	400	U	U	380	U	U
DI-n-OCTYL PHTHALATE	UG/KG	390	U	U	400	U	U	380	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	390	U	U	400	U	U	380	U	U
DIBENZOFURAN	UG/KG	390	U	U	400	U	U	380	U	U
DIETHYL PHTHALATE	UG/KG	390	U	U	400	U	U	380	U	U
DIMETHYL PHTHALATE	UG/KG	390	U	U	400	U	U	380	U	U
FLUORANTHENE	UG/KG	480			400	U	U	150	J	J
FLUORENE	UG/KG	390	U	U	400	U	U	380	U	U
HEXACHLOROBENZENE	UG/KG	390	U	U	400	U	U	380	U	U
HEXACHLOROBUTADIENE	UG/KG	390	U	U	400	U	U	380	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	1900	U	U	2000	U	U	1800	U	U
HEXACHLOROETHANE	UG/KG	390	U	U	400	U	U	380	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	390	U	U	400	U	U	380	U	U
ISOPHORONE	UG/KG	390	U	U	400	U	U	380	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	390	U	U	400	U	U	380	U	U
N-NITROSODIPHENYLAMINE	UG/KG	390	U	U	400	U	U	380	U	U

ABG:SEMIVOLATILES	Units	2220 ABGSO11 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	2230 ABGSO12 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	2240 ABGSO12 03-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	380	U	U	150	J	J	400	U	U
BENZO(a)ANTHRACENE	UG/KG	380	U	U	510			400	U	U
BENZO(a)PYRENE	UG/KG	380	U	U	440			400	U	U
BENZO(b)FLUORANTHENE	UG/KG	380	U	U	600			400	U	U
BENZO(ghi)PERYLENE	UG/KG	380	U	U	430	U	U	400	U	U
BENZO(k)FLUORANTHENE	UG/KG	380	U	U	540			400	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	380	U	U	430	U	U	400	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	380	U	U	430	U	U	400	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	380	U	U	430	U	U	400	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	57	J	J	87	J	J	100	J	J
BUTYL BENZYL PHTHALATE	UG/KG	380	U	U	430	U	U	400	U	U
CARBAZOLE	UG/KG	380	U	U	430	U	U	400	U	U
CHRYSENE	UG/KG	380	U	U	570			400	U	U
DI-n-BUTYL PHTHALATE	UG/KG	380	U	U	430	U	U	400	U	U
DI-n-OCTYL PHTHALATE	UG/KG	380	U	U	430	U	U	400	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	380	U	U	62	J	J	400	U	U
DIBENZOFURAN	UG/KG	380	U	U	430	U	U	400	U	U
DIETHYL PHTHALATE	UG/KG	380	U	U	430	U	U	400	U	U
DIMETHYL PHTHALATE	UG/KG	380	U	U	430	U	U	400	U	U
FLUORANTHENE	UG/KG	380	U	U	860			400	U	U
FLUORENE	UG/KG	380	U	U	430	U	U	400	U	U
HEXACHLOROBENZENE	UG/KG	380	U	U	430	U	U	400	U	U
HEXACHLOROBUTADIENE	UG/KG	380	U	U	430	U	U	400	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	1800	U	U	2100	U	U	1900	U	U
HEXACHLOROETHANE	UG/KG	380	U	U	430	U	U	400	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	380	U	U	430	U	U	400	U	U
ISOPHORONE	UG/KG	380	U	U	430	U	U	400	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	380	U	U	430	U	U	400	U	U
N-NITROSODIPHENYLAMINE	UG/KG	380	U	U	430	U	U	400	U	U

Sample No:		2010			2020			2030		
Sample Location:		ABGSO01			ABGSO01			ABGSO02		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			1.5 - 2			0 - .5		
ABG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	400	U	U	400	U	U	370	U	U
NITROBENZENE	UG/KG	400	U	U	400	U	U	370	U	U
PENTACHLOROPHENOL	UG/KG	1900	U	U	1900	U	U	1800	U	U
PHENANTHRENE	UG/KG	60	J	J	400	U	U	370	U	U
PHENOL	UG/KG	400	U	U	400	U	U	370	U	U
PYRENE	UG/KG	75	J	J	400	U	U	370	U	U

Sample No:		2040			2050			2060		
Sample Location:		ABGSO02			ABGSO03			ABGSO03		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	380	U	U	350	U	U	410	U	U
NITROBENZENE	UG/KG	380	U	U	350	U	U	410	U	U
PENTACHLOROPHENOL	UG/KG	1900	U	U	1700	U	U	2000	U	U
PHENANTHRENE	UG/KG	380	U	U	110	J	J	410	U	U
PHENOL	UG/KG	380	U	U	350	U	U	410	U	U
PYRENE	UG/KG	380	U	U	110	J	J	410	U	U

Additional Burning Ground

Data Summary - Soils

Report Date: 02/17/97

Sample No:		2070			2080			2090		
Sample Location:		ABGSO04			ABGSO04			ABGSO05		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			2 - 3			0 - .5		
ABG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	370	U	U	380	U	U	380	U	U
NITROBENZENE	UG/KG	370	U	U	380	U	U	380	U	U
PENTACHLOROPHENOL	UG/KG	1800	U	U	1800	U	U	1800	U	U
PHENANTHRENE	UG/KG	92	J	J	380	U	U	380	U	U
PHENOL	UG/KG	370	U	U	380	U	U	380	U	U
PYRENE	UG/KG	110	J	J	380	U	U	380	U	U

PLUMBROOK
Additional Burning Ground
Data Summary - Soils

Report Date: 02/17/97

Sample No:		2100			2110			2120		
Sample Location:		ABGSO05			ABGSO06			ABGSO06		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	400	U	U	380	U	U	480	U	U
NITROBENZENE	UG/KG	400	U	U	380	U	U	480	U	U
PENTACHLOROPHENOL	UG/KG	2000	U	U	1900	U	U	2300	U	U
PHENANTHRENE	UG/KG	400	U	U	380	U	U	480	U	U
PHENOL	UG/KG	400	U	U	380	U	U	480	U	U
PYRENE	UG/KG	400	U	U	380	U	U	54	J	J

Additional Burning Ground

Data Summary - Soils

Report Date: 02/17/97

Sample No:		2130			2140			2150		
Sample Location:		ABGSO07			ABGSO07			ABGSO08		
Sample Date:		04-OCT-96			04-OCT-96			04-OCT-96		
Depth		0 - .5			2 - 3			0 - .5		
ABG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	400	U	U	410	U	U	66	J	J
NITROBENZENE	UG/KG	400	U	U	410	U	U	420	U	U
PENTACHLOROPHENOL	UG/KG	1900	U	U	2000	U	U	2000	U	U
PHENANTHRENE	UG/KG	120	J	J	410	U	U	3000		
PHENOL	UG/KG	400	U	U	410	U	U	420	U	U
PYRENE	UG/KG	180	J	J	410	U	U	2900		

PLUMBROOK
Additional Burning Ground
Data Summary - Soils

Report Date: 02/17/97

Sample No:		2160			2170			2180		
Sample Location:		ABGSO08			ABGSO09			ABGSO09		
Sample Date:		04-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	400	U	U	400	U	U	410	U	U
NITROBENZENE	UG/KG	400	U	U	400	U	U	410	U	U
PENTACHLOROPHENOL	UG/KG	2000	U	U	1900	U	U	2000	U	U
PHENANTHRENE	UG/KG	400	U	U	1100			410	U	U
PHENOL	UG/KG	400	U	U	400	U	U	410	U	U
PYRENE	UG/KG	400	U	U	1700			410	U	U

Additional Burning Ground

Data Summary - Soils

Report Date: 02/17/97

Sample No:		2190			2200			2210		
Sample Location:		ABGSO10			ABGSO10			ABGSO11		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			2 - 3			.5 - 1		
ABG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	390	U	U	400	U	U	380	U	U
NITROBENZENE	UG/KG	390	U	U	400	U	U	380	U	U
PENTACHLOROPHENOL	UG/KG	1900	U	U	2000	U	U	1800	U	U
PHENANTHRENE	UG/KG	310	J	J	400	U	U	86	J	J
PHENOL	UG/KG	390	U	U	400	U	U	380	U	U
PYRENE	UG/KG	400			400	U	U	120	J	J

PLUMBROOK
Additional Burning Ground
Data Summary - Soils

Report Date: 02/17/97

Sample No:		2220			2230			2240		
Sample Location:		ABGSO11			ABGSO12			ABGSO12		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	380	U	U	430	U	U	400	U	U
NITROBENZENE	UG/KG	380	U	U	430	U	U	400	U	U
PENTACHLOROPHENOL	UG/KG	1800	U	U	2100	U	U	1900	U	U
PHENANTHRENE	UG/KG	380	U	U	310	J	J	400	U	U
PHENOL	UG/KG	380	U	U	430	U	U	400	U	U
PYRENE	UG/KG	380	U	U	660			400	U	U

Sample No:		2010			2020			2030		
Sample Location:		ABGSO01			ABGSO01			ABGSO02		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			1.5 - 2			0 - .5		
ABG:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	4.1	U	U	2.1	U	U	4.8	GU	U
4,4'-DDE	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U
4,4'-DDT	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U
ALDRIN	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U
AROCLOR 1016	UG/KG	79	U	U	40	U	U	37	U	U
AROCLOR 1221	UG/KG	79	U	U	40	U	U	37	U	U
AROCLOR 1232	UG/KG	79	U	U	40	U	U	37	U	U
AROCLOR 1242	UG/KG	79	U	U	40	U	U	37	U	U
AROCLOR 1248	UG/KG	79	U	U	40	U	U	37	U	U
AROCLOR 1254	UG/KG	79	U	U	40	U	U	37	U	U
AROCLOR 1260	UG/KG	79	U	U	40	U	U	37	U	U
DIELDRIN	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U
ENDOSULFAN I	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U
ENDOSULFAN II	UG/KG	4.1	U	U	2.1	U	U	2.2	GU	U
ENDOSULFAN SULFATE	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U
ENDRIN	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U
ENDRIN ALDEHYDE	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U
ENDRIN KETONE	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U
HEPTACHLOR	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U
HEPTACHLOR EPOXIDE	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U
METHOXYCHLOR	UG/KG	7.9	U	U	4.0	U	U	3.7	U	U
TOXAPHENE	UG/KG	160	U	U	81	U	U	75	U	U
alpha-BHC	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U
alpha-CHLORDANE	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U
beta-BHC	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U
delta-BHC	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U
gamma-BHC (LINDANE)	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U
gamma-CHLORDANE	UG/KG	4.1	U	U	2.1	U	U	1.9	U	U

Sample No:		2040			2050			2060		
Sample Location:		ABGSO02			ABGSO03			ABGSO03		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
4,4'-DDE	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
4,4'-DDT	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
ALDRIN	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
AROCLOR 1016	UG/KG	38	U	U	98	GU	U	41	U	U
AROCLOR 1221	UG/KG	38	U	U	69	U	U	41	U	U
AROCLOR 1232	UG/KG	38	U	U	150	GU	U	41	U	U
AROCLOR 1242	UG/KG	38	U	U	69	U	U	41	U	U
AROCLOR 1248	UG/KG	38	U	U	75	GU	U	41	U	U
AROCLOR 1254	UG/KG	38	U	U	170	GU	U	41	U	U
AROCLOR 1260	UG/KG	38	U	U	110	X		41	U	U
DIELDRIN	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
ENDOSULFAN I	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
ENDOSULFAN II	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
ENDOSULFAN SULFATE	UG/KG	2.0	U	U	6.0	GU	U	2.1	U	U
ENDRIN	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
ENDRIN ALDEHYDE	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
ENDRIN KETONE	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
HEPTACHLOR	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
HEPTACHLOR EPOXIDE	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
METHOXYCHLOR	UG/KG	3.8	U	U	6.9	U	U	4.1	U	U
TOXAPHENE	UG/KG	78	U	U	140	U	U	84	U	U
alpha-BHC	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
alpha-CHLORDANE	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
beta-BHC	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
delta-BHC	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
gamma-BHC (LINDANE)	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U
gamma-CHLORDANE	UG/KG	2.0	U	U	3.6	U	U	2.1	U	U

Sample No:		2070			2080			2090		
Sample Location:		ABGSO04			ABGSO04			ABGSO05		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			2 - 3			0 - .5		
ABG:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
4,4'-DDE	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
4,4'-DDT	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
ALDRIN	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
AROCLOR 1016	UG/KG	130	GU	U	38	U	U	38	U	U
AROCLOR 1221	UG/KG	74	U	U	38	U	U	38	U	U
AROCLOR 1232	UG/KG	140	GU	U	38	U	U	38	U	U
AROCLOR 1242	UG/KG	74	U	U	38	U	U	38	U	U
AROCLOR 1248	UG/KG	74	U	U	38	U	U	38	U	U
AROCLOR 1254	UG/KG	350	GU	U	38	U	U	38	U	U
AROCLOR 1260	UG/KG	250	X		38	U	U	38	U	U
DIELDRIN	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
ENDOSULFAN I	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
ENDOSULFAN II	UG/KG	9.8	GU	U	1.9	U	U	2.0	U	U
ENDOSULFAN SULFATE	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
ENDRIN	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
ENDRIN ALDEHYDE	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
ENDRIN KETONE	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
HEPTACHLOR	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
HEPTACHLOR EPOXIDE	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
METHOXYCHLOR	UG/KG	7.4	U	U	3.8	U	U	3.8	U	U
TOXAPHENE	UG/KG	150	U	U	77	U	U	77	U	U
alpha-BHC	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
alpha-CHLORDANE	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
beta-BHC	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
delta-BHC	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
gamma-BHC (LINDANE)	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U
gamma-CHLORDANE	UG/KG	3.8	U	U	1.9	U	U	2.0	U	U

Sample No:		2100			2110			2120		
Sample Location:		ABGSO05			ABGSO06			ABGSO06		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
4,4'-DDE	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
4,4'-DDT	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
ALDRIN	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
AROCLOR 1016	UG/KG	40	U	U	38	U	U	48	U	U
AROCLOR 1221	UG/KG	40	U	U	38	U	U	48	U	U
AROCLOR 1232	UG/KG	40	U	U	38	U	U	48	U	U
AROCLOR 1242	UG/KG	40	U	U	38	U	U	48	U	U
AROCLOR 1248	UG/KG	40	U	U	38	U	U	48	U	U
AROCLOR 1254	UG/KG	40	U	U	38	U	U	48	U	U
AROCLOR 1260	UG/KG	40	U	U	38	U	U	48	U	U
DIELDRIN	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
ENDOSULFAN I	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
ENDOSULFAN II	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
ENDOSULFAN SULFATE	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
ENDRIN	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
ENDRIN ALDEHYDE	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
ENDRIN KETONE	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
HEPTACHLOR	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
HEPTACHLOR EPOXIDE	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
METHOXYCHLOR	UG/KG	4.0	U	U	3.8	U	U	4.8	U	U
TOXAPHENE	UG/KG	82	U	U	78	U	U	97	U	U
alpha-BHC	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
alpha-CHLORDANE	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
beta-BHC	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
delta-BHC	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
gamma-BHC (LINDANE)	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U
gamma-CHLORDANE	UG/KG	2.1	U	U	2.0	U	U	2.5	U	U

Sample No:		2130			2140			2150		
Sample Location:		ABGSO07			ABGSO07			ABGSO08		
Sample Date:		04-OCT-96			04-OCT-96			04-OCT-96		
Depth		0 - .5			2 - 3			0 - .5		
ABG:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	4.1	U	U	2.1	U	U	110	U	U
4,4'-DDE	UG/KG	4.1	U	U	2.1	U	U	210	GU	U
4,4'-DDT	UG/KG	4.1	U	U	2.1	U	U	110	U	U
ALDRIN	UG/KG	4.8	GU	U	2.1	U	U	110	U	U
AROCLOR 1016	UG/KG	80	U	U	41	U	U	3800	GU	U
AROCLOR 1221	UG/KG	80	U	U	41	U	U	2100	U	U
AROCLOR 1232	UG/KG	120	GU	U	41	U	U	2300	GU	U
AROCLOR 1242	UG/KG	80	U	U	41	U	U	2100	U	U
AROCLOR 1248	UG/KG	80	U	U	41	U	U	2100	U	U
AROCLOR 1254	UG/KG	80	U	U	41	U	U	28000	GU	U
AROCLOR 1260	UG/KG	80	U	U	41	U	U	19000		
DIELDRIN	UG/KG	4.1	U	U	2.1	U	U	120	GU	U
ENDOSULFAN I	UG/KG	4.1	U	U	2.1	U	U	110	U	U
ENDOSULFAN II	UG/KG	5.7	GU	U	2.1	U	U	480	GU	U
ENDOSULFAN SULFATE	UG/KG	4.1	U	U	2.1	U	U	110	U	U
ENDRIN	UG/KG	4.1	U	U	2.1	U	U	260	GU	U
ENDRIN ALDEHYDE	UG/KG	4.1	U	U	2.1	U	U	180	GU	U
ENDRIN KETONE	UG/KG	4.1	U	U	2.1	U	U	200	GU	U
HEPTACHLOR	UG/KG	4.1	U	U	2.1	U	U	110	U	U
HEPTACHLOR EPOXIDE	UG/KG	4.1	U	U	2.1	U	U	110	U	U
METHOXYCHLOR	UG/KG	8.0	U	U	4.1	U	U	210	U	U
TOXAPHENE	UG/KG	160	U	U	83	U	U	4300	U	U
alpha-BHC	UG/KG	4.1	U	U	2.1	U	U	110	U	U
alpha-CHLORDANE	UG/KG	4.1	U	U	2.1	U	U	110	U	U
beta-BHC	UG/KG	4.1	U	U	2.1	U	U	110	U	U
delta-BHC	UG/KG	4.1	U	U	2.1	U	U	110	U	U
gamma-BHC (LINDANE)	UG/KG	4.1	U	U	2.1	U	U	110	U	U
gamma-CHLORDANE	UG/KG	4.1	U	U	2.1	U	U	110	U	U

PLUMBROOK
Additional Burning Ground
Data Summary - Soils

Report Date: 02/17/97

Sample No:		2160			2170			2180		
Sample Location:		ABGSO08			ABGSO09			ABGSO09		
Sample Date:		04-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	2.1	U	U	41	U	U	2.1	U	U
4,4'-DDE	UG/KG	2.1	U	U	110	GU	U	2.1	U	U
4,4'-DDT	UG/KG	2.1	U	U	41	U	U	2.1	U	U
ALDRIN	UG/KG	2.1	U	U	64	GU	U	2.1	U	U
AROCLOR 1016	UG/KG	40	U	U	2500	GU	U	41	U	U
AROCLOR 1221	UG/KG	40	U	U	800	U	U	41	U	U
AROCLOR 1232	UG/KG	40	U	U	1500	GU	U	41	U	U
AROCLOR 1242	UG/KG	40	U	U	800	U	U	41	U	U
AROCLOR 1248	UG/KG	40	U	U	800	U	U	41	U	U
AROCLOR 1254	UG/KG	50	GU	U	12000	GU	U	41	U	U
AROCLOR 1260	UG/KG	40	U	U	7400			41	U	U
DIELDRIN	UG/KG	2.1	U	U	47	GU	U	2.1	U	U
ENDOSULFAN I	UG/KG	2.1	U	U	41	U	U	2.1	U	U
ENDOSULFAN II	UG/KG	2.1	U	U	180	GU	U	2.1	U	U
ENDOSULFAN SULFATE	UG/KG	2.1	U	U	41	U	U	2.1	U	U
ENDRIN	UG/KG	2.1	U	U	92	GU	U	2.1	U	U
ENDRIN ALDEHYDE	UG/KG	2.1	U	U	66	GU	U	2.1	U	U
ENDRIN KETONE	UG/KG	2.1	U	U	78	GU	U	2.1	U	U
HEPTACHLOR	UG/KG	2.1	U	U	41	U	U	2.1	U	U
HEPTACHLOR EPOXIDE	UG/KG	2.1	U	U	41	U	U	2.1	U	U
METHOXYCHLOR	UG/KG	4.0	U	U	80	U	U	4.1	U	U
TOXAPHENE	UG/KG	82	U	U	1600	U	U	82	U	U
alpha-BHC	UG/KG	2.1	U	U	41	U	U	2.1	U	U
alpha-CHLORDANE	UG/KG	2.1	U	U	41	U	U	2.1	U	U
beta-BHC	UG/KG	2.1	U	U	41	U	U	2.1	U	U
delta-BHC	UG/KG	2.1	U	U	41	U	U	2.1	U	U
gamma-BHC (LINDANE)	UG/KG	2.1	U	U	41	U	U	2.1	U	U
gamma-CHLORDANE	UG/KG	2.1	U	U	52	GU	U	2.1	U	U

Sample No:		2190			2200			2210		
Sample Location:		ABGSO10			ABGSO10			ABGSO11		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			2 - 3			.5 - 1		
ABG:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	10	U	U	2.1	U	U	1.9	U	U
4,4'-DDE	UG/KG	10	U	U	2.1	U	U	1.9	U	U
4,4'-DDT	UG/KG	10	U	U	2.1	U	U	1.9	U	U
ALDRIN	UG/KG	10	U	U	2.1	U	U	1.9	U	U
AROCLOR 1016	UG/KG	220	GU	U	40	U	U	38	U	U
AROCLOR 1221	UG/KG	190	U	U	40	U	U	38	U	U
AROCLOR 1232	UG/KG	240	GU	U	40	U	U	38	U	U
AROCLOR 1242	UG/KG	190	U	U	40	U	U	38	U	U
AROCLOR 1248	UG/KG	190	U	U	40	U	U	38	U	U
AROCLOR 1254	UG/KG	790	GU	U	40	U	U	38	U	U
AROCLOR 1260	UG/KG	600			40	U	U	38	U	U
DIELDRIN	UG/KG	10	U	U	2.1	U	U	1.9	U	U
ENDOSULFAN I	UG/KG	10	U	U	2.1	U	U	1.9	U	U
ENDOSULFAN II	UG/KG	10	U	U	2.1	U	U	2.7	GU	U
ENDOSULFAN SULFATE	UG/KG	10	U	U	2.1	U	U	1.9	U	U
ENDRIN	UG/KG	14	GU	U	2.1	U	U	1.9	U	U
ENDRIN ALDEHYDE	UG/KG	10	U	U	2.1	U	U	1.9	U	U
ENDRIN KETONE	UG/KG	10	U	U	2.1	U	U	1.9	U	U
HEPTACHLOR	UG/KG	10	U	U	2.1	U	U	1.9	U	U
HEPTACHLOR EPOXIDE	UG/KG	10	U	U	2.1	U	U	1.9	U	U
METHOXYCHLOR	UG/KG	19	U	U	4.0	U	U	3.8	U	U
TOXAPHENE	UG/KG	400	U	U	82	U	U	76	U	U
alpha-BHC	UG/KG	10	U	U	2.1	U	U	1.9	U	U
alpha-CHLORDANE	UG/KG	10	U	U	2.1	U	U	1.9	U	U
beta-BHC	UG/KG	17	GU	U	2.1	U	U	1.9	U	U
delta-BHC	UG/KG	10	U	U	2.1	U	U	1.9	U	U
gamma-BHC (LINDANE)	UG/KG	10	U	U	2.1	U	U	1.9	U	U
gamma-CHLORDANE	UG/KG	10	U	U	2.1	U	U	1.9	U	U

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Sample No:		2220			2230			2240		
Sample Location:		ABGSO11			ABGSO12			ABGSO12		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
4,4'-DDE	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
4,4'-DDT	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
ALDRIN	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
AROCLOR 1016	UG/KG	38	U	U	86	U	U	40	U	U
AROCLOR 1221	UG/KG	38	U	U	86	U	U	40	U	U
AROCLOR 1232	UG/KG	38	U	U	86	U	U	40	U	U
AROCLOR 1242	UG/KG	38	U	U	86	U	U	40	U	U
AROCLOR 1248	UG/KG	38	U	U	86	U	U	40	U	U
AROCLOR 1254	UG/KG	38	U	U	250	GU	U	40	U	U
AROCLOR 1260	UG/KG	38	U	U	180			40	U	U
DIELDRIN	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
ENDOSULFAN I	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
ENDOSULFAN II	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
ENDOSULFAN SULFATE	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
ENDRIN	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
ENDRIN ALDEHYDE	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
ENDRIN KETONE	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
HEPTACHLOR	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
HEPTACHLOR EPOXIDE	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
METHOXYCHLOR	UG/KG	3.8	U	U	8.6	U	U	4.0	U	U
TOXAPHENE	UG/KG	77	U	U	170	U	U	81	U	U
alpha-BHC	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
alpha-CHLORDANE	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
beta-BHC	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
delta-BHC	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
gamma-BHC (LINDANE)	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U
gamma-CHLORDANE	UG/KG	1.9	U	U	4.4	U	U	2.1	U	U

Sample No:		2010			2020			2030		
Sample Location:		ABGSO01			ABGSO01			ABGSO02		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			1.5 - 2			0 - .5		
ABG:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	5700			9880			5370		
ANTIMONY	MG/KG	7.2	U	UJ	7.2	U	UJ	6.7	U	UJ
ARSENIC	MG/KG	16.8			6.1			1.9		
BARIUM	MG/KG	46.5			111			24.9		
BERYLLIUM	MG/KG	0.60	U	U	0.66			0.56	U	U
CADMIUM	MG/KG	0.60	U	U	0.60	U	U	0.56	U	U
CALCIUM	MG/KG	2800			47100			834		
CHROMIUM	MG/KG	7.6			12.7			4.8		
COBALT	MG/KG	12.5			8.3			5.6	U	U
COPPER	MG/KG	37.2			9.6			3.2		
IRON	MG/KG	25200			32700			6620		
LEAD	MG/KG	26.8			11.6			9.8		
MAGNESIUM	MG/KG	1080			21900			644		
MANGANESE	MG/KG	331		J	1830		J	114		J
MERCURY	MG/KG	0.047			0.040	U	U	0.037	U	U
NICKEL	MG/KG	25.7			20.7			5.7		
POTASSIUM	MG/KG	1310			783			559	U	U
SELENIUM	MG/KG	0.84			0.60	U	U	0.56	U	U
SILVER	MG/KG	1.2	U	U	1.2	U	U	1.1	U	U
SODIUM	MG/KG	600	U	U	603	U	U	559	U	U
THALLIUM	MG/KG	2.7			1.2	U	U	1.1	U	U
VANADIUM	MG/KG	13.7			30.6			8.7		
ZINC	MG/KG	37.2			51.7			28.1		

Sample No:		2040			2050			2060		
Sample Location:		ABGSO02			ABGSO03			ABGSO03		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	9680			3670			4220		
ANTIMONY	MG/KG	6.9	U	UJ	6.3	U	UJ	7.5	U	UJ
ARSENIC	MG/KG	3.0			39.1			2.9		
BARIUM	MG/KG	23.1	U	U	41.0			25.1	U	U
BERYLLIUM	MG/KG	0.58	U	U	0.52	U	U	0.63	U	U
CADMIUM	MG/KG	0.58	U	U	0.52	U	U	0.63	U	U
CALCIUM	MG/KG	714			1270			1270		
CHROMIUM	MG/KG	10.0			6.4			8.0		
COBALT	MG/KG	6.8			5.2	U	U	6.3	U	U
COPPER	MG/KG	2.9	U	U	32.2			9.9		
IRON	MG/KG	11700			27600			9960		
LEAD	MG/KG	4.9			39.0			3.5		
MAGNESIUM	MG/KG	889			523	U	U	839		
MANGANESE	MG/KG	59.1		J	53.4		J	76.5		J
MERCURY	MG/KG	0.038	U	U	0.046			0.041	U	U
NICKEL	MG/KG	7.0			17.7			9.5		
POTASSIUM	MG/KG	579	U	U	800			627	U	U
SELENIUM	MG/KG	0.58	U	U	1.2			0.63	U	U
SILVER	MG/KG	1.2	U	U	1.0	U	U	1.3	U	U
SODIUM	MG/KG	579	U	U	523	U	U	627	U	U
THALLIUM	MG/KG	1.2	U	U	1.2			1.3	U	U
VANADIUM	MG/KG	22.1			10.9			14.9		
ZINC	MG/KG	18.7			22.0			31.3		

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Sample No:		2070			2080			2090		
Sample Location:		ABGSO04			ABGSO04			ABGSO05		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			2 - 3			0 - .5		
ABG:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	4410			5590			7700		
ANTIMONY	MG/KG	6.8	U	UJ	6.9	U	UJ	6.9	U	UJ
ARSENIC	MG/KG	12.2			3.5			1.8		
BARIUM	MG/KG	30.9			22.9	U	U	24.4		
BERYLLIUM	MG/KG	0.56	U	U	0.57	U	U	0.58	U	U
CADMIUM	MG/KG	0.56	U	U	0.57	U	U	0.58	U	U
CALCIUM	MG/KG	13000			979			806		
CHROMIUM	MG/KG	5.9			7.8			7.1		
COBALT	MG/KG	6.4			7.4			5.8	U	U
COPPER	MG/KG	32.9			4.6			2.9	U	U
IRON	MG/KG	17500			12000			7900		
LEAD	MG/KG	61.3			4.7			5.0		
MAGNESIUM	MG/KG	2020			855			668		
MANGANESE	MG/KG	127		J	284		J	51.6		J
MERCURY	MG/KG	0.043			0.038	U	U	0.038	U	U
NICKEL	MG/KG	15.3			8.1			5.4		
POTASSIUM	MG/KG	842			573	U	U	577	U	U
SELENIUM	MG/KG	0.63			0.57	U	U	0.58	U	U
SILVER	MG/KG	1.1	U	U	1.1	U	U	1.2	U	U
SODIUM	MG/KG	564	U	U	573	U	U	577	U	U
THALLIUM	MG/KG	1.1	U	U	1.1	U	U	1.2	U	U
VANADIUM	MG/KG	11.5			16.7			13.8		
ZINC	MG/KG	53.1			19.1			20.1		

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Sample No:		2100			2110			2120		
Sample Location:		ABGSO05			ABGSO06			ABGSO06		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	4840			5310			6330		
ANTIMONY	MG/KG	7.3	U	UJ	7.0	U	UJ	8.7	U	UJ
ARSENIC	MG/KG	3.6			6.2			4.8		
BARIUM	MG/KG	24.5	U	U	23.3	U	U	61.5		
BERYLLIUM	MG/KG	0.61	U	U	0.58	U	U	0.72	U	U
CADMIUM	MG/KG	0.61	U	U	0.58	U	U	0.72	U	U
CALCIUM	MG/KG	1360			591			15600		
CHROMIUM	MG/KG	9.7			8.4			10.6		
COBALT	MG/KG	6.1	U	U	5.8	U	U	7.2	U	U
COPPER	MG/KG	6.1			10.8			24.2		
IRON	MG/KG	11800			14800			13100		
LEAD	MG/KG	5.3			7.9			54.8		
MAGNESIUM	MG/KG	877			608			2280		
MANGANESE	MG/KG	151		J	38.3		J	155		J
MERCURY	MG/KG	0.040	U	U	0.038	U	U	0.12		
NICKEL	MG/KG	8.6			9.2			13.0		
POTASSIUM	MG/KG	612	U	U	581	U	U	1050		
SELENIUM	MG/KG	0.61	U	U	0.58	U	U	0.72	U	U
SILVER	MG/KG	1.2	U	U	1.2	U	U	1.4	U	U
SODIUM	MG/KG	612	U	U	581	U	U	723	U	U
THALLIUM	MG/KG	1.2	U	U	1.2	U	U	1.4	U	U
VANADIUM	MG/KG	16.7			19.2			19.6		
ZINC	MG/KG	24.9			24.8			105		

Sample No:		2130			2140			2150		
Sample Location:		ABGSO07			ABGSO07			ABGSO08		
Sample Date:		04-OCT-96			04-OCT-96			04-OCT-96		
Depth		0 - .5			2 - 3			0 - .5		
ABG:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	3670			6180			4600		
ANTIMONY	MG/KG	7.3	U	UJ	7.4	U	UJ	7.7	U	UJ
ARSENIC	MG/KG	7.6			1.9			19.8		
BARIUM	MG/KG	42.5			28.6			60.3		
BERYLLIUM	MG/KG	0.60	U	U	0.62	U	U	0.64	U	U
CADMIUM	MG/KG	0.60	U	U	0.62	U	U	9.2		
CALCIUM	MG/KG	16100			3700			1640		
CHROMIUM	MG/KG	5.9			9.4			25.6		
COBALT	MG/KG	6.0	U	U	6.2	U	U	7.3		
COPPER	MG/KG	17.3			3.8			401		
IRON	MG/KG	14500			8300			130000		
LEAD	MG/KG	35.4			3.7			690		
MAGNESIUM	MG/KG	2820			1010			639	U	U
MANGANESE	MG/KG	137		J	139		J	537		J
MERCURY	MG/KG	0.040	U	U	0.041	U	U	0.46		
NICKEL	MG/KG	13.4			7.2			81.9		
POTASSIUM	MG/KG	605	U	U	617	U	U	770		
SELENIUM	MG/KG	0.60	U	U	0.62	U	U	1.1		
SILVER	MG/KG	1.2	U	U	1.2	U	U	1.3	U	U
SODIUM	MG/KG	605	U	U	617	U	U	639	U	U
THALLIUM	MG/KG	1.2	U	U	1.2	U	U	3.1		
VANADIUM	MG/KG	10.7			18.4			6.4	U	U
ZINC	MG/KG	41.1			19.2			430		

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Sample No:		2160			2170			2180		
Sample Location:		ABGSO08			ABGSO09			ABGSO09		
Sample Date:		04-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	7250			6020			4160		
ANTIMONY	MG/KG	7.3	U	UJ	7.3	U	UJ	7.4	U	UJ
ARSENIC	MG/KG	2.1			23.7			2.3		
BARIUM	MG/KG	31.1			71.6			24.6	U	U
BERYLLIUM	MG/KG	0.61	U	U	1.0			0.62	U	U
CADMIUM	MG/KG	0.61	U	U	8.8			0.62	U	U
CALCIUM	MG/KG	5040			3980			15400		
CHROMIUM	MG/KG	9.6			40.3			8.4		
COBALT	MG/KG	7.5			17.4			6.2	U	U
COPPER	MG/KG	9.1			2720			3.1	U	U
IRON	MG/KG	12700			159000			8500		
LEAD	MG/KG	6.8			556		J	3.8		J
MAGNESIUM	MG/KG	1640			1170			7290		
MANGANESE	MG/KG	77.6		J	1020			70.0		
MERCURY	MG/KG	0.040	U	U	1.2			0.041	U	U
NICKEL	MG/KG	8.1			117			7.0		
POTASSIUM	MG/KG	612	U	U	1680			615	U	U
SELENIUM	MG/KG	0.61	U	U	0.93			0.62	U	U
SILVER	MG/KG	1.2	U	U	1.2	U	U	1.2	U	U
SODIUM	MG/KG	612	U	U	605	U	U	615	U	U
THALLIUM	MG/KG	1.2	U	U	5.5		J	1.2	U	UJ
VANADIUM	MG/KG	22.4			6.0	U	U	19.8		
ZINC	MG/KG	26.9			2720			18.4		

Sample No:		2190			2200			2210		
Sample Location:		ABGSO10			ABGSO10			ABGSO11		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			2 - 3			.5 - 1		
ABG:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	4260			2650			6610		
ANTIMONY	MG/KG	7.1	U	UJ	7.3	U	UJ	6.8	U	UJ
ARSENIC	MG/KG	19.9			2.8			7.6		
BARIUM	MG/KG	38.2			24.4	U	U	98.6		
BERYLLIUM	MG/KG	0.63			0.61	U	U	0.72		
CADMIUM	MG/KG	0.72			0.61	U	U	0.57	U	U
CALCIUM	MG/KG	1380			13600			5950		
CHROMIUM	MG/KG	6.7			6.0			8.8		
COBALT	MG/KG	5.9	U	U	6.7			8.4		
COPPER	MG/KG	169			3.8			37.2		
IRON	MG/KG	32300			9350			27900		
LEAD	MG/KG	213		J	5.7		J	64.3		J
MAGNESIUM	MG/KG	590	U	U	6290			1360		
MANGANESE	MG/KG	54.8			57.6			145		
MERCURY	MG/KG	0.20			0.040	U	U	0.038	U	U
NICKEL	MG/KG	25.1			12.0			23.3		
POTASSIUM	MG/KG	2080			611	U	U	571		
SELENIUM	MG/KG	1.8			0.61	U	U	0.61		
SILVER	MG/KG	1.2			1.2	U	U	1.1	U	U
SODIUM	MG/KG	590	U	U	611	U	U	569	U	U
THALLIUM	MG/KG	2.5		J	1.2	U	UJ	1.1	U	UJ
VANADIUM	MG/KG	14.4			14.6			13.5		
ZINC	MG/KG	143			18.6			48.0		

Sample No:		2220			2230			2240		
Sample Location:		ABGSO11			ABGSO12			ABGSO12		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	4970			9370			5670		
ANTIMONY	MG/KG	6.9	U	UJ	7.8	U	UJ	7.3	U	UJ
ARSENIC	MG/KG	2.9			13.7			1.2	U	U
BARIUM	MG/KG	22.9	U	U	49.6			24.8		
BERYLLIUM	MG/KG	0.57	U	U	0.80			0.61	U	U
CADMIUM	MG/KG	0.57	U	U	0.71			0.61	U	U
CALCIUM	MG/KG	1480			3800			8920		
CHROMIUM	MG/KG	7.2			11.4			9.2		
COBALT	MG/KG	5.8			15.4			6.9		
COPPER	MG/KG	3.9			101			3.0	U	U
IRON	MG/KG	9010			29900			6830		
LEAD	MG/KG	3.4		J	142		J	3.3		J
MAGNESIUM	MG/KG	925			1160			4720		
MANGANESE	MG/KG	192			158			55.7		
MERCURY	MG/KG	0.038	U	U	0.066			0.040	U	U
NICKEL	MG/KG	6.9			33.6			9.5		
POTASSIUM	MG/KG	573	U	U	1700			606	U	U
SELENIUM	MG/KG	0.57	U	U	1.1			0.61	U	U
SILVER	MG/KG	1.1	U	U	1.3	U	U	1.2	U	U
SODIUM	MG/KG	573	U	U	652	U	U	606	U	U
THALLIUM	MG/KG	1.1	U	UJ	1.5		J	1.2	U	UJ
VANADIUM	MG/KG	15.6			22.2			19.5		
ZINC	MG/KG	17.6			105			19.3		

Sample No:		2010			2020			2030		
Sample Location:		ABGSO01			ABGSO01			ABGSO02		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			1.5 - 2			0 - .5		
ABG:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
HMX	UG/KG	500	U	U	500	U	U	500	U	U
NITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
RDX	UG/KG	500	U	U	500	U	U	500	U	U
TETRYL	UG/KG	650	U	U	650	U	U	650	U	U

PLUMBROOK
Additional Burning Ground
Data Summary - Soils

Report Date: 02/17/97

Sample No:		2040			2050			2060		
Sample Location:		ABGSO02			ABGSO03			ABGSO03		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
HMX	UG/KG	500	U	U	500	U	U	500	U	U
NITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
RDX	UG/KG	500	U	U	500	U	U	500	U	U
TETRYL	UG/KG	650	U	U	650	U	U	650	U	U

Additional Burning Ground

Data Summary - Soils

Report Date: 02/17/97

Sample No:		2070			2080			2090		
Sample Location:		ABGSO04			ABGSO04			ABGSO05		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			2 - 3			0 - .5		
ABG:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	370			250	U	U	250	U	U
2,4-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	400	GU	U	250	U	U	250	U	U
HMX	UG/KG	500	U	U	500	U	U	500	U	U
NITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
RDX	UG/KG	500	U	U	500	U	U	500	U	U
TETRYL	UG/KG	650	U	U	650	U	U	650	U	U

PLUMBROOK
Additional Burning Ground
Data Summary - Soils

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Sample No:		2100			2110			2120		
Sample Location:		ABGSO05			ABGSO06			ABGSO06		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
HMX	UG/KG	500	U	U	500	U	U	500	U	U
NITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
RDX	UG/KG	500	U	U	500	U	U	500	U	U
TETRYL	UG/KG	650	U	U	650	U	U	650	U	U

Additional Burning Ground

Data Summary - Soils

Report Date: 02/17/97

Sample No:		2130			2140			2150		
Sample Location:		ABGSO07			ABGSO07			ABGSO08		
Sample Date:		04-OCT-96			04-OCT-96			04-OCT-96		
Depth		0 - .5			2 - 3			0 - .5		
ABG:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	280			250	U	U	600		
2,4-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	660		
2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
HMX	UG/KG	500	U	U	500	U	U	500	U	U
NITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
RDX	UG/KG	500	U	U	500	U	U	500	U	U
TETRYL	UG/KG	650	U	U	650	U	U	650	U	U

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Additional Burning Ground
Data Summary - Soils

Report Date: 02/17/97

Sample No:		2160			2170			2180		
Sample Location:		ABGSO08			ABGSO09			ABGSO09		
Sample Date:		04-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	250	U	U	2000			250	U	U
2,4-DINITROTOLUENE	UG/KG	250	U	U	4700			250	U	U
2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	250	U	U	3100	GU	U	250	U	U
HMX	UG/KG	500	U	U	500	U	U	1000		
NITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
RDX	UG/KG	500	U	U	500	U	U	500	U	U
TETRYL	UG/KG	650	U	U	650	U	U	650	U	U

Sample No:		2190			2200			2210		
Sample Location:		ABGSO10			ABGSO10			ABGSO11		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			2 - 3			.5 - 1		
ABG:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
HMX	UG/KG	500	U	U	1500			500	U	U
NITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
RDX	UG/KG	500	U	U	500	U	U	500	U	U
TETRYL	UG/KG	650	U	U	650	U	U	650	U	U

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Additional Burning Ground
Data Summary - Soils

Report Date: 02/17/97

Sample No:		2220			2230			2240		
Sample Location:		ABGSO11			ABGSO12			ABGSO12		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
HMX	UG/KG	500	U	U	500	U	U	500	U	U
NITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
RDX	UG/KG	500	U	U	500	U	U	500	U	U
TETRYL	UG/KG	650	U	U	650	U	U	650	U	U

Report Date: 02/17/97

Sample No:		2010			2020			2030		
Sample Location:		ABGSO01			ABGSO01			ABGSO02		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			1.5 - 2			0 - .5		
ABG:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.60	U	U	0.60	U	U	0.56	U	U

PLUMBROOK
Additional Burning Ground
Data Summary - Soils

Report Date: 02/17/97

Sample No:		2040			2050			2060		
Sample Location:		ABGSO02			ABGSO03			ABGSO03		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.58	U	U	0.52	U	U	0.63	U	U

Sample No:		2070			2080			2090		
Sample Location:		ABGSO04			ABGSO04			ABGSO05		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			2 - 3			0 - .5		
ABG:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.56	U	U	0.57	U	U	0.58	U	U

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Additional Burning Ground
Data Summary - Soils

Report Date: 02/17/97

Sample No:		2100			2110			2120		
Sample Location:		ABGSO05			ABGSO06			ABGSO06		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.61	U	U	0.58	U	U	0.72	U	U

Sample No:		2130			2140			2150		
Sample Location:		ABGSO07			ABGSO07			ABGSO08		
Sample Date:		04-OCT-96			04-OCT-96			04-OCT-96		
Depth		0 - .5			2 - 3			0 - .5		
ABG:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.60	U	U	0.62	U	U	0.64	U	U

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Additional Burning Ground
Data Summary - Soils

Report Date: 02/17/97

Sample No:		2160			2170			2180		
Sample Location:		ABGSO08			ABGSO09			ABGSO09		
Sample Date:		04-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.61	U	U	0.60	U	U	0.62	U	U

Sample No:		2190			2200			2210		
Sample Location:		ABGSO10			ABGSO10			ABGSO11		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		0 - .5			2 - 3			.5 - 1		
ABG:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.59	U	U	0.61	U	U	0.57	U	U

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Additional Burning Ground
Data Summary - Soils

Report Date: 02/17/97

Sample No:		2220			2230			2240		
Sample Location:		ABGSO11			ABGSO12			ABGSO12		
Sample Date:		03-OCT-96			03-OCT-96			03-OCT-96		
Depth		2 - 3			0 - .5			2 - 3		
ABG:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.57	U	U	0.65	U	U	0.61	U	U

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Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4010		4020		4030	
Sample Location:				PH2SO01		PH2SO01		PH2SO02	
Sample Date:				28-SEP-96		28-SEP-96		29-SEP-96	
Depth				0-.5		2-3		0-.5	
PH2:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
BENZO(A)PYRENE		MG/KG	0.088	.17	J				

PLUMBROOK

Power House Number 2 Ash Pit

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				4040		4050		4060	
Sample Location:				PH2SO02		PH2SO03		PH2SO03	
Sample Date:				29-SEP-96		29-SEP-96		29-SEP-96	
Depth				2-3		0-.5		2-3	
PH2:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
BENZO(A)PYRENE		MG/KG	0.088			.099	J		

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Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4070		4080		4090	
Sample Location:				PH2SO04		PH2SO04		PH2SO05	
Sample Date:				28-SEP-96		28-SEP-96		28-SEP-96	
Depth				0-.5		2-3		0-.5	
PH2:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
BENZO(A)PYRENE		MG/KG	0.088						

PLUMBROOK

Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4100		4110		4120	
Sample Location:				PH2SO05		PH2SO06		PH2SO06	
Sample Date:				28-SEP-96		29-SEP-96		29-SEP-96	
Depth				2-3		0-.5		2-3	
PH2:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
BENZO(A)PYRENE		MG/KG	0.088						

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Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4130		4140		4150	
Sample Location:				PH2SO07		PH2SO07		PH2SO08	
Sample Date:				29-SEP-96		29-SEP-96		28-SEP-96	
Depth				0-.5		2-3		0-.5	
PH2:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
BENZO(A)PYRENE		MG/KG	0.088						

PLUMBROOK

Power House Number 2 Ash Pit

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				4160		4170		4180	
Sample Location:				PH2SO08		PH2SO09		PH2SO09	
Sample Date:				28-SEP-96		29-SEP-96		29-SEP-96	
Depth				2-3		0-.5		2-3	
PH2:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
BENZO(A)PYRENE		MG/KG	0.088						

PLUMBROOK

Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4190		4200		4210	
Sample Location:				PH2SO10		PH2SO10		PH2SO11	
Sample Date:				29-SEP-96		29-SEP-96		29-SEP-96	
Depth				0-.5		2-3		0-.5	
PH2:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
BENZO(A)PYRENE		MG/KG	0.088						

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Power House Number 2 Ash Pit

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				4220		4230		4240	
Sample Location:				PH2SO11		PH2SO12		PH2SO12	
Sample Date:				29-SEP-96		29-SEP-96		29-SEP-96	
Depth				2-3		0-.5		3-4	
PH2:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
BENZO(A)PYRENE		MG/KG	0.088						

PLUM BROOK

Power House Number 2 Ash Pit

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				4010		4020		4030	
Sample Location:				PH2SO01		PH2SO01		PH2SO02	
Sample Date:				28-SEP-96		28-SEP-96		29-SEP-96	
Depth				0-.5		2-3		0-.5	
PH2:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800	12700				8210	
ARSENIC		MG/KG	.43	11.6		4.8		17.8	
BERYLLIUM		MG/KG	0.15	1.2				1.1	
CALCIUM		MG/KG		8630		8390		9840	
IRON		MG/KG	2300	38700		14000		74000	
MAGNESIUM		MG/KG		2960		3420		1320	
MANGANESE		MG/KG	160	189		259		1020	
POTASSIUM		MG/KG		1410		1020		950	
THALLIUM		MG/KG	0.51	1.9				2.9	

PLUMBROOK

Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4040		4050		4060	
Sample Location:				PH2SO02		PH2SO03		PH2SO03	
Sample Date:				29-SEP-96		29-SEP-96		29-SEP-96	
Depth				2-3		0-.5		2-3	
PH2:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800			8940			
ARSENIC		MG/KG	.43	3.6		15.1		6.2	
BERYLLIUM		MG/KG	0.15			1.2			
CALCIUM		MG/KG		1640		9290		2560	
IRON		MG/KG	2300	10500		28900		18000	
MAGNESIUM		MG/KG		1190		2010		2050	
MANGANESE		MG/KG	160			494		236	
POTASSIUM		MG/KG				982		892	
THALLIUM		MG/KG	0.51					1.3	

PLUM...ROOK

Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4070		4080		4090	
Sample Location:				PH2SO04		PH2SO04		PH2SO05	
Sample Date:				28-SEP-96		28-SEP-96		28-SEP-96	
Depth				0-.5		2-3		0-.5	
PH2:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800	13900		9490		8300	
ARSENIC		MG/KG	.43	7.0		7.1		20.7	
BERYLLIUM		MG/KG	0.15	0.83		0.60		1.4	
CALCIUM		MG/KG		2890		2390		9450	
IRON		MG/KG	2300	25200		22500		45400	
MAGNESIUM		MG/KG		3440		2500		957	
MANGANESE		MG/KG	160	430		464		350	
POTASSIUM		MG/KG		1830		1130		1420	
THALLIUM		MG/KG	0.51					1.9	

PLUMBROOK

Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4100		4110		4120	
Sample Location:				PH2SO05		PH2SO06		PH2SO06	
Sample Date:				28-SEP-96		29-SEP-96		29-SEP-96	
Depth				2-3		0-.5		2-3	
PH2:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800	9920		9850		8570	
ARSENIC		MG/KG	.43	5.5		19.0		4.4	
BERYLLIUM		MG/KG	0.15	0.76		1.0		0.76	
CALCIUM		MG/KG		3020		4890		996	
IRON		MG/KG	2300	22500		107000		23700	
MAGNESIUM		MG/KG		2600		704		2280	
MANGANESE		MG/KG	160	693		165			
POTASSIUM		MG/KG		1080		1000		957	
THALLIUM		MG/KG	0.51			4.4			

PLUM...ROOK

Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4130		4140		4150	
Sample Location:				PH2SO07		PH2SO07		PH2SO08	
Sample Date:				29-SEP-96		29-SEP-96		28-SEP-96	
Depth				0-.5		2-3		0-.5	
PH2:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800					11500	
ARSENIC		MG/KG	.43					6.3	
BERYLLIUM		MG/KG	0.15					0.73	
CALCIUM		MG/KG						4260	
IRON		MG/KG	2300					21300	
MAGNESIUM		MG/KG						2770	
MANGANESE		MG/KG	160					450	
POTASSIUM		MG/KG						1770	
THALLIUM		MG/KG	0.51						

PLUMBROOK

Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4160		4170		4180	
Sample Location:				PH2SO08		PH2SO09		PH2SO09	
Sample Date:				28-SEP-96		29-SEP-96		29-SEP-96	
Depth				2-3		0-.5		2-3	
PH2:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800			13800			
ARSENIC		MG/KG	.43	5.1		9.3		5.0	
BERYLLIUM		MG/KG	0.15			0.96			
CALCIUM		MG/KG		1910		4780		2200	
IRON		MG/KG	2300	16200		27700		16700	
MAGNESIUM		MG/KG		1760		3400		2110	
MANGANESE		MG/KG	160	565		663		305	
POTASSIUM		MG/KG		774		2260		952	
THALLIUM		MG/KG	0.51	1.5					

PLUMBROOK

Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4190		4200		4210	
Sample Location:				PH2SO10		PH2SO10		PH2SO11	
Sample Date:				29-SEP-96		29-SEP-96		29-SEP-96	
Depth				0-.5		2-3		0-.5	
PH2:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800	10500				10900	
ARSENIC		MG/KG	.43	16.2		4.4		13.6	
BERYLLIUM		MG/KG	0.15	1.2				1.3	
CALCIUM		MG/KG		8840		1730		4650	
IRON		MG/KG	2300	38000		13900		29300	
MAGNESIUM		MG/KG		1860		1640		1840	
MANGANESE		MG/KG	160	423	J			394	J
POTASSIUM		MG/KG		1540		661		1660	
THALLIUM		MG/KG	0.51	5.0		2.0		3.9	

PLUMBROOK

Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4220		4230		4240	
Sample Location:				PH2SO11		PH2SO12		PH2SO12	
Sample Date:				29-SEP-96		29-SEP-96		29-SEP-96	
Depth				2-3		0-.5		3-4	
PH2:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800	9880		11600			
ARSENIC		MG/KG	.43	5.8		21.2		4.3	
BERYLLIUM		MG/KG	0.15	0.70		1.2			
CALCIUM		MG/KG		3320		9120		1870	
IRON		MG/KG	2300	23100		70300		12800	
MAGNESIUM		MG/KG		3090		913		1420	
MANGANESE		MG/KG	160	1560	J	258	J		
POTASSIUM		MG/KG		1130		1440		724	
THALLIUM		MG/KG	0.51	2.4		8.5		1.4	

PLUM...ROOK

Power House Number 2 Ash Pit

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				4010		4020		4030	
Sample Location:				PH2SO01		PH2SO01		PH2SO02	
Sample Date:				28-SEP-96		28-SEP-96		29-SEP-96	
Depth				0-.5		2-3		0-.5	
PH2:CYANIDE	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
TOTAL CYANIDE		MG/KG							

PLUMBROOK

Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4040		4050		4060	
Sample Location:				PH2SO02		PH2SO03		PH2SO03	
Sample Date:				29-SEP-96		29-SEP-96		29-SEP-96	
Depth				2-3		0-.5		2-3	
PH2:CYANIDE	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
TOTAL CYANIDE		MG/KG							

PLUM...ROOK

Power House Number 2 Ash Pit

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				4070		4080		4090	
Sample Location:				PH2SO04		PH2SO04		PH2SO05	
Sample Date:				28-SEP-96		28-SEP-96		28-SEP-96	
Depth				0-.5		2-3		0-.5	
PH2:CYANIDE	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
TOTAL CYANIDE		MG/KG							

PLUMBROOK

Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4100		4110		4120	
Sample Location:				PH2SO05		PH2SO06		PH2SO06	
Sample Date:				28-SEP-96		29-SEP-96		29-SEP-96	
Depth				2-3		0-.5		2-3	
PH2:CYANIDE	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
TOTAL CYANIDE		MG/KG							

PLUMBROOK

Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4130		4140		4150	
Sample Location:				PH2SO07		PH2SO07		PH2SO08	
Sample Date:				29-SEP-96		29-SEP-96		28-SEP-96	
Depth				0-.5		2-3		0-.5	
PH2:CYANIDE	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
TOTAL CYANIDE		MG/KG							

PLUMBROOK

Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4160		4170		4180	
Sample Location:				PH2SO08		PH2SO09		PH2SO09	
Sample Date:				28-SEP-96		29-SEP-96		29-SEP-96	
Depth				2-3		0-.5		2-3	
PH2:CYANIDE	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
TOTAL CYANIDE		MG/KG				0.71			

PLUMBROOK

Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4190		4200		4210	
Sample Location:				PH2SO10		PH2SO10		PH2SO11	
Sample Date:				29-SEP-96		29-SEP-96		29-SEP-96	
Depth				0-.5		2-3		0-.5	
PH2:CYANIDE	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
TOTAL CYANIDE		MG/KG		0.89					

PLUMBROOK

Power House Number 2 Ash Pit

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				4220		4230		4240	
Sample Location:				PH2SO11		PH2SO12		PH2SO12	
Sample Date:				29-SEP-96		29-SEP-96		29-SEP-96	
Depth				2-3		0-.5		3-4	
PH2:CYANIDE	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
TOTAL CYANIDE		MG/KG							

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Power House Number 2 Ash Pit
Data Summary - Soils

Report Date: 02/15/97

PH2:VOLATILES	Units	4010 PH2SO01 28-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4020 PH2SO01 28-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4030 PH2SO02 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	41	U	U	5.5	U	U	38	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	41	U	U	5.5	U	U	38	U	U
1,1,2-TRICHLOROETHANE	UG/KG	41	U	U	5.5	U	U	38	U	U
1,1-DICHLOROETHANE	UG/KG	41	U	U	5.5	U	U	38	U	U
1,1-DICHLOROETHENE	UG/KG	41	U	U	5.5	U	U	38	U	U
1,2-DICHLOROETHANE	UG/KG	41	U	U	5.5	U	U	38	U	U
1,2-DICHLOROETHENE	UG/KG	41	U	U	5.5	U	U	38	U	U
1,2-DICHLOROPROPANE	UG/KG	41	U	U	5.5	U	U	38	U	U
2-BUTANONE	UG/KG	160	U	U	22	U	U	150	U	U
2-HEXANONE	UG/KG	160	U	U	22	U	U	150	U	U
4-METHYL-2-PENTANONE	UG/KG	160	U	U	22	U	U	150	U	U
ACETONE	UG/KG	160	U	U	22	U	U	150	U	U
BENZENE	UG/KG	41	U	U	5.5	U	U	38	U	U
BROMODICHLOROMETHANE	UG/KG	41	U	U	5.5	U	U	38	U	U
BROMOFORM	UG/KG	41	U	U	5.5	U	U	38	U	U
BROMOMETHANE	UG/KG	81	U	U	11	U	U	77	U	U
CARBON DISULFIDE	UG/KG	41	U	U	5.5	U	U	38	U	U
CARBON TETRACHLORIDE	UG/KG	41	U	U	5.5	U	U	38	U	U
CHLOROBENZENE	UG/KG	41	U	U	5.5	U	U	38	U	U
CHLOROETHANE	UG/KG	81	U	U	11	U	U	77	U	U
CHLOROFORM	UG/KG	41	U	U	5.5	U	U	38	U	U
CHLOROMETHANE	UG/KG	81	U	U	11	U	U	77	U	U
DIBROMOCHLOROMETHANE	UG/KG	41	U	U	5.5	U	U	38	U	U
ETHYLBENZENE	UG/KG	41	U	U	5.5	U	U	38	U	U
METHYLENE CHLORIDE	UG/KG	41	J B	U	5.5	U	U	38	J B	U
STYRENE	UG/KG	41	U	U	5.5	U	U	38	U	U
TETRACHLOROETHENE	UG/KG	41	U	U	5.5	U	U	38	U	U
TOLUENE	UG/KG	41	U	U	5.5	U	U	38	U	U
TOTAL XYLENES	UG/KG	41	U	U	5.5	U	U	38	U	U

PLUMBROOK

Power House Number 2 Ash Pit

Data Summary - Soils

Report Date: 02/15/97

PH2:VOLATILES	Units	4040 PH2SO02 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4050 PH2SO03 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4060 PH2SO03 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	5.8	U	U	43	U	UJ	6.4	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	5.8	U	U	43	U	UJ	6.4	U	U
1,1,2-TRICHLOROETHANE	UG/KG	5.8	U	U	43	U	UJ	6.4	U	U
1,1-DICHLOROETHANE	UG/KG	5.8	U	U	43	U	U	6.4	U	U
1,1-DICHLOROETHENE	UG/KG	5.8	U	U	43	U	U	6.4	U	U
1,2-DICHLOROETHANE	UG/KG	5.8	U	U	43	U	U	6.4	U	U
1,2-DICHLOROETHENE	UG/KG	5.8	U	U	43	U	U	6.4	U	U
1,2-DICHLOROPROPANE	UG/KG	5.8	U	U	43	U	UJ	6.4	U	U
2-BUTANONE	UG/KG	23	U	U	170	U	U	25	U	U
2-HEXANONE	UG/KG	23	U	U	170	U	UJ	25	U	U
4-METHYL-2-PENTANONE	UG/KG	23	U	U	170	U	UJ	25	U	U
ACETONE	UG/KG	23	U	U	170	U	U	25	U	U
BENZENE	UG/KG	5.8	U	U	43	U	UJ	6.4	U	U
BROMODICHLOROMETHANE	UG/KG	5.8	U	U	43	U	UJ	6.4	U	U
BROMOFORM	UG/KG	5.8	U	U	43	U	UJ	6.4	U	U
BROMOMETHANE	UG/KG	12	U	U	86	U	U	13	U	U
CARBON DISULFIDE	UG/KG	5.8	U	U	43	U	U	6.4	U	U
CARBON TETRACHLORIDE	UG/KG	5.8	U	U	43	U	UJ	6.4	U	U
CHLOROBENZENE	UG/KG	5.8	U	U	43	U	UJ	6.4	U	U
CHLOROETHANE	UG/KG	12	U	U	86	U	U	13	U	U
CHLOROFORM	UG/KG	5.8	U	U	43	U	U	6.4	U	U
CHLOROMETHANE	UG/KG	12	U	U	86	U	U	13	U	U
DIBROMOCHLOROMETHANE	UG/KG	5.8	U	U	43	U	UJ	6.4	U	U
ETHYLBENZENE	UG/KG	5.8	U	U	43	U	UJ	6.4	U	U
METHYLENE CHLORIDE	UG/KG	5.8	U	U	43	B	U	6.4	U	U
STYRENE	UG/KG	5.8	U	U	43	U	UJ	6.4	U	U
TETRACHLOROETHENE	UG/KG	5.8	U	U	43	U	UJ	6.4	U	U
TOLUENE	UG/KG	5.8	U	U	18	J	J	11		
TOTAL XYLENES	UG/KG	5.8	U	U	43	U	UJ	6.5		

PH2:VOLATILES	Units	4070 PH2SO04 28-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4080 PH2SO04 28-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4090 PH2SO05 28-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
1,1,2,2-TETRACHLOROETHANE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
1,1,2-TRICHLOROETHANE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
1,1-DICHLOROETHANE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
1,1-DICHLOROETHENE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
1,2-DICHLOROETHANE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
1,2-DICHLOROETHENE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
1,2-DICHLOROPROPANE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
2-BUTANONE	UG/KG	25	U	U	23	U	U	32	U	UJ
2-HEXANONE	UG/KG	25	U	U	23	U	U	32	U	UJ
4-METHYL-2-PENTANONE	UG/KG	25	U	U	23	U	U	32	U	UJ
ACETONE	UG/KG	120		J	23	U	U	32	U	UJ
BENZENE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
BROMODICHLOROMETHANE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
BROMOFORM	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
BROMOMETHANE	UG/KG	13	U	U	12	U	U	16	U	UJ
CARBON DISULFIDE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
CARBON TETRACHLORIDE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
CHLOROBENZENE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
CHLOROETHANE	UG/KG	13	U	U	12	U	U	16	U	UJ
CHLOROFORM	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
CHLOROMETHANE	UG/KG	13	U	U	12	U	U	16	U	UJ
DIBROMOCHLOROMETHANE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
ETHYLBENZENE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
METHYLENE CHLORIDE	UG/KG	6.3	U	U	5.8	U	U	52		J
STYRENE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
TETRACHLOROETHENE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
TOLUENE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
TOTAL XYLENES	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ

PLUMBROOK
Power House Number 2 Ash Pit
Data Summary - Soils

Report Date: 02/15/97

PH2:VOLATILES	Units	4100 PH2SO05 28-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4110 PH2SO06 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4120 PH2SO06 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	28	U	U	33	U	U	32	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	28	U	U	33	U	U	32	U	U
1,1,2-TRICHLOROETHANE	UG/KG	28	U	U	33	U	U	32	U	U
1,1-DICHLOROETHANE	UG/KG	28	U	U	33	U	U	32	U	U
1,1-DICHLOROETHENE	UG/KG	28	U	U	33	U	U	32	U	U
1,2-DICHLOROETHANE	UG/KG	28	U	U	33	U	U	32	U	U
1,2-DICHLOROETHENE	UG/KG	28	U	U	33	U	U	32	U	U
1,2-DICHLOROPROPANE	UG/KG	28	U	U	33	U	U	32	U	U
2-BUTANONE	UG/KG	110	U	U	130	U	U	130	U	U
2-HEXANONE	UG/KG	110	U	U	130	U	U	130	U	U
4-METHYL-2-PENTANONE	UG/KG	110	U	U	130	U	U	130	U	U
ACETONE	UG/KG	120			42	J	J	130	U	U
BENZENE	UG/KG	28	U	U	33	U	U	32	U	U
BROMODICHLOROMETHANE	UG/KG	28	U	U	33	U	U	32	U	U
BROMOFORM	UG/KG	28	U	U	33	U	U	32	U	U
BROMOMETHANE	UG/KG	57	U	U	65	U	U	64	U	U
CARBON DISULFIDE	UG/KG	28	U	U	33	U	U	32	U	U
CARBON TETRACHLORIDE	UG/KG	28	U	U	33	U	U	32	U	U
CHLOROBENZENE	UG/KG	28	U	U	33	U	U	32	U	U
CHLOROETHANE	UG/KG	57	U	U	65	U	U	64	U	U
CHLOROFORM	UG/KG	28	U	U	33	U	U	32	U	U
CHLOROMETHANE	UG/KG	57	U	U	65	U	U	64	U	U
DIBROMOCHLOROMETHANE	UG/KG	28	U	U	33	U	U	32	U	U
ETHYLBENZENE	UG/KG	28	U	U	33	U	U	32	U	U
METHYLENE CHLORIDE	UG/KG	28	J B	U	33	J B	U	32	J B	U
STYRENE	UG/KG	28	U	U	33	U	U	32	U	U
TETRACHLOROETHENE	UG/KG	28	U	U	33	U	U	32	U	U
TOLUENE	UG/KG	28	U	U	33	U	U	32	U	U
TOTAL XYLENES	UG/KG	28	U	U	33	U	U	32	U	U

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PH2:VOLATILES	Units	4130 PH2SO07 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4140 PH2SO07 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4150 PH2SO08 28-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
1,1,2-TRICHLOROETHANE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
1,1-DICHLOROETHANE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
1,1-DICHLOROETHENE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
1,2-DICHLOROETHANE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
1,2-DICHLOROETHENE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
1,2-DICHLOROPROPANE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
2-BUTANONE	UG/KG	170	U	U	23	U	U	27	U	U
2-HEXANONE	UG/KG	170	U	U	23	U	U	27	U	U
4-METHYL-2-PENTANONE	UG/KG	170	U	U	23	U	U	27	U	U
ACETONE	UG/KG	170	U	U	23	U	U	27	U	U
BENZENE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
BROMODICHLOROMETHANE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
BROMOFORM	UG/KG	42	U	U	5.7	U	U	6.7	U	U
BROMOMETHANE	UG/KG	85	U	U	11	U	U	13	U	U
CARBON DISULFIDE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
CARBON TETRACHLORIDE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
CHLOROBENZENE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
CHLOROETHANE	UG/KG	85	U	U	11	U	U	13	U	U
CHLOROFORM	UG/KG	42	U	U	5.7	U	U	6.7	U	U
CHLOROMETHANE	UG/KG	85	U	U	11	U	U	13	U	U
DIBROMOCHLOROMETHANE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
ETHYLBENZENE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
METHYLENE CHLORIDE	UG/KG	42	U	U	9.9		U	8.2		U
STYRENE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
TETRACHLOROETHENE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
TOLUENE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
TOTAL XYLENES	UG/KG	42	U	U	5.7	U	U	6.7	U	U

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PH2:VOLATILES	Units	4160 PH2SO08 28-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4170 PH2SO09 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4180 PH2SO09 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
1,1,2-TRICHLOROETHANE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
1,1-DICHLOROETHANE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
1,1-DICHLOROETHENE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
1,2-DICHLOROETHANE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
1,2-DICHLOROETHENE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
1,2-DICHLOROPROPANE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
2-BUTANONE	UG/KG	22	U	U	28	U	U	24	U	U
2-HEXANONE	UG/KG	22	U	U	28	U	U	24	U	U
4-METHYL-2-PENTANONE	UG/KG	22	U	U	28	U	U	24	U	U
ACETONE	UG/KG	22	U	U	28	U	U	24	U	U
BENZENE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
BROMODICHLOROMETHANE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
BROMOFORM	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
BROMOMETHANE	UG/KG	1.1	J	J	14	U	U	12	U	U
CARBON DISULFIDE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
CARBON TETRACHLORIDE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
CHLOROBENZENE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
CHLOROETHANE	UG/KG	11	U	U	14	U	U	12	U	U
CHLOROFORM	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
CHLOROMETHANE	UG/KG	11	U	U	14	U	U	12	U	U
DIBROMOCHLOROMETHANE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
ETHYLBENZENE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
METHYLENE CHLORIDE	UG/KG	5.5	U	U	14		U	9.0		U
STYRENE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
TETRACHLOROETHENE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
TOLUENE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
TOTAL XYLENES	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U

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PH2:VOLATILES	Units	4190 PH2SO10 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4200 PH2SO10 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4210 PH2SO11 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	45	U	U	5.7	U	U	41	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	45	U	U	5.7	U	U	41	U	U
1,1,2-TRICHLOROETHANE	UG/KG	45	U	U	5.7	U	U	41	U	U
1,1-DICHLOROETHANE	UG/KG	45	U	U	5.7	U	U	41	U	U
1,1-DICHLOROETHENE	UG/KG	45	U	U	5.7	U	U	41	U	U
1,2-DICHLOROETHANE	UG/KG	45	U	U	5.7	U	U	41	U	U
1,2-DICHLOROETHENE	UG/KG	45	U	U	5.7	U	U	41	U	U
1,2-DICHLOROPROPANE	UG/KG	45	U	U	5.7	U	U	41	U	U
2-BUTANONE	UG/KG	180	U	U	23	U	U	160	U	U
2-HEXANONE	UG/KG	180	U	U	23	U	U	160	U	U
4-METHYL-2-PENTANONE	UG/KG	180	U	U	23	U	U	160	U	U
ACETONE	UG/KG	180	U	U	23	U	U	160	U	U
BENZENE	UG/KG	45	U	U	5.7	U	U	41	U	U
BROMODICHLOROMETHANE	UG/KG	45	U	U	5.7	U	U	41	U	U
BROMOFORM	UG/KG	45	U	U	5.7	U	U	41	U	U
BROMOMETHANE	UG/KG	89	U	U	11	U	U	82	U	U
CARBON DISULFIDE	UG/KG	45	U	U	5.7	U	U	41	U	U
CARBON TETRACHLORIDE	UG/KG	45	U	U	5.7	U	U	41	U	U
CHLOROBENZENE	UG/KG	45	U	U	5.7	U	U	41	U	U
CHLOROETHANE	UG/KG	89	U	U	11	U	U	82	U	U
CHLOROFORM	UG/KG	45	U	U	5.7	U	U	41	U	U
CHLOROMETHANE	UG/KG	89	U	U	11	U	U	82	U	U
DIBROMOCHLOROMETHANE	UG/KG	45	U	U	5.7	U	U	41	U	U
ETHYLBENZENE	UG/KG	45	U	U	5.7	U	U	41	U	U
METHYLENE CHLORIDE	UG/KG	45	U	U	5.7	U	U	41	U	U
STYRENE	UG/KG	45	U	U	5.7	U	U	41	U	U
TETRACHLOROETHENE	UG/KG	45	U	U	5.7	U	U	41	U	U
TOLUENE	UG/KG	45	U	U	5.7	U	U	41	U	U
TOTAL XYLENES	UG/KG	45	U	U	5.7	U	U	41	U	U

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PH2:VOLATILES	Units	4220 PH2SO11 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4230 PH2SO12 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4240 PH2SO12 29-SEP-96 3 - 4 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
1,1,2-TRICHLOROETHANE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
1,1-DICHLOROETHANE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
1,1-DICHLOROETHENE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
1,2-DICHLOROETHANE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
1,2-DICHLOROETHENE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
1,2-DICHLOROPROPANE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
2-BUTANONE	UG/KG	24	U	U	150	U	U	22	U	U
2-HEXANONE	UG/KG	24	U	U	150	U	U	22	U	U
4-METHYL-2-PENTANONE	UG/KG	24	U	U	150	U	U	22	U	U
ACETONE	UG/KG	24	U	U	150	U	U	22	U	U
BENZENE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
BROMODICHLOROMETHANE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
BROMOFORM	UG/KG	5.9	U	U	38	U	U	5.4	U	U
BROMOMETHANE	UG/KG	12	U	U	76	U	U	11	U	U
CARBON DISULFIDE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
CARBON TETRACHLORIDE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
CHLOROBENZENE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
CHLOROETHANE	UG/KG	12	U	U	76	U	U	11	U	U
CHLOROFORM	UG/KG	5.9	U	U	38	U	U	5.4	U	U
CHLOROMETHANE	UG/KG	12	U	U	76	U	U	11	U	U
DIBROMOCHLOROMETHANE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
ETHYLBENZENE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
METHYLENE CHLORIDE	UG/KG	5.9	U	U	38	J	U	5.4	U	U
STYRENE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
TETRACHLOROETHENE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
TOLUENE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
TOTAL XYLENES	UG/KG	5.9	U	U	38	U	U	5.4	U	U

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Sample No:		4010			4020			4030		
Sample Location:		PH2SO01			PH2SO01			PH2SO02		
Sample Date:		28-SEP-96			28-SEP-96			29-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	41	U	U	5.5	U	U	38	U	U
VINYL CHLORIDE	UG/KG	81	U	U	11	U	U	77	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	41	U	U	5.5	U	U	38	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	41	U	U	5.5	U	U	38	U	U

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Sample No:		4040			4050			4060		
Sample Location:		PH2SO02			PH2SO03			PH2SO03		
Sample Date:		29-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			2 - 3		
PH2:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	5.8	U	U	43	U	UJ	6.4	U	U
VINYL CHLORIDE	UG/KG	12	U	U	86	U	U	13	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	5.8	U	U	43	U	UJ	6.4	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	5.8	U	U	43	U	UJ	6.4	U	U

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Sample No:		4070			4080			4090		
Sample Location:		PH2SO04			PH2SO04			PH2SO05		
Sample Date:		28-SEP-96			28-SEP-96			28-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
VINYL CHLORIDE	UG/KG	13	U	U	12	U	U	16	U	UJ
cis-1,3-DICHLOROPROPENE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ
trans-1,3-DICHLOROPROPENE	UG/KG	6.3	U	U	5.8	U	U	8.0	U	UJ

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Sample No:		4100			4110			4120		
Sample Location:		PH2SO05			PH2SO06			PH2SO06		
Sample Date:		28-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			2 - 3		
PH2:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	28	U	U	33	U	U	32	U	U
VINYL CHLORIDE	UG/KG	57	U	U	65	U	U	64	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	28	U	U	33	U	U	32	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	28	U	U	33	U	U	32	U	U

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Sample No:		4130			4140			4150		
Sample Location:		PH2SO07			PH2SO07			PH2SO08		
Sample Date:		29-SEP-96			29-SEP-96			28-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
VINYL CHLORIDE	UG/KG	85	U	U	11	U	U	13	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	42	U	U	5.7	U	U	6.7	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	42	U	U	5.7	U	U	6.7	U	U

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Sample No:		4160			4170			4180		
Sample Location:		PH2SO08			PH2SO09			PH2SO09		
Sample Date:		28-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			2 - 3		
PH2:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
VINYL CHLORIDE	UG/KG	11	U	U	14	U	U	12	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	5.5	U	U	7.1	U	U	6.1	U	U

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Sample No:		4190			4200			4210		
Sample Location:		PH2SO10			PH2SO10			PH2SO11		
Sample Date:		29-SEP-96			29-SEP-96			29-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	45	U	U	5.7	U	U	41	U	U
VINYL CHLORIDE	UG/KG	89	U	U	11	U	U	82	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	45	U	U	5.7	U	U	41	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	45	U	U	5.7	U	U	41	U	U

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Sample No:		4220			4230			4240		
Sample Location:		PH2SO11			PH2SO12			PH2SO12		
Sample Date:		29-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			3 - 4		
PH2:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
VINYL CHLORIDE	UG/KG	12	U	U	76	U	U	11	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	5.9	U	U	38	U	U	5.4	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	5.9	U	U	38	U	U	5.4	U	U

PH2:SEMIVOLATILES	Units	4010 PH2SO01 28-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4020 PH2SO01 28-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4030 PH2SO02 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	540	U	U	370	U	U	510	U	U
1,2-DICHLOROBENZENE	UG/KG	540	U	U	370	U	U	510	U	U
1,3-DICHLOROBENZENE	UG/KG	540	U	U	370	U	U	510	U	U
1,4-DICHLOROBENZENE	UG/KG	540	U	U	370	U	U	510	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	540	U	U	370	U	U	510	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	540	U	U	370	U	U	510	U	U
2,4-DICHLOROPHENOL	UG/KG	540	U	U	370	U	U	510	U	U
2,4-DIMETHYLPHENOL	UG/KG	540	U	U	370	U	U	510	U	U
2,4-DINITROPHENOL	UG/KG	2600	U	U	1800	U	U	2500	U	U
2,4-DINITROTOLUENE	UG/KG	540	U	U	370	U	U	510	U	U
2,6-DINITROTOLUENE	UG/KG	540	U	U	370	U	U	510	U	U
2-CHLORONAPHTHALENE	UG/KG	540	U	U	370	U	U	510	U	U
2-CHLOROPHENOL	UG/KG	540	U	U	370	U	U	510	U	U
2-METHYLNAPHTHALENE	UG/KG	540	U	U	370	U	U	510	U	U
2-METHYLPHENOL	UG/KG	540	U	U	370	U	U	510	U	U
2-NITROANILINE	UG/KG	2600	U	U	1800	U	U	2500	U	U
2-NITROPHENOL	UG/KG	540	U	U	370	U	U	510	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	2600	U	U	1800	U	U	2500	U	U
3-NITROANILINE	UG/KG	2600	U	U	1800	U	U	2500	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	2600	U	U	1800	U	U	2500	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	540	U	U	370	U	U	510	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	540	U	U	370	U	U	510	U	U
4-CHLOROANILINE	UG/KG	540	U	U	370	U	U	510	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	540	U	U	370	U	U	510	U	U
4-METHYLPHENOL	UG/KG	540	U	U	370	U	U	510	U	U
4-NITROANILINE	UG/KG	2600	U	U	1800	U	U	2500	U	U
4-NITROPHENOL	UG/KG	2600	U	U	1800	U	U	2500	U	U
ACENAPHTHENE	UG/KG	540	U	U	370	U	U	510	U	U
ACENAPHTHYLENE	UG/KG	110	J	J	370	U	U	510	U	U

PH2:SEMIVOLATILES	Units	4040 PH2SO02 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4050 PH2SO03 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4060 PH2SO03 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	380	U	U	570	U	U	420	U	U
1,2-DICHLOROBENZENE	UG/KG	380	U	U	570	U	U	420	U	U
1,3-DICHLOROBENZENE	UG/KG	380	U	U	570	U	U	420	U	U
1,4-DICHLOROBENZENE	UG/KG	380	U	U	570	U	U	420	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	380	U	U	570	U	U	420	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	380	U	U	570	U	U	420	U	U
2,4-DICHLOROPHENOL	UG/KG	380	U	U	570	U	U	420	U	U
2,4-DIMETHYLPHENOL	UG/KG	380	U	U	570	U	U	420	U	U
2,4-DINITROPHENOL	UG/KG	1800	U	U	2700	U	U	2000	U	U
2,4-DINITROTOLUENE	UG/KG	380	U	U	570	U	U	420	U	U
2,6-DINITROTOLUENE	UG/KG	380	U	U	570	U	U	420	U	U
2-CHLORONAPHTHALENE	UG/KG	380	U	U	570	U	U	420	U	U
2-CHLOROPHENOL	UG/KG	380	U	U	570	U	U	420	U	U
2-METHYLNAPHTHALENE	UG/KG	380	U	U	570	U	U	420	U	U
2-METHYLPHENOL	UG/KG	380	U	U	570	U	U	420	U	U
2-NITROANILINE	UG/KG	1800	U	U	2700	U	U	2000	U	U
2-NITROPHENOL	UG/KG	380	U	U	570	U	U	420	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	1800	U	U	2700	U	U	2000	U	U
3-NITROANILINE	UG/KG	1800	U	U	2700	U	U	2000	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	1800	U	U	2700	U	U	2000	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	380	U	U	570	U	U	420	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	380	U	U	570	U	U	420	U	U
4-CHLOROANILINE	UG/KG	380	U	U	570	U	U	420	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	380	U	U	570	U	U	420	U	U
4-METHYLPHENOL	UG/KG	380	U	U	570	U	U	420	U	U
4-NITROANILINE	UG/KG	1800	U	U	2700	U	U	2000	U	U
4-NITROPHENOL	UG/KG	1800	U	U	2700	U	U	2000	U	U
ACENAPHTHENE	UG/KG	380	U	U	570	U	U	420	U	U
ACENAPHTHYLENE	UG/KG	380	U	U	570	U	U	420	U	U

PH2:SEMIVOLATILES	Units	4070 PH2SO04 28-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4080 PH2SO04 28-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4090 PH2SO05 28-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	420	U	U	390	U	U	530	U	U
1,2-DICHLOROBENZENE	UG/KG	420	U	U	390	U	U	530	U	U
1,3-DICHLOROBENZENE	UG/KG	420	U	U	390	U	U	530	U	U
1,4-DICHLOROBENZENE	UG/KG	420	U	U	390	U	U	530	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	420	U	U	390	U	U	530	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	420	U	U	390	U	U	530	U	U
2,4-DICHLOROPHENOL	UG/KG	420	U	U	390	U	U	530	U	U
2,4-DIMETHYLPHENOL	UG/KG	420	U	U	390	U	U	530	U	U
2,4-DINITROPHENOL	UG/KG	2000	U	U	1900	U	U	2500	U	U
2,4-DINITROTOLUENE	UG/KG	420	U	U	390	U	U	530	U	U
2,6-DINITROTOLUENE	UG/KG	420	U	U	390	U	U	530	U	U
2-CHLORONAPHTHALENE	UG/KG	420	U	U	390	U	U	530	U	U
2-CHLOROPHENOL	UG/KG	420	U	U	390	U	U	530	U	U
2-METHYLNAPHTHALENE	UG/KG	420	U	U	390	U	U	530	U	U
2-METHYLPHENOL	UG/KG	420	U	U	390	U	U	530	U	U
2-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2500	U	U
2-NITROPHENOL	UG/KG	420	U	U	390	U	U	530	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	2000	U	U	1900	U	U	2500	U	U
3-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2500	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	2000	U	U	1900	U	U	2500	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	420	U	U	390	U	U	530	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	420	U	U	390	U	U	530	U	U
4-CHLOROANILINE	UG/KG	420	U	U	390	U	U	530	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	420	U	U	390	U	U	530	U	U
4-METHYLPHENOL	UG/KG	420	U	U	390	U	U	530	U	U
4-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2500	U	U
4-NITROPHENOL	UG/KG	2000	U	U	1900	U	U	2500	U	U
ACENAPHTHENE	UG/KG	420	U	U	390	U	U	530	U	U
ACENAPHTHYLENE	UG/KG	420	U	U	390	U	U	530	U	U

PH2:SEMIVOLATILES	Units	4100 PH2SO05 28-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4110 PH2SO06 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4120 PH2SO06 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	380	U	U	430	U	U	420	U	U
1,2-DICHLOROBENZENE	UG/KG	380	U	U	430	U	U	420	U	U
1,3-DICHLOROBENZENE	UG/KG	380	U	U	430	U	U	420	U	U
1,4-DICHLOROBENZENE	UG/KG	380	U	U	430	U	U	420	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	380	U	U	430	U	U	420	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	380	U	U	430	U	U	420	U	U
2,4-DICHLOROPHENOL	UG/KG	380	U	U	430	U	U	420	U	U
2,4-DIMETHYLPHENOL	UG/KG	380	U	U	430	U	U	420	U	U
2,4-DINITROPHENOL	UG/KG	1800	U	U	2100	U	U	2000	U	U
2,4-DINITROTOLUENE	UG/KG	380	U	U	430	U	U	420	U	U
2,6-DINITROTOLUENE	UG/KG	380	U	U	430	U	U	420	U	U
2-CHLORONAPHTHALENE	UG/KG	380	U	U	430	U	U	420	U	U
2-CHLOROPHENOL	UG/KG	380	U	U	430	U	U	420	U	U
2-METHYLNAPHTHALENE	UG/KG	380	U	U	430	U	U	420	U	U
2-METHYLPHENOL	UG/KG	380	U	U	430	U	U	420	U	U
2-NITROANILINE	UG/KG	1800	U	U	2100	U	U	2000	U	U
2-NITROPHENOL	UG/KG	380	U	U	430	U	U	420	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	1800	U	U	2100	U	U	2000	U	U
3-NITROANILINE	UG/KG	1800	U	U	2100	U	U	2000	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	1800	U	U	2100	U	U	2000	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	380	U	U	430	U	U	420	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	380	U	U	430	U	U	420	U	U
4-CHLOROANILINE	UG/KG	380	U	U	430	U	U	420	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	380	U	U	430	U	U	420	U	U
4-METHYLPHENOL	UG/KG	380	U	U	430	U	U	420	U	U
4-NITROANILINE	UG/KG	1800	U	U	2100	U	U	2000	U	U
4-NITROPHENOL	UG/KG	1800	U	U	2100	U	U	2000	U	U
ACENAPHTHENE	UG/KG	380	U	U	430	U	U	420	U	U
ACENAPHTHYLENE	UG/KG	380	U	U	430	U	U	420	U	U

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PH2:SEMIVOLATILES	Units	4130 PH2SO07 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4140 PH2SO07 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4150 PH2SO08 28-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	560	U	U	380	U	U	440	U	U
1,2-DICHLOROBENZENE	UG/KG	560	U	U	380	U	U	440	U	U
1,3-DICHLOROBENZENE	UG/KG	560	U	U	380	U	U	440	U	U
1,4-DICHLOROBENZENE	UG/KG	560	U	U	380	U	U	440	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	560	U	U	380	U	U	440	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	560	U	U	380	U	U	440	U	U
2,4-DICHLOROPHENOL	UG/KG	560	U	U	380	U	U	440	U	U
2,4-DIMETHYLPHENOL	UG/KG	560	U	U	380	U	U	440	U	U
2,4-DINITROPHENOL	UG/KG	2700	U	U	1800	U	U	2100	U	U
2,4-DINITROTOLUENE	UG/KG	560	U	U	380	U	U	440	U	U
2,6-DINITROTOLUENE	UG/KG	560	U	U	380	U	U	440	U	U
2-CHLORONAPHTHALENE	UG/KG	560	U	U	380	U	U	440	U	U
2-CHLOROPHENOL	UG/KG	560	U	U	380	U	U	440	U	U
2-METHYLNAPHTHALENE	UG/KG	560	U	U	380	U	U	440	U	U
2-METHYLPHENOL	UG/KG	560	U	U	380	U	U	440	U	U
2-NITROANILINE	UG/KG	2700	U	U	1800	U	U	2100	U	U
2-NITROPHENOL	UG/KG	560	U	U	380	U	U	440	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	2700	U	U	1800	U	U	2100	U	U
3-NITROANILINE	UG/KG	2700	U	U	1800	U	U	2100	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	2700	U	U	1800	U	U	2100	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	560	U	U	380	U	U	440	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	560	U	U	380	U	U	440	U	U
4-CHLOROANILINE	UG/KG	560	U	U	380	U	U	440	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	560	U	U	380	U	U	440	U	U
4-METHYLPHENOL	UG/KG	560	U	U	380	U	U	440	U	U
4-NITROANILINE	UG/KG	2700	U	U	1800	U	U	2100	U	U
4-NITROPHENOL	UG/KG	2700	U	U	1800	U	U	2100	U	U
ACENAPHTHENE	UG/KG	560	U	U	380	U	U	440	U	U
ACENAPHTHYLENE	UG/KG	560	U	U	380	U	U	440	U	U

PH2:SEMIVOLATILES	Units	4160 PH2SO08 28-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4170 PH2SO09 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4180 PH2SO09 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	360	U	U	470	U	U	400	U	U
1,2-DICHLOROBENZENE	UG/KG	360	U	U	470	U	U	400	U	U
1,3-DICHLOROBENZENE	UG/KG	360	U	U	470	U	U	400	U	U
1,4-DICHLOROBENZENE	UG/KG	360	U	U	470	U	U	400	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	360	U	U	470	U	U	400	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	360	U	U	470	U	U	400	U	U
2,4-DICHLOROPHENOL	UG/KG	360	U	U	470	U	U	400	U	U
2,4-DIMETHYLPHENOL	UG/KG	360	U	U	470	U	U	400	U	U
2,4-DINITROPHENOL	UG/KG	1800	U	U	2300	U	U	1900	U	U
2,4-DINITROTOLUENE	UG/KG	360	U	U	470	U	U	400	U	U
2,6-DINITROTOLUENE	UG/KG	360	U	U	470	U	U	400	U	U
2-CHLORONAPHTHALENE	UG/KG	360	U	U	470	U	U	400	U	U
2-CHLOROPHENOL	UG/KG	360	U	U	470	U	U	400	U	U
2-METHYLNAPHTHALENE	UG/KG	360	U	U	470	U	U	400	U	U
2-METHYLPHENOL	UG/KG	360	U	U	470	U	U	400	U	U
2-NITROANILINE	UG/KG	1800	U	U	2300	U	U	1900	U	U
2-NITROPHENOL	UG/KG	360	U	U	470	U	U	400	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	1800	U	U	2300	U	U	1900	U	U
3-NITROANILINE	UG/KG	1800	U	U	2300	U	U	1900	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	1800	U	U	2300	U	U	1900	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	360	U	U	470	U	U	400	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	360	U	U	470	U	U	400	U	U
4-CHLOROANILINE	UG/KG	360	U	U	470	U	U	400	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	360	U	U	470	U	U	400	U	U
4-METHYLPHENOL	UG/KG	360	U	U	470	U	U	400	U	U
4-NITROANILINE	UG/KG	1800	U	U	2300	U	U	1900	U	U
4-NITROPHENOL	UG/KG	1800	U	U	2300	U	U	1900	U	U
ACENAPHTHENE	UG/KG	360	U	U	470	U	U	400	U	U
ACENAPHTHYLENE	UG/KG	360	U	U	470	U	U	400	U	U

PH2:SEMIVOLATILES	Units	4190 PH2SO10 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4200 PH2SO10 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4210 PH2SO11 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	590	U	U	380	U	U	540	U	U
1,2-DICHLOROBENZENE	UG/KG	590	U	U	380	U	U	540	U	U
1,3-DICHLOROBENZENE	UG/KG	590	U	U	380	U	U	540	U	U
1,4-DICHLOROBENZENE	UG/KG	590	U	U	380	U	U	540	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	590	U	U	380	U	U	540	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	590	U	U	380	U	U	540	U	U
2,4-DICHLOROPHENOL	UG/KG	590	U	U	380	U	U	540	U	U
2,4-DIMETHYLPHENOL	UG/KG	590	U	U	380	U	U	540	U	U
2,4-DINITROPHENOL	UG/KG	2900	U	U	1800	U	U	2600	U	U
2,4-DINITROTOLUENE	UG/KG	590	U	U	380	U	U	540	U	U
2,6-DINITROTOLUENE	UG/KG	590	U	U	380	U	U	540	U	U
2-CHLORONAPHTHALENE	UG/KG	590	U	U	380	U	U	540	U	U
2-CHLOROPHENOL	UG/KG	590	U	U	380	U	U	540	U	U
2-METHYLNAPHTHALENE	UG/KG	590	U	U	380	U	U	540	U	U
2-METHYLPHENOL	UG/KG	590	U	U	380	U	U	540	U	U
2-NITROANILINE	UG/KG	2900	U	U	1800	U	U	2600	U	U
2-NITROPHENOL	UG/KG	590	U	U	380	U	U	540	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	2900	U	U	1800	U	U	2600	U	U
3-NITROANILINE	UG/KG	2900	U	U	1800	U	U	2600	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	2900	U	U	1800	U	U	2600	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	590	U	U	380	U	U	540	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	590	U	U	380	U	U	540	U	U
4-CHLOROANILINE	UG/KG	590	U	U	380	U	U	540	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	590	U	U	380	U	U	540	U	U
4-METHYLPHENOL	UG/KG	590	U	U	380	U	U	540	U	U
4-NITROANILINE	UG/KG	2900	U	U	1800	U	U	2600	U	U
4-NITROPHENOL	UG/KG	2900	U	U	1800	U	U	2600	U	U
ACENAPHTHENE	UG/KG	590	U	U	380	U	U	540	U	U
ACENAPHTHYLENE	UG/KG	590	U	U	380	U	U	540	U	U

PLUMBROOK
Power House Number 2 Ash Pit
Data Summary - Soils

Report Date: 02/15/97

PH2:SEMIVOLATILES	Units	4220 PH2SO11 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4230 PH2SO12 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4240 PH2SO12 29-SEP-96 3 - 4 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	390	U	U	500	U	U	360	U	U
1,2-DICHLOROBENZENE	UG/KG	390	U	U	500	U	U	360	U	U
1,3-DICHLOROBENZENE	UG/KG	390	U	U	500	U	U	360	U	U
1,4-DICHLOROBENZENE	UG/KG	390	U	U	500	U	U	360	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	390	U	U	500	U	U	360	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	390	U	U	500	U	U	360	U	U
2,4-DICHLOROPHENOL	UG/KG	390	U	U	500	U	U	360	U	U
2,4-DIMETHYLPHENOL	UG/KG	390	U	U	500	U	U	360	U	U
2,4-DINITROPHENOL	UG/KG	1900	U	U	2400	U	U	1700	U	U
2,4-DINITROTOLUENE	UG/KG	390	U	U	500	U	U	360	U	U
2,6-DINITROTOLUENE	UG/KG	390	U	U	500	U	U	360	U	U
2-CHLORONAPHTHALENE	UG/KG	390	U	U	500	U	U	360	U	U
2-CHLOROPHENOL	UG/KG	390	U	U	500	U	U	360	U	U
2-METHYLNAPHTHALENE	UG/KG	390	U	U	500	U	U	360	U	U
2-METHYLPHENOL	UG/KG	390	U	U	500	U	U	360	U	U
2-NITROANILINE	UG/KG	1900	U	U	2400	U	U	1700	U	U
2-NITROPHENOL	UG/KG	390	U	U	500	U	U	360	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	1900	U	U	2400	U	U	1700	U	U
3-NITROANILINE	UG/KG	1900	U	U	2400	U	U	1700	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	1900	U	U	2400	U	U	1700	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	390	U	U	500	U	U	360	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	390	U	U	500	U	U	360	U	U
4-CHLOROANILINE	UG/KG	390	U	U	500	U	U	360	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	390	U	U	500	U	U	360	U	U
4-METHYLPHENOL	UG/KG	390	U	U	500	U	U	360	U	U
4-NITROANILINE	UG/KG	1900	U	U	2400	U	U	1700	U	U
4-NITROPHENOL	UG/KG	1900	U	U	2400	U	U	1700	U	U
ACENAPHTHENE	UG/KG	390	U	U	500	U	U	360	U	U
ACENAPHTHYLENE	UG/KG	390	U	U	500	U	U	360	U	U

Report Date: 02/15/97

PH2:SEMIVOLATILES	Units	4010 PH2SO01 28-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4020 PH2SO01 28-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4030 PH2SO02 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	58	J	J	370	U	U	510	U	U
BENZO(a)ANTHRACENE	UG/KG	130	J	J	370	U	U	510	U	U
BENZO(a)PYRENE	UG/KG	170	J	J	370	U	U	510	U	U
BENZO(b)FLUORANTHENE	UG/KG	160	J	J	370	U	U	510	U	U
BENZO(ghi)PERYLENE	UG/KG	130	J	J	370	U	U	510	U	U
BENZO(k)FLUORANTHENE	UG/KG	230	J	J	370	U	U	510	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	540	U	U	370	U	U	510	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	540	U	U	370	U	U	510	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	540	U	U	370	U	U	510	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	540	U	U	370	U	U	510	U	U
BUTYL BENZYL PHTHALATE	UG/KG	540	U	U	370	U	U	510	U	U
CARBAZOLE	UG/KG	540	U	U	370	U	U	510	U	U
CHRYSENE	UG/KG	160	J	J	370	U	U	510	U	U
DI-n-BUTYL PHTHALATE	UG/KG	540	U	U	370	U	U	510	U	U
DI-n-OCTYL PHTHALATE	UG/KG	540	U	U	370	U	U	510	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	540	U	U	370	U	U	510	U	U
DIBENZOFURAN	UG/KG	540	U	U	370	U	U	510	U	U
DIETHYL PHTHALATE	UG/KG	540	U	U	370	U	U	510	U	U
DIMETHYL PHTHALATE	UG/KG	540	U	U	370	U	U	510	U	U
FLUORANTHENE	UG/KG	300	J	J	370	U	U	70	J	J
FLUORENE	UG/KG	540	U	U	370	U	U	510	U	U
HEXACHLOROBENZENE	UG/KG	540	U	U	370	U	U	510	U	U
HEXACHLOROBUTADIENE	UG/KG	540	U	U	370	U	U	510	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	2600	U	U	1800	U	U	2500	U	U
HEXACHLOROETHANE	UG/KG	540	U	U	370	U	U	510	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	120	J	J	370	U	U	510	U	U
ISOPHORONE	UG/KG	540	U	U	370	U	U	510	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	540	U	U	370	U	U	510	U	U
N-NITROSODIPHENYLAMINE	UG/KG	540	U	U	370	U	U	510	U	U

PH2:SEMIVOLATILES	Units	4040 PH2SO02 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4050 PH2SO03 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4060 PH2SO03 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	380	U	U	570	U	U	420	U	U
BENZO(a)ANTHRACENE	UG/KG	380	U	U	76	J	J	420	U	U
BENZO(a)PYRENE	UG/KG	380	U	U	99	J	J	420	U	U
BENZO(b)FLUORANTHENE	UG/KG	380	U	U	570	U	U	420	U	U
BENZO(ghi)PERYLENE	UG/KG	380	U	U	570	U	U	420	U	U
BENZO(k)FLUORANTHENE	UG/KG	380	U	U	570	U	U	420	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	380	U	U	570	U	U	420	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	380	U	U	570	U	U	420	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	380	U	U	570	U	U	420	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	380	U	U	570	U	U	420	U	U
BUTYL BENZYL PHTHALATE	UG/KG	380	U	U	570	U	U	420	U	U
CARBAZOLE	UG/KG	380	U	U	570	U	U	420	U	U
CHRYSENE	UG/KG	380	U	U	98	J	J	420	U	U
DI-n-BUTYL PHTHALATE	UG/KG	380	U	U	570	U	U	420	U	U
DI-n-OCTYL PHTHALATE	UG/KG	380	U	U	570	U	U	420	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	380	U	U	570	U	U	420	U	U
DIBENZOFURAN	UG/KG	380	U	U	570	U	U	420	U	U
DIETHYL PHTHALATE	UG/KG	380	U	U	570	U	U	420	U	U
DIMETHYL PHTHALATE	UG/KG	380	U	U	570	U	U	420	U	U
FLUORANTHENE	UG/KG	380	U	U	180	J	J	420	U	U
FLUORENE	UG/KG	380	U	U	570	U	U	420	U	U
HEXACHLOROBENZENE	UG/KG	380	U	U	570	U	U	420	U	U
HEXACHLOROBUTADIENE	UG/KG	380	U	U	570	U	U	420	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	1800	U	U	2700	U	U	2000	U	U
HEXACHLOROETHANE	UG/KG	380	U	U	570	U	U	420	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	380	U	U	570	U	U	420	U	U
ISOPHORONE	UG/KG	380	U	U	570	U	U	420	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	380	U	U	570	U	U	420	U	U
N-NITROSODIPHENYLAMINE	UG/KG	380	U	U	570	U	U	420	U	U

PH2:SEMIVOLATILES	Units	4070 PH2SO04 28-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4080 PH2SO04 28-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4090 PH2SO05 28-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	420	U	U	390	U	U	530	U	U
BENZO(a)ANTHRACENE	UG/KG	420	U	U	390	U	U	530	U	U
BENZO(a)PYRENE	UG/KG	420	U	U	390	U	U	530	U	U
BENZO(b)FLUORANTHENE	UG/KG	420	U	U	390	U	U	530	U	U
BENZO(ghi)PERYLENE	UG/KG	420	U	U	390	U	U	530	U	U
BENZO(k)FLUORANTHENE	UG/KG	420	U	U	390	U	U	530	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	420	U	U	390	U	U	530	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	420	U	U	390	U	U	530	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	420	U	U	390	U	U	530	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	420	U	U	390	U	U	530	U	U
BUTYL BENZYL PHTHALATE	UG/KG	420	U	U	390	U	U	530	U	U
CARBAZOLE	UG/KG	420	U	U	390	U	U	530	U	U
CHRYSENE	UG/KG	420	U	U	390	U	U	530	U	U
DI-n-BUTYL PHTHALATE	UG/KG	420	U	U	390	U	U	530	U	U
DI-n-OCTYL PHTHALATE	UG/KG	420	U	U	390	U	U	530	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	420	U	U	390	U	U	530	U	U
DIBENZOFURAN	UG/KG	420	U	U	390	U	U	530	U	U
DIETHYL PHTHALATE	UG/KG	420	U	U	390	U	U	530	U	U
DIMETHYL PHTHALATE	UG/KG	420	U	U	390	U	U	530	U	U
FLUORANTHENE	UG/KG	420	U	U	390	U	U	530	U	U
FLUORENE	UG/KG	420	U	U	390	U	U	530	U	U
HEXACHLOROBENZENE	UG/KG	420	U	U	390	U	U	530	U	U
HEXACHLOROBUTADIENE	UG/KG	420	U	U	390	U	U	530	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	2000	U	U	1900	U	U	2500	U	U
HEXACHLOROETHANE	UG/KG	420	U	U	390	U	U	530	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	420	U	U	390	U	U	530	U	U
ISOPHORONE	UG/KG	420	U	U	390	U	U	530	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	420	U	U	390	U	U	530	U	U
N-NITROSODIPHENYLAMINE	UG/KG	420	U	U	390	U	U	530	U	U

PH2:SEMIVOLATILES	Units	4100 PH2SO05 28-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4110 PH2SO06 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4120 PH2SO06 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	380	U	U	430	U	U	420	U	U
BENZO(a)ANTHRACENE	UG/KG	380	U	U	430	U	U	420	U	U
BENZO(a)PYRENE	UG/KG	380	U	U	430	U	U	420	U	U
BENZO(b)FLUORANTHENE	UG/KG	380	U	U	430	U	U	420	U	U
BENZO(ghi)PERYLENE	UG/KG	380	U	U	430	U	U	420	U	U
BENZO(k)FLUORANTHENE	UG/KG	380	U	U	430	U	U	420	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	380	U	U	430	U	U	420	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	380	U	U	430	U	U	420	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	380	U	U	430	U	U	420	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	380	U	U	430	U	U	420	U	U
BUTYL BENZYL PHTHALATE	UG/KG	380	U	U	430	U	U	420	U	U
CARBAZOLE	UG/KG	380	U	U	430	U	U	420	U	U
CHRYSENE	UG/KG	380	U	U	430	U	U	420	U	U
DI-n-BUTYL PHTHALATE	UG/KG	380	U	U	430	U	U	420	U	U
DI-n-OCTYL PHTHALATE	UG/KG	380	U	U	430	U	U	420	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	380	U	U	430	U	U	420	U	U
DIBENZOFURAN	UG/KG	380	U	U	430	U	U	420	U	U
DIETHYL PHTHALATE	UG/KG	380	U	U	430	U	U	420	U	U
DIMETHYL PHTHALATE	UG/KG	380	U	U	430	U	U	420	U	U
FLUORANTHENE	UG/KG	380	U	U	430	U	U	420	U	U
FLUORENE	UG/KG	380	U	U	430	U	U	420	U	U
HEXACHLOROBENZENE	UG/KG	380	U	U	430	U	U	420	U	U
HEXACHLOROBUTADIENE	UG/KG	380	U	U	430	U	U	420	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	1800	U	U	2100	U	U	2000	U	U
HEXACHLOROETHANE	UG/KG	380	U	U	430	U	U	420	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	380	U	U	430	U	U	420	U	U
ISOPHORONE	UG/KG	380	U	U	430	U	U	420	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	380	U	U	430	U	U	420	U	U
N-NITROSODIPHENYLAMINE	UG/KG	380	U	U	430	U	U	420	U	U

PH2:SEMIVOLATILES	Units	4130 PH2SO07 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4140 PH2SO07 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4150 PH2SO08 28-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	560	U	U	380	U	U	440	U	U
BENZO(a)ANTHRACENE	UG/KG	560	U	U	380	U	U	440	U	U
BENZO(a)PYRENE	UG/KG	560	U	U	380	U	U	440	U	U
BENZO(b)FLUORANTHENE	UG/KG	560	U	U	380	U	U	440	U	U
BENZO(ghi)PERYLENE	UG/KG	560	U	U	380	U	U	440	U	U
BENZO(k)FLUORANTHENE	UG/KG	560	U	U	380	U	U	440	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	560	U	U	380	U	U	440	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	560	U	U	380	U	U	440	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	560	U	U	380	U	U	440	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	560	U	U	380	U	U	440	U	U
BUTYL BENZYL PHTHALATE	UG/KG	560	U	U	380	U	U	440	U	U
CARBAZOLE	UG/KG	560	U	U	380	U	U	440	U	U
CHRYSENE	UG/KG	560	U	U	380	U	U	440	U	U
DI-n-BUTYL PHTHALATE	UG/KG	560	U	U	380	U	U	440	U	U
DI-n-OCTYL PHTHALATE	UG/KG	560	U	U	380	U	U	440	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	560	U	U	380	U	U	440	U	U
DIBENZOFURAN	UG/KG	560	U	U	380	U	U	440	U	U
DIETHYL PHTHALATE	UG/KG	560	U	U	380	U	U	440	U	U
DIMETHYL PHTHALATE	UG/KG	560	U	U	380	U	U	440	U	U
FLUORANTHENE	UG/KG	560	U	U	380	U	U	440	U	U
FLUORENE	UG/KG	560	U	U	380	U	U	440	U	U
HEXACHLOROBENZENE	UG/KG	560	U	U	380	U	U	440	U	U
HEXACHLOROBUTADIENE	UG/KG	560	U	U	380	U	U	440	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	2700	U	U	1800	U	U	2100	U	U
HEXACHLOROETHANE	UG/KG	560	U	U	380	U	U	440	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	560	U	U	380	U	U	440	U	U
ISOPHORONE	UG/KG	560	U	U	380	U	U	440	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	560	U	U	380	U	U	440	U	U
N-NITROSODIPHENYLAMINE	UG/KG	560	U	U	380	U	U	440	U	U

PH2:SEMIVOLATILES	Units	4160 PH2SO08 28-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4170 PH2SO09 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4180 PH2SO09 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	360	U	U	470	U	U	400	U	U
BENZO(a)ANTHRACENE	UG/KG	360	U	U	470	U	U	400	U	U
BENZO(a)PYRENE	UG/KG	360	U	U	470	U	U	400	U	U
BENZO(b)FLUORANTHENE	UG/KG	360	U	U	470	U	U	400	U	U
BENZO(ghi)PERYLENE	UG/KG	360	U	U	470	U	U	400	U	U
BENZO(k)FLUORANTHENE	UG/KG	360	U	U	470	U	U	400	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	360	U	U	470	U	U	400	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	360	U	U	470	U	U	400	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	360	U	U	470	U	U	400	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	360	U	U	470	U	U	400	U	U
BUTYL BENZYL PHTHALATE	UG/KG	360	U	U	470	U	U	400	U	U
CARBAZOLE	UG/KG	360	U	U	470	U	U	400	U	U
CHRYSENE	UG/KG	360	U	U	470	U	U	400	U	U
DI-n-BUTYL PHTHALATE	UG/KG	360	U	U	470	U	U	400	U	U
DI-n-OCTYL PHTHALATE	UG/KG	360	U	U	470	U	U	400	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	360	U	U	470	U	U	400	U	U
DIBENZOFURAN	UG/KG	360	U	U	470	U	U	400	U	U
DIETHYL PHTHALATE	UG/KG	360	U	U	470	U	U	400	U	U
DIMETHYL PHTHALATE	UG/KG	360	U	U	470	U	U	400	U	U
FLUORANTHENE	UG/KG	360	U	U	79	J	J	400	U	U
FLUORENE	UG/KG	360	U	U	470	U	U	400	U	U
HEXACHLOROBENZENE	UG/KG	360	U	U	470	U	U	400	U	U
HEXACHLOROBUTADIENE	UG/KG	360	U	U	470	U	U	400	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	1800	U	U	2300	U	U	1900	U	U
HEXACHLOROETHANE	UG/KG	360	U	U	470	U	U	400	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	360	U	U	470	U	U	400	U	U
ISOPHORONE	UG/KG	360	U	U	470	U	U	400	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	360	U	U	470	U	U	400	U	U
N-NITROSODIPHENYLAMINE	UG/KG	360	U	U	470	U	U	400	U	U

PH2:SEMIVOLATILES	Units	4190 PH2SO10 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4200 PH2SO10 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4210 PH2SO11 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	590	U	U	380	U	U	540	U	U
BENZO(a)ANTHRACENE	UG/KG	590	U	U	380	U	U	540	U	U
BENZO(a)PYRENE	UG/KG	590	U	U	380	U	U	540	U	U
BENZO(b)FLUORANTHENE	UG/KG	590	U	U	380	U	U	540	U	U
BENZO(ghi)PERYLENE	UG/KG	590	U	U	380	U	U	540	U	U
BENZO(k)FLUORANTHENE	UG/KG	590	U	U	380	U	U	540	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	590	U	U	380	U	U	540	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	590	U	U	380	U	U	540	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	590	U	U	380	U	U	540	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	95	J	J	380	U	U	540	U	U
BUTYL BENZYL PHTHALATE	UG/KG	590	U	U	380	U	U	540	U	U
CARBAZOLE	UG/KG	590	U	U	380	U	U	540	U	U
CHRYSENE	UG/KG	590	U	U	380	U	U	540	U	U
DI-n-BUTYL PHTHALATE	UG/KG	590	U	U	380	U	U	170	J	J
DI-n-OCTYL PHTHALATE	UG/KG	590	U	U	380	U	U	540	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	590	U	U	380	U	U	540	U	U
DIBENZOFURAN	UG/KG	590	U	U	380	U	U	540	U	U
DIETHYL PHTHALATE	UG/KG	590	U	U	380	U	U	540	U	U
DIMETHYL PHTHALATE	UG/KG	590	U	U	380	U	U	540	U	U
FLUORANTHENE	UG/KG	590	U	U	380	U	U	83	J	J
FLUORENE	UG/KG	590	U	U	380	U	U	540	U	U
HEXACHLOROBENZENE	UG/KG	590	U	U	380	U	U	540	U	U
HEXACHLOROBUTADIENE	UG/KG	590	U	U	380	U	U	540	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	2900	U	U	1800	U	U	2600	U	U
HEXACHLOROETHANE	UG/KG	590	U	U	380	U	U	540	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	590	U	U	380	U	U	540	U	U
ISOPHORONE	UG/KG	590	U	U	380	U	U	540	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	590	U	U	380	U	U	540	U	U
N-NITROSODIPHENYLAMINE	UG/KG	590	U	U	380	U	U	540	U	U

PH2:SEMIVOLATILES	Units	4220 PH2SO11 29-SEP-96 2 - 3 Result	Lab Qlfr	Val Qlfr	4230 PH2SO12 29-SEP-96 0 - .5 Result	Lab Qlfr	Val Qlfr	4240 PH2SO12 29-SEP-96 3 - 4 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	390	U	U	500	U	U	360	U	U
BENZO(a)ANTHRACENE	UG/KG	390	U	U	500	U	U	360	U	U
BENZO(a)PYRENE	UG/KG	390	U	U	500	U	U	360	U	U
BENZO(b)FLUORANTHENE	UG/KG	390	U	U	500	U	U	360	U	U
BENZO(ghi)PERYLENE	UG/KG	390	U	U	500	U	U	360	U	U
BENZO(k)FLUORANTHENE	UG/KG	390	U	U	500	U	U	360	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	390	U	U	500	U	U	360	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	390	U	U	500	U	U	360	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	390	U	U	500	U	U	360	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	66	J	J	500	U	U	360	U	U
BUTYL BENZYL PHTHALATE	UG/KG	390	U	U	500	U	U	360	U	U
CARBAZOLE	UG/KG	390	U	U	500	U	U	360	U	U
CHRYSENE	UG/KG	390	U	U	500	U	U	360	U	U
DI-n-BUTYL PHTHALATE	UG/KG	390	U	U	500	U	U	66	J	J
DI-n-OCTYL PHTHALATE	UG/KG	390	U	U	500	U	U	360	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	390	U	U	500	U	U	360	U	U
DIBENZOFURAN	UG/KG	390	U	U	500	U	U	360	U	U
DIETHYL PHTHALATE	UG/KG	390	U	U	500	U	U	360	U	U
DIMETHYL PHTHALATE	UG/KG	390	U	U	500	U	U	360	U	U
FLUORANTHENE	UG/KG	390	U	U	500	U	U	360	U	U
FLUORENE	UG/KG	390	U	U	500	U	U	360	U	U
HEXACHLOROBENZENE	UG/KG	390	U	U	500	U	U	360	U	U
HEXACHLOROBUTADIENE	UG/KG	390	U	U	500	U	U	360	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	1900	U	U	2400	U	U	1700	U	U
HEXACHLOROETHANE	UG/KG	390	U	U	500	U	U	360	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	390	U	U	500	U	U	360	U	U
ISOPHORONE	UG/KG	390	U	U	500	U	U	360	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	390	U	U	500	U	U	360	U	U
N-NITROSODIPHENYLAMINE	UG/KG	390	U	U	500	U	U	360	U	U

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Sample No:		4010			4020			4030		
Sample Location:		PH2SO01			PH2SO01			PH2SO02		
Sample Date:		28-SEP-96			28-SEP-96			29-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	540	U	U	370	U	U	510	U	U
NITROBENZENE	UG/KG	540	U	U	370	U	U	510	U	U
PENTACHLOROPHENOL	UG/KG	2600	U	U	1800	U	U	2500	U	U
PHENANTHRENE	UG/KG	100	J	J	370	U	U	510	U	U
PHENOL	UG/KG	540	U	U	370	U	U	510	U	U
PYRENE	UG/KG	250	J	J	370	U	U	59	J	J

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Sample No:		4040			4050			4060		
Sample Location:		PH2SO02			PH2SO03			PH2SO03		
Sample Date:		29-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			2 - 3		
PH2:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	380	U	U	570	U	U	420	U	U
NITROBENZENE	UG/KG	380	U	U	570	U	U	420	U	U
PENTACHLOROPHENOL	UG/KG	1800	U	U	2700	U	U	2000	U	U
PHENANTHRENE	UG/KG	380	U	U	63	J	J	420	U	U
PHENOL	UG/KG	380	U	U	570	U	U	420	U	U
PYRENE	UG/KG	380	U	U	150	J	J	420	U	U

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Sample No:		4070			4080			4090		
Sample Location:		PH2SO04			PH2SO04			PH2SO05		
Sample Date:		28-SEP-96			28-SEP-96			28-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	420	U	U	390	U	U	530	U	U
NITROBENZENE	UG/KG	420	U	U	390	U	U	530	U	U
PENTACHLOROPHENOL	UG/KG	2000	U	U	1900	U	U	2500	U	U
PHENANTHRENE	UG/KG	420	U	U	390	U	U	530	U	U
PHENOL	UG/KG	420	U	U	390	U	U	530	U	U
PYRENE	UG/KG	420	U	U	390	U	U	530	U	U

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Sample No:		4100			4110			4120		
Sample Location:		PH2SO05			PH2SO06			PH2SO06		
Sample Date:		28-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			2 - 3		
PH2:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	380	U	U	430	U	U	420	U	U
NITROBENZENE	UG/KG	380	U	U	430	U	U	420	U	U
PENTACHLOROPHENOL	UG/KG	1800	U	U	2100	U	U	2000	U	U
PHENANTHRENE	UG/KG	380	U	U	430	U	U	420	U	U
PHENOL	UG/KG	380	U	U	430	U	U	420	U	U
PYRENE	UG/KG	380	U	U	430	U	U	420	U	U

Sample No:		4130			4140			4150		
Sample Location:		PH2SO07			PH2SO07			PH2SO08		
Sample Date:		29-SEP-96			29-SEP-96			28-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	560	U	U	380	U	U	440	U	U
NITROBENZENE	UG/KG	560	U	U	380	U	U	440	U	U
PENTACHLOROPHENOL	UG/KG	2700	U	U	1800	U	U	2100	U	U
PHENANTHRENE	UG/KG	560	U	U	380	U	U	440	U	U
PHENOL	UG/KG	560	U	U	380	U	U	440	U	U
PYRENE	UG/KG	560	U	U	380	U	U	440	U	U

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Sample No:		4160			4170			4180		
Sample Location:		PH2SO08			PH2SO09			PH2SO09		
Sample Date:		28-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			2 - 3		
PH2:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	360	U	U	470	U	U	400	U	U
NITROBENZENE	UG/KG	360	U	U	470	U	U	400	U	U
PENTACHLOROPHENOL	UG/KG	1800	U	U	2300	U	U	1900	U	U
PHENANTHRENE	UG/KG	360	U	U	470	U	U	400	U	U
PHENOL	UG/KG	360	U	U	470	U	U	400	U	U
PYRENE	UG/KG	360	U	U	52	J	J	400	U	U

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Sample No:		4190			4200			4210		
Sample Location:		PH2SO10			PH2SO10			PH2SO11		
Sample Date:		29-SEP-96			29-SEP-96			29-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	590	U	U	380	U	U	540	U	U
NITROBENZENE	UG/KG	590	U	U	380	U	U	540	U	U
PENTACHLOROPHENOL	UG/KG	2900	U	U	1800	U	U	2600	U	U
PHENANTHRENE	UG/KG	590	U	U	380	U	U	540	U	U
PHENOL	UG/KG	590	U	U	380	U	U	540	U	U
PYRENE	UG/KG	590	U	U	380	U	U	67	J	J

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Sample No:		4220			4230			4240		
Sample Location:		PH2SO11			PH2SO12			PH2SO12		
Sample Date:		29-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			3 - 4		
PH2:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	390	U	U	500	U	U	360	U	U
NITROBENZENE	UG/KG	390	U	U	500	U	U	360	U	U
PENTACHLOROPHENOL	UG/KG	1900	U	U	2400	U	U	1700	U	U
PHENANTHRENE	UG/KG	390	U	U	500	U	U	360	U	U
PHENOL	UG/KG	390	U	U	500	U	U	360	U	U
PYRENE	UG/KG	390	U	U	500	U	U	360	U	U

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Sample No:		4010			4020			4030		
Sample Location:		PH2SO01			PH2SO01			PH2SO02		
Sample Date:		28-SEP-96			28-SEP-96			29-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	2.8	U	U	1.9	U	U	2.6	U	U
4,4'-DDE	UG/KG	7.4			1.9	U	U	2.6	U	U
4,4'-DDT	UG/KG	6.3			1.9	U	U	2.6	U	U
ALDRIN	UG/KG	2.8	U	U	1.9	U	U	2.6	U	U
AROCLOR 1016	UG/KG	54	U	U	37	U	U	51	U	U
AROCLOR 1221	UG/KG	54	U	U	37	U	U	51	U	U
AROCLOR 1232	UG/KG	54	U	U	37	U	U	51	U	U
AROCLOR 1242	UG/KG	54	U	U	37	U	U	51	U	U
AROCLOR 1248	UG/KG	54	U	U	37	U	U	51	U	U
AROCLOR 1254	UG/KG	54	U	U	37	U	U	51	U	U
AROCLOR 1260	UG/KG	54	U	U	37	U	U	51	U	U
DIELDRIN	UG/KG	2.8	U	U	1.9	U	U	2.6	U	U
ENDOSULFAN I	UG/KG	2.8	U	U	1.9	U	U	2.6	U	U
ENDOSULFAN II	UG/KG	2.8	U	U	1.9	U	U	2.6	U	U
ENDOSULFAN SULFATE	UG/KG	2.8	U	U	1.9	U	U	2.6	U	U
ENDRIN	UG/KG	2.8	U	U	1.9	U	U	2.6	U	U
ENDRIN ALDEHYDE	UG/KG	2.8	U	U	1.9	U	U	2.6	U	U
ENDRIN KETONE	UG/KG	2.8	U	UJ	1.9	U	UJ	2.6	U	UJ
HEPTACHLOR	UG/KG	2.8	U	U	1.9	U	U	2.6	U	U
HEPTACHLOR EPOXIDE	UG/KG	2.8	U	U	1.9	U	U	2.6	U	U
METHOXYCHLOR	UG/KG	5.4	U	UJ	3.7	U	UJ	6.1		
TOXAPHENE	UG/KG	110	U	U	74	U	U	100	U	U
alpha-BHC	UG/KG	2.8	U	U	1.9	U	U	2.6	U	U
alpha-CHLORDANE	UG/KG	2.8	U	U	1.9	U	U	2.6	U	U
beta-BHC	UG/KG	2.8	U	U	1.9	U	U	2.6	U	U
delta-BHC	UG/KG	2.8	U	U	1.9	U	U	2.6	U	U
gamma-BHC (LINDANE)	UG/KG	2.8	U	U	1.9	U	U	2.6	U	U
gamma-CHLORDANE	UG/KG	2.8	U	U	1.9	U	U	2.6	U	U

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Sample No:		4040			4050			4060		
Sample Location:		PH2SO02			PH2SO03			PH2SO03		
Sample Date:		29-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			2 - 3		
PH2:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
4,4'-DDE	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
4,4'-DDT	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
ALDRIN	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
AROCLOR 1016	UG/KG	38	U	U	57	U	U	42	U	U
AROCLOR 1221	UG/KG	38	U	U	57	U	U	42	U	U
AROCLOR 1232	UG/KG	38	U	U	57	U	U	42	U	U
AROCLOR 1242	UG/KG	38	U	U	57	U	U	42	U	U
AROCLOR 1248	UG/KG	38	U	U	57	U	U	42	U	U
AROCLOR 1254	UG/KG	38	U	U	57	U	U	42	U	U
AROCLOR 1260	UG/KG	38	U	U	57	U	U	42	U	U
DIELDRIN	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
ENDOSULFAN I	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
ENDOSULFAN II	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
ENDOSULFAN SULFATE	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
ENDRIN	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
ENDRIN ALDEHYDE	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
ENDRIN KETONE	UG/KG	2.0	U	UJ	2.9	U	UJ	2.2	U	UJ
HEPTACHLOR	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
HEPTACHLOR EPOXIDE	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
METHOXYCHLOR	UG/KG	3.8	U	UJ	6.5			4.2	U	U
TOXAPHENE	UG/KG	77	U	U	110	U	U	85	U	U
alpha-BHC	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
alpha-CHLORDANE	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
beta-BHC	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
delta-BHC	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
gamma-BHC (LINDANE)	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U
gamma-CHLORDANE *	UG/KG	2.0	U	U	2.9	U	U	2.2	U	U

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Sample No:		4070			4080			4090		
Sample Location:		PH2SO04			PH2SO04			PH2SO05		
Sample Date:		28-SEP-96			28-SEP-96			28-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	2.2	U	U	2.0	U	U	2.7	U	U
4,4'-DDE	UG/KG	2.2	U	U	2.0	U	U	3.4		
4,4'-DDT	UG/KG	2.2	U	U	2.0	U	U	3.6		
ALDRIN	UG/KG	2.2	U	U	2.0	U	U	2.7	U	U
AROCLOR 1016	UG/KG	42	U	U	39	U	U	53	U	U
AROCLOR 1221	UG/KG	42	U	U	39	U	U	53	U	U
AROCLOR 1232	UG/KG	42	U	U	39	U	U	53	U	U
AROCLOR 1242	UG/KG	42	U	U	39	U	U	53	U	U
AROCLOR 1248	UG/KG	42	U	U	39	U	U	53	U	U
AROCLOR 1254	UG/KG	42	U	U	39	U	U	53	U	U
AROCLOR 1260	UG/KG	42	U	U	39	U	U	53	U	U
DIELDRIN	UG/KG	2.2	U	U	2.0	U	U	2.7	U	U
ENDOSULFAN I	UG/KG	2.2	U	U	2.0	U	U	2.7	U	U
ENDOSULFAN II	UG/KG	2.2	U	U	2.0	U	U	2.7	U	U
ENDOSULFAN SULFATE	UG/KG	2.2	U	U	2.0	U	U	2.7	U	U
ENDRIN	UG/KG	2.2	U	U	2.0	U	U	2.7	U	U
ENDRIN ALDEHYDE	UG/KG	2.2	U	U	2.0	U	U	2.7	U	U
ENDRIN KETONE	UG/KG	2.2	U	UJ	2.0	U	UJ	2.7	U	UJ
HEPTACHLOR	UG/KG	2.2	U	U	2.0	U	U	2.7	U	U
HEPTACHLOR EPOXIDE	UG/KG	2.2	U	U	2.0	U	U	2.7	U	U
METHOXYCHLOR	UG/KG	4.2	U	UJ	3.9	U	U	5.3	U	UJ
TOXAPHENE	UG/KG	85	U	U	78	U	U	110	U	U
alpha-BHC	UG/KG	2.2	U	U	2.0	U	U	2.7	U	U
alpha-CHLORDANE	UG/KG	2.2	U	U	2.0	U	U	2.7	U	U
beta-BHC	UG/KG	2.2	U	U	2.0	U	U	2.7	U	U
delta-BHC	UG/KG	2.2	U	U	2.0	U	U	2.7	U	U
gamma-BHC (LINDANE)	UG/KG	2.2	U	U	2.0	U	U	2.7	U	U
gamma-CHLORDANE	UG/KG	2.2	U	U	2.0	U	U	2.7	U	U

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Sample No:		4100			4110			4120		
Sample Location:		PH2SO05			PH2SO06			PH2SO06		
Sample Date:		28-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			2 - 3		
PH2:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
4,4'-DDE	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
4,4'-DDT	UG/KG	1.9	U	U	2.6			2.2	U	U
ALDRIN	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
AROCLOR 1016	UG/KG	38	U	U	43	U	U	42	U	U
AROCLOR 1221	UG/KG	38	U	U	43	U	U	42	U	U
AROCLOR 1232	UG/KG	38	U	U	43	U	U	42	U	U
AROCLOR 1242	UG/KG	38	U	U	43	U	U	42	U	U
AROCLOR 1248	UG/KG	38	U	U	43	U	U	42	U	U
AROCLOR 1254	UG/KG	38	U	U	43	U	U	42	U	U
AROCLOR 1260	UG/KG	38	U	U	43	U	U	42	U	U
DIELDRIN	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
ENDOSULFAN I	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
ENDOSULFAN II	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
ENDOSULFAN SULFATE	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
ENDRIN	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
ENDRIN ALDEHYDE	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
ENDRIN KETONE	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
HEPTACHLOR	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
HEPTACHLOR EPOXIDE	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
METHOXYCHLOR	UG/KG	3.8	U	U	4.3	U	U	4.2	U	U
TOXAPHENE	UG/KG	76	U	U	87	U	U	85	U	U
alpha-BHC	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
alpha-CHLORDANE	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
beta-BHC	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
delta-BHC	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
gamma-BHC (LINDANE)	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U
gamma-CHLORDANE	UG/KG	1.9	U	U	2.2	U	U	2.2	U	U

Sample No:		4130			4140			4150		
Sample Location:		PH2SO07			PH2SO07			PH2SO08		
Sample Date:		29-SEP-96			29-SEP-96			28-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U
4,4'-DDE	UG/KG	7.1			1.9	U	U	2.4		
4,4'-DDT	UG/KG	7.1			1.9	U	U	3.5		
ALDRIN	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U
AROCLOR 1016	UG/KG	56	U	U	38	U	U	44	U	U
AROCLOR 1221	UG/KG	56	U	U	38	U	U	44	U	U
AROCLOR 1232	UG/KG	56	U	U	38	U	U	44	U	U
AROCLOR 1242	UG/KG	56	U	U	38	U	U	44	U	U
AROCLOR 1248	UG/KG	56	U	U	38	U	U	44	U	U
AROCLOR 1254	UG/KG	56	U	U	38	U	U	44	U	U
AROCLOR 1260	UG/KG	56	U	U	38	U	U	44	U	U
DIELDRIN	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U
ENDOSULFAN I	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U
ENDOSULFAN II	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U
ENDOSULFAN SULFATE	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U
ENDRIN	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U
ENDRIN ALDEHYDE	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U
ENDRIN KETONE	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U
HEPTACHLOR	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U
HEPTACHLOR EPOXIDE	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U
METHOXYCHLOR	UG/KG	5.6	U	U	3.8	U	U	4.4	U	U
TOXAPHENE	UG/KG	110	U	U	77	U	U	89	U	U
alpha-BHC	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U
alpha-CHLORDANE	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U
beta-BHC	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U
delta-BHC	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U
gamma-BHC (LINDANE)	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U
gamma-CHLORDANE	UG/KG	2.9	U	U	1.9	U	U	2.3	U	U

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Sample No:		4160			4170			4180		
Sample Location:		PH2SO08			PH2SO09			PH2SO09		
Sample Date:		28-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			2 - 3		
PH2:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U
4,4'-DDE	UG/KG	1.9	U	U	5.8			2.1	U	U
4,4'-DDT	UG/KG	1.9	U	U	5.7			2.1	U	U
ALDRIN	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U
AROCLOR 1016	UG/KG	36	U	U	47	U	U	40	U	U
AROCLOR 1221	UG/KG	36	U	U	47	U	U	40	U	U
AROCLOR 1232	UG/KG	36	U	U	47	U	U	40	U	U
AROCLOR 1242	UG/KG	36	U	U	47	U	U	40	U	U
AROCLOR 1248	UG/KG	36	U	U	47	U	U	40	U	U
AROCLOR 1254	UG/KG	36	U	U	47	U	U	40	U	U
AROCLOR 1260	UG/KG	36	U	U	47	U	U	40	U	U
DIELDRIN	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U
ENDOSULFAN I	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U
ENDOSULFAN II	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U
ENDOSULFAN SULFATE	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U
ENDRIN	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U
ENDRIN ALDEHYDE	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U
ENDRIN KETONE	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U
HEPTACHLOR	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U
HEPTACHLOR EPOXIDE	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U
METHOXYCHLOR	UG/KG	3.6	U	U	4.7	U	U	4.0	U	U
TOXAPHENE	UG/KG	73	U	U	95	U	U	81	U	U
alpha-BHC	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U
alpha-CHLORDANE	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U
beta-BHC	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U
delta-BHC	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U
gamma-BHC (LINDANE)	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U
gamma-CHLORDANE	UG/KG	1.9	U	U	2.4	U	U	2.1	U	U

Sample No:		4190			4200			4210		
Sample Location:		PH2SO10			PH2SO10			PH2SO11		
Sample Date:		29-SEP-96			29-SEP-96			29-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	3.0	U	U	1.9	U	U	2.8	U	U
4,4'-DDE	UG/KG	3.9			1.9	U	U	3.4		
4,4'-DDT	UG/KG	4.1			1.9	U	U	3.3		
ALDRIN	UG/KG	3.0	U	U	1.9	U	U	2.8	U	U
AROCLOR 1016	UG/KG	59	U	U	38	U	U	54	U	U
AROCLOR 1221	UG/KG	59	U	U	38	U	U	54	U	U
AROCLOR 1232	UG/KG	59	U	U	38	U	U	54	U	U
AROCLOR 1242	UG/KG	59	U	U	38	U	U	54	U	U
AROCLOR 1248	UG/KG	59	U	U	38	U	U	54	U	U
AROCLOR 1254	UG/KG	59	U	U	38	U	U	54	U	U
AROCLOR 1260	UG/KG	59	U	U	38	U	U	54	U	U
DIELDRIN	UG/KG	3.0	U	U	1.9	U	U	2.8	U	U
ENDOSULFAN I	UG/KG	3.0	U	U	1.9	U	U	2.8	U	U
ENDOSULFAN II	UG/KG	3.0	U	U	1.9	U	U	2.8	U	U
ENDOSULFAN SULFATE	UG/KG	3.0	U	U	1.9	U	U	5.5	GU	U
ENDRIN	UG/KG	3.0	U	U	1.9	U	U	2.8	U	U
ENDRIN ALDEHYDE	UG/KG	3.0	U	U	1.9	U	U	2.8	U	U
ENDRIN KETONE	UG/KG	3.0	U	UJ	1.9	U	UJ	2.8	U	UJ
HEPTACHLOR	UG/KG	3.0	U	U	1.9	U	U	2.8	U	U
HEPTACHLOR EPOXIDE	UG/KG	3.0	U	U	1.9	U	U	2.8	U	U
METHOXYCHLOR	UG/KG	5.9	U	U	3.8	U	U	5.4	U	U
TOXAPHENE	UG/KG	120	U	U	76	U	U	110	U	U
alpha-BHC	UG/KG	3.0	U	U	1.9	U	U	2.8	U	U
alpha-CHLORDANE	UG/KG	3.0	U	U	1.9	U	U	2.8	U	U
beta-BHC	UG/KG	3.0	U	U	1.9	U	U	2.8	U	U
delta-BHC	UG/KG	3.0	U	U	1.9	U	U	2.8	U	U
gamma-BHC (LINDANE)	UG/KG	3.0	U	U	1.9	U	U	2.8	U	U
gamma-CHLORDANE	UG/KG	3.0	U	U	1.9	U	U	2.8	U	U

Sample No:		4220			4230			4240		
Sample Location:		PH2SO11			PH2SO12			PH2SO12		
Sample Date:		29-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			3 - 4		
PH2:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
4,4'-DDE	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
4,4'-DDT	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
ALDRIN	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
AROCLOR 1016	UG/KG	39	U	U	50	U	U	36	U	U
AROCLOR 1221	UG/KG	39	U	U	50	U	U	36	U	U
AROCLOR 1232	UG/KG	39	U	U	50	U	U	36	U	U
AROCLOR 1242	UG/KG	39	U	U	50	U	U	36	U	U
AROCLOR 1248	UG/KG	39	U	U	50	U	U	36	U	U
AROCLOR 1254	UG/KG	39	U	U	50	U	U	36	U	U
AROCLOR 1260	UG/KG	39	U	U	50	U	U	36	U	U
DIELDRIN	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
ENDOSULFAN I	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
ENDOSULFAN II	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
ENDOSULFAN SULFATE	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
ENDRIN	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
ENDRIN ALDEHYDE	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
ENDRIN KETONE	UG/KG	2.0	U	UJ	2.6	U	UJ	1.8	U	UJ
HEPTACHLOR	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
HEPTACHLOR EPOXIDE	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
METHOXYCHLOR	UG/KG	3.9	U	U	5.0	U	U	3.6	U	U
TOXAPHENE	UG/KG	80	U	U	100	U	U	73	U	U
alpha-BHC	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
alpha-CHLORDANE	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
beta-BHC	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
delta-BHC	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
gamma-BHC (LINDANE)	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U
gamma-CHLORDANE	UG/KG	2.0	U	U	2.6	U	U	1.8	U	U

Sample No:		4010			4020			4030		
Sample Location:		PH2SO01			PH2SO01			PH2SO02		
Sample Date:		28-SEP-96			28-SEP-96			29-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	12700			5880			8210		
ANTIMONY	MG/KG	9.8	U	UJ	6.7	U	UJ	9.2	U	UJ
ARSENIC	MG/KG	11.6			4.8			17.8		
BARIUM	MG/KG	85.3			40.3			141		
BERYLLIUM	MG/KG	1.2			0.55	U	U	1.1		
CADMIUM	MG/KG	0.81	U	U	0.55	U	U	1.1		
CALCIUM	MG/KG	8630			8390			9840		
CHROMIUM	MG/KG	16.2			8.9			7.5		
COBALT	MG/KG	15.1			10.7			19.0		
COPPER	MG/KG	33.1			12.5			28.2		
IRON	MG/KG	38700			14000			74000		
LEAD	MG/KG	32.2			7.7			15.6		
MAGNESIUM	MG/KG	2960			3420			1320		
MANGANESE	MG/KG	189			259			1020		
MERCURY	MG/KG	0.10			0.037	U	U	0.059		
NICKEL	MG/KG	41.9			18.3			30.8		
POTASSIUM	MG/KG	1410			1020			950		
SELENIUM	MG/KG	2.1			0.55	U	U	1.8		
SILVER	MG/KG	1.6	U	U	1.1	U	U	2.0		
SODIUM	MG/KG	813	U	U	555	U	U	768	U	U
THALLIUM	MG/KG	1.9			1.1	U	U	2.9		
VANADIUM	MG/KG	19.6			14.3			8.8		
ZINC	MG/KG	127			39.2			73.0		

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Sample No:		4040			4050			4060		
Sample Location:		PH2SO02			PH2SO03			PH2SO03		
Sample Date:		29-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			2 - 3		
PH2:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	3520			8940			6580		
ANTIMONY	MG/KG	6.9	U	UJ	10.3	U	UJ	7.6	U	UJ
ARSENIC	MG/KG	3.6			15.1			6.2		
BARIUM	MG/KG	29.9			108			60.0		
BERYLLIUM	MG/KG	0.58	U	U	1.2			0.64	U	U
CADMIUM	MG/KG	0.58	U	U	0.86	U	U	0.64	U	U
CALCIUM	MG/KG	1640			9290			2560		
CHROMIUM	MG/KG	6.1			12.5			10.2		
COBALT	MG/KG	8.5			16.5			13.4		
COPPER	MG/KG	8.3			25.4			14.1		
IRON	MG/KG	10500			28900			18000		
LEAD	MG/KG	6.1			25.4			10.3		
MAGNESIUM	MG/KG	1190			2010			2050		
MANGANESE	MG/KG	129			494			236		
MERCURY	MG/KG	0.038	U	U	0.098			0.042	U	U
NICKEL	MG/KG	13.9			26.0			20.4		
POTASSIUM	MG/KG	577	U	U	982			892		
SELENIUM	MG/KG	0.58	U	U	2.0			0.64	U	U
SILVER	MG/KG	1.2	U	U	1.7	U	U	1.3	U	U
SODIUM	MG/KG	577	U	U	858	U	U	636	U	U
THALLIUM	MG/KG	1.2	U	U	1.7	U	U	1.3		
VANADIUM	MG/KG	7.5			19.0			13.2		
ZINC	MG/KG	35.3			78.0			56.0		

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Sample No:		4070			4080			4090		
Sample Location:		PH2SO04			PH2SO04			PH2SO05		
Sample Date:		28-SEP-96			28-SEP-96			28-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	13900			9490			8300		
ANTIMONY	MG/KG	7.6	U	UJ	7.0	U	UJ	9.6	U	UJ
ARSENIC	MG/KG	7.0			7.1			20.7		
BARIUM	MG/KG	90.2			59.4			133		
BERYLLIUM	MG/KG	0.83			0.60			1.4		
CADMIUM	MG/KG	0.63	U	U	0.58	U	U	1.4		
CALCIUM	MG/KG	2890			2390			9450		
CHROMIUM	MG/KG	17.7			14.2			9.9		
COBALT	MG/KG	16.4			15.2			13.8		
COPPER	MG/KG	18.6			17.3			25.7		
IRON	MG/KG	25200			22500			45400		
LEAD	MG/KG	14.8			10.5			18.8		
MAGNESIUM	MG/KG	3440			2500			957		
MANGANESE	MG/KG	430			464			350		
MERCURY	MG/KG	0.042	U	U	0.039	U	U	0.069		
NICKEL	MG/KG	30.4			31.9			23.5		
POTASSIUM	MG/KG	1830			1130			1420		
SELENIUM	MG/KG	0.65			0.58	U	U	2.2		
SILVER	MG/KG	1.6			1.6			1.6	U	U
SODIUM	MG/KG	633	U	U	584	U	U	796	U	U
THALLIUM	MG/KG	1.3	U	U	1.2	U	U	1.9		
VANADIUM	MG/KG	24.9			21.1			14.3		
ZINC	MG/KG	88.7			73.2			61.5		

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Sample No:		4100			4110			4120		
Sample Location:		PH2SO05			PH2SO06			PH2SO06		
Sample Date:		28-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			2 - 3		
PH2:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	9920			9850			8570		
ANTIMONY	MG/KG	6.8	U	UJ	7.8	U	UJ	7.6	U	UJ
ARSENIC	MG/KG	5.5			19.0			4.4		
BARIUM	MG/KG	82.9			121			73.0		
BERYLLIUM	MG/KG	0.76			1.0			0.76		
CADMIUM	MG/KG	0.57	U	U	0.65	U	U	0.64	U	U
CALCIUM	MG/KG	3020			4890			996		
CHROMIUM	MG/KG	13.4			1.9			11.6		
COBALT	MG/KG	19.6			15.4			12.3		
COPPER	MG/KG	18.0			38.6			18.4		
IRON	MG/KG	22500			107000			23700		
LEAD	MG/KG	11.1			15.6			10.9		
MAGNESIUM	MG/KG	2600			704			2280		
MANGANESE	MG/KG	693			165			126		
MERCURY	MG/KG	0.038	U	U	0.043	U	U	0.042	U	U
NICKEL	MG/KG	34.3			28.3			28.3		
POTASSIUM	MG/KG	1080			1000			957		
SELENIUM	MG/KG	0.57	U	U	1.8			0.64		
SILVER	MG/KG	1.2			1.7			1.3	U	U
SODIUM	MG/KG	569	U	U	652	U	U	637	U	U
THALLIUM	MG/KG	1.1	U	U	4.4			1.3	U	U
VANADIUM	MG/KG	17.7			6.5	U	U	13.5		
ZINC	MG/KG	78.5			45.7			76.5		

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Sample No:		4130			4140			4150		
Sample Location:		PH2SO07			PH2SO07			PH2SO08		
Sample Date:		29-SEP-96			29-SEP-96			28-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	10300			8940			11500		
ANTIMONY	MG/KG	10.2	U	UJ	6.9	U	UJ	8.0	U	UJ
ARSENIC	MG/KG	18.1			4.6			6.3		
BARIUM	MG/KG	141			90.0			74.3		
BERYLLIUM	MG/KG	1.6			0.68			0.73		
CADMIUM	MG/KG	0.85	U	U	0.57	U	U	0.67	U	U
CALCIUM	MG/KG	9780			2580			4260		
CHROMIUM	MG/KG	14.8			11.5			14.5		
COBALT	MG/KG	15.8			12.1			14.6		
COPPER	MG/KG	25.0			24.7			16.8		
IRON	MG/KG	41200			20800			21300		
LEAD	MG/KG	19.1			11.1			17.6		
MAGNESIUM	MG/KG	1460			2610			2770		
MANGANESE	MG/KG	241			324			450		
MERCURY	MG/KG	0.072			0.038	U	U	0.045		
NICKEL	MG/KG	27.0			29.3			26.2		
POTASSIUM	MG/KG	1530			873			1770		
SELENIUM	MG/KG	1.7			0.57	U	U	0.67	U	U
SILVER	MG/KG	1.7	U	U	1.1	U	U	1.3	U	U
SODIUM	MG/KG	847	U	U	572	U	U	668	U	U
THALLIUM	MG/KG	1.7	U	U	1.1	U	U	1.3	U	U
VANADIUM	MG/KG	19.9			14.8			22.3		
ZINC	MG/KG	73.6			68.8			81.1		

PLUMBROOK

Power House Number 2 Ash Pit

Data Summary - Soils

Report Date: 02/15/97

Sample No:		4160			4170			4180		
Sample Location:		PH2SO08			PH2SO09			PH2SO09		
Sample Date:		28-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			2 - 3		
PH2:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	6950			13800			7100		
ANTIMONY	MG/KG	6.6	U	UJ	8.5	U	UJ	7.3	U	UJ
ARSENIC	MG/KG	5.1			9.3			5.0		
BARIUM	MG/KG	54.2			103			55.2		
BERYLLIUM	MG/KG	0.55	U	U	0.96			0.61	U	U
CADMIUM	MG/KG	0.55	U	U	0.71	U	U	0.61	U	U
CALCIUM	MG/KG	1910			4780			2200		
CHROMIUM	MG/KG	9.9			17.0			9.8		
COBALT	MG/KG	11.3			14.5			11.9		
COPPER	MG/KG	12.8			25.3			12.9		
IRON	MG/KG	16200			27700			16700		
LEAD	MG/KG	7.3			21.8			8.2		
MAGNESIUM	MG/KG	1760			3400			2110		
MANGANESE	MG/KG	565			663			305		
MERCURY	MG/KG	0.036	U	U	0.061			0.040	U	U
NICKEL	MG/KG	22.9			33.6			21.1		
POTASSIUM	MG/KG	774			2260			952		
SELENIUM	MG/KG	0.55	U	U	1.3			0.61	U	U
SILVER	MG/KG	1.1	U	U	1.4	U	U	1.2	U	U
SODIUM	MG/KG	548	U	U	706	U	U	605	U	U
THALLIUM	MG/KG	1.5			1.4	U	U	1.2	U	U
VANADIUM	MG/KG	15.6			23.7			14.2		
ZINC	MG/KG	53.6			103			50.3		

Report Date: 02/15/97

Sample No:		4190			4200			4210		
Sample Location:		PH2SO10			PH2SO10			PH2SO11		
Sample Date:		29-SEP-96			29-SEP-96			29-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	10500			5650			10900		
ANTIMONY	MG/KG	10.7	U	U	6.8	U	U	9.8	U	U
ARSENIC	MG/KG	16.2			4.4			13.6		
BARIUM	MG/KG	107			40.8			102		
BERYLLIUM	MG/KG	1.2			0.57	U	U	1.3		
CADMIUM	MG/KG	0.89	U	U	0.57	U	U	0.82	U	U
CALCIUM	MG/KG	8840			1730			4650		
CHROMIUM	MG/KG	14.4			8.1			15.8		
COBALT	MG/KG	12.0			7.5			13.0		
COPPER	MG/KG	26.9			12.0			23.8		
IRON	MG/KG	38000			13900			29300		
LEAD	MG/KG	25.5			10.5			22.6		
MAGNESIUM	MG/KG	1860			1640			1840		
MANGANESE	MG/KG	423		J	149		J	394		J
MERCURY	MG/KG	0.11			0.038	U	U	0.14		
NICKEL	MG/KG	23.6			16.2			23.7		
POTASSIUM	MG/KG	1540			661			1660		
SELENIUM	MG/KG	2.4			0.57	U	U	1.9		
SILVER	MG/KG	1.8	U	U	1.1	U	U	1.6	U	U
SODIUM	MG/KG	891	U	U	571	U	U	820	U	U
THALLIUM	MG/KG	5.0			2.0			3.9		
VANADIUM	MG/KG	18.9			10.4			21.5		
ZINC	MG/KG	85.4			42.2			79.0		

PLUMBROOK

Power House Number 2 Ash Pit

Data Summary - Soils

Report Date: 02/15/97

Sample No:		4220			4230			4240		
Sample Location:		PH2SO11			PH2SO12			PH2SO12		
Sample Date:		29-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			3 - 4		
PH2:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	9880			11600			5370		
ANTIMONY	MG/KG	7.1	U	U	9.2	U	U	6.5	U	U
ARSENIC	MG/KG	5.8			21.2			4.3		
BARIUM	MG/KG	90.3			131			38.3		
BERYLLIUM	MG/KG	0.70			1.2			0.54	U	U
CADMIUM	MG/KG	0.59	U	U	0.76	U	U	0.54	U	U
CALCIUM	MG/KG	3320			9120			1870		
CHROMIUM	MG/KG	13.7			8.1			7.4		
COBALT	MG/KG	24.7			9.4			5.6		
COPPER	MG/KG	20.7			31.5			9.6		
IRON	MG/KG	23100			70300			12800		
LEAD	MG/KG	15.1			11.7			7.0		
MAGNESIUM	MG/KG	3090			913			1420		
MANGANESE	MG/KG	1560		J	258		J	82.1		J
MERCURY	MG/KG	0.039	U	U	0.050	U	U	0.039		
NICKEL	MG/KG	35.2			21.4			13.8		
POTASSIUM	MG/KG	1130			1440			724		
SELENIUM	MG/KG	0.81			2.6			0.54	U	U
SILVER	MG/KG	1.2	U	U	1.5	U	U	1.1	U	U
SODIUM	MG/KG	595	U	U	765	U	U	543	U	U
THALLIUM	MG/KG	2.4			8.5			1.4		
VANADIUM	MG/KG	18.4			9.3			10.7		
ZINC	MG/KG	77.2			51.6			37.2		

Power House Number 2 Ash Pit

Data Summary - Soils

Report Date: 02/15/97

Sample No:		4010			4020			4030		
Sample Location:		PH2SO01			PH2SO01			PH2SO02		
Sample Date:		28-SEP-96			28-SEP-96			29-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.81	U	U	0.55	U	U	0.77	U	U

PLUMBROOK

Power House Number 2 Ash Pit

Data Summary - Soils

Report Date: 02/15/97

Sample No:		4040			4050			4060		
Sample Location:		PH2SO02			PH2SO03			PH2SO03		
Sample Date:		29-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			2 - 3		
PH2:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.58	U	U	0.86	U	U	0.64	U	U

Power House Number 2 Ash Pit

Data Summary - Soils

Report Date: 02/15/97

Sample No:		4070			4080			4090		
Sample Location:		PH2SO04			PH2SO04			PH2SO05		
Sample Date:		28-SEP-96			28-SEP-96			28-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.63	U	U	0.58	U	U	0.80	U	U

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Power House Number 2 Ash Pit

Data Summary - Soils

Report Date: 02/15/97

Sample No:		4100			4110			4120		
Sample Location:		PH2SO05			PH2SO06			PH2SO06		
Sample Date:		28-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			2 - 3		
PH2:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.57	U	U	0.65	U	U	0.64	U	U

Power House Number 2 Ash Pit

Data Summary - Soils

Report Date: 02/15/97

Sample No:		4130			4140			4150		
Sample Location:		PH2SO07			PH2SO07			PH2SO08		
Sample Date:		29-SEP-96			29-SEP-96			28-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.93			0.57	U	U	0.67	U	U

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Power House Number 2 Ash Pit

Data Summary - Soils

Report Date: 02/15/97

Sample No:		4160			4170			4180		
Sample Location:		PH2SO08			PH2SO09			PH2SO09		
Sample Date:		28-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			2 - 3		
PH2:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.55	U	U	0.71			0.61	U	U

Power House Number 2 Ash Pit

Data Summary - Soils

Report Date: 02/15/97

Sample No:		4190			4200			4210		
Sample Location:		PH2SO10			PH2SO10			PH2SO11		
Sample Date:		29-SEP-96			29-SEP-96			29-SEP-96		
Depth		0 - .5			2 - 3			0 - .5		
PH2:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.89			0.57	U	U	0.82	U	U

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Power House Number 2 Ash Pit

Data Summary - Soils

Report Date: 02/15/97

Sample No:		4220			4230			4240		
Sample Location:		PH2SO11			PH2SO12			PH2SO12		
Sample Date:		29-SEP-96			29-SEP-96			29-SEP-96		
Depth		2 - 3			0 - .5			3 - 4		
PH2:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.59	U	U	0.76	U	U	0.54	U	U

PLUMBROOK

Waste Water Disposal Plant No. 2

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/27/97

Sample No:				3210		3220		3230	
Sample Location:				WP2SO01		WP2SO02		WP2SO03	
Sample Date:				02-OCT-96		02-OCT-96		03-OCT-96	
Depth				0-.5		4-5		0-.5	
WP2:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
BENZO(A)ANTHRACENE		MG/KG	0.88						
BENZO(A)PYRENE		MG/KG	0.088	.67				.21	J
BENZO(B)FLUORANTHENE		MG/KG	0.88						
DIBENZ(A,H)ANTHRACENE		MG/KG	0.088	.18	J				
INDENO(1,2,3-CD)PYRENE		MG/KG	0.88						

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Waste Water Disposal Plant No. 2

Report Date: 02/27/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				3240		3250		3260	
Sample Location:				WP2SO04		WP2SO05		WP2SO06	
Sample Date:				02-OCT-96		02-OCT-96		02-OCT-96	
Depth				4-5		0-.5		4-5	
WP2:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
BENZO(A)ANTHRACENE		MG/KG	0.88			6			
BENZO(A)PYRENE		MG/KG	0.088			5.7			
BENZO(B)FLUORANTHENE		MG/KG	0.88			6.1			
DIBENZ(A,H)ANTHRACENE		MG/KG	0.088			1.2			
INDENO(1,2,3-CD)PYRENE		MG/KG	0.88			2.7			

PLUMBROOK

Waste Water Disposal Plant No. 2

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/27/97

Sample No:				3270		3280		3290	
Sample Location:				WP2SO07		WP2SO08		WP2SO09	
Sample Date:				02-OCT-96		02-OCT-96		03-OCT-96	
Depth				4-5		0-.5		0-.5	
WP2:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
BENZO(A)ANTHRACENE		MG/KG	0.88			2.9			
BENZO(A)PYRENE		MG/KG	0.088			2			
BENZO(B)FLUORANTHENE		MG/KG	0.88			2.5			
DIBENZ(A,H)ANTHRACENE		MG/KG	0.088			.57			
INDENO(1,2,3-CD)PYRENE		MG/KG	0.88			1.2			

PLUMBROOK

Waste Water Disposal Plant No. 2

Report Date: 02/27/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				3300	
Sample Location:				WP2SO10	
Sample Date:				02-OCT-96	
Depth				4-5	
WP2:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr
BENZO(A)ANTHRACENE		MG/KG	0.88		
BENZO(A)PYRENE		MG/KG	0.088	.83	
BENZO(B)FLUORANTHENE		MG/KG	0.88	1.3	
DIBENZ(A,H)ANTHRACENE		MG/KG	0.088	.23	J
INDENO(1,2,3-CD)PYRENE		MG/KG	0.88		

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Waste Water Disposal Plant No. 2

Report Date: 02/27/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				3210		3220		3230	
Sample Location:				WP2SO01		WP2SO02		WP2SO03	
Sample Date:				02-OCT-96		02-OCT-96		03-OCT-96	
Depth				0-.5		4-5		0-.5	
WP2:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083	.11					

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Waste Water Disposal Plant No. 2

Report Date: 02/27/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				3240		3250		3260	
Sample Location:				WP2SO04		WP2SO05		WP2SO06	
Sample Date:				02-OCT-96		02-OCT-96		02-OCT-96	
Depth				4-5		0-.5		4-5	
WP2:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083			1.7			

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Waste Water Disposal Plant No. 2

Report Date: 02/27/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				3270		3280		3290	
Sample Location:				WP2SO07		WP2SO08		WP2SO09	
Sample Date:				02-OCT-96		02-OCT-96		03-OCT-96	
Depth				4-5		0-.5		0-.5	
WP2:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083			.48			

PLUMBROOK

Waste Water Disposal Plant No. 2

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/27/97

Sample No:				3300	
Sample Location:				WP2SO10	
Sample Date:				02-OCT-96	
Depth				4-5	
WP2:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083	5.8	

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Waste Water Disposal Plant No. 2

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/27/97

Sample No:				3210		3220		3230	
Sample Location:				WP2SO01		WP2SO02		WP2SO03	
Sample Date:				02-OCT-96		02-OCT-96		03-OCT-96	
Depth				0-.5		4-5		0-.5	
WP2:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800	10600		14600			
ANTIMONY		MG/KG	3.1						
ARSENIC		MG/KG	.43	7.4		9.3		18.8	
BERYLLIUM		MG/KG	0.15			0.76			
CALCIUM		MG/KG		8740		2620		1790	
IRON		MG/KG	2300	20600		29600		28400	
LEAD		MG/KG	400						
MAGNESIUM		MG/KG		5060		3720		1200	
MANGANESE		MG/KG	160	458		473			
POTASSIUM		MG/KG		1610	J	1380	J	2130	
THALLIUM		MG/KG	0.51					1.5	J

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Waste Water Disposal Plant No. 2

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/27/97

Sample No:				3240		3250		3260	
Sample Location:				WP2SO04		WP2SO05		WP2SO06	
Sample Date:				02-OCT-96		02-OCT-96		02-OCT-96	
Depth				4-5		0-.5		4-5	
WP2:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800	13200				9050	
ANTIMONY		MG/KG	3.1						
ARSENIC		MG/KG	.43	8.9		4.9		9.1	
BERYLLIUM		MG/KG	0.15	0.61					
CALCIUM		MG/KG		3730		101000		30400	
IRON		MG/KG	2300	27100		9060		21300	
LEAD		MG/KG	400			514			
MAGNESIUM		MG/KG		4960		11300		10300	
MANGANESE		MG/KG	160	430		226		437	
POTASSIUM		MG/KG		1610	J	632	J	1400	J
THALLIUM		MG/KG	0.51	1.3					

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Waste Water Disposal Plant No. 2

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/27/97

Sample No:				3270		3280		3290	
Sample Location:				WP2SO07		WP2SO08		WP2SO09	
Sample Date:				02-OCT-96		02-OCT-96		03-OCT-96	
Depth				4-5		0-.5		0-.5	
WP2:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800	13700				8730	
ANTIMONY		MG/KG	3.1						
ARSENIC		MG/KG	.43	10.1		6.7		6.3	
BERYLLIUM		MG/KG	0.15	0.67					
CALCIUM		MG/KG		25500		43100		17300	
IRON		MG/KG	2300	24900		17000		16500	
LEAD		MG/KG	400						
MAGNESIUM		MG/KG		11000		9590		7280	
MANGANESE		MG/KG	160	598	J	314	J	378	
POTASSIUM		MG/KG		2650		1090		1510	
THALLIUM		MG/KG	0.51	1.2					

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Waste Water Disposal Plant No. 2

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/27/97

Sample No:				3300	
Sample Location:				WP2SO10	
Sample Date:				02-OCT-96	
Depth				4-5	
WP2:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr
ALUMINUM		MG/KG	7800		
ANTIMONY		MG/KG	3.1	106	J
ARSENIC		MG/KG	.43	7.9	
BERYLLIUM		MG/KG	0.15		
CALCIUM		MG/KG		30700	
IRON		MG/KG	2300	19200	
LEAD		MG/KG	400	2870	
MAGNESIUM		MG/KG		4350	
MANGANESE		MG/KG	160	309	J
POTASSIUM		MG/KG		1060	
THALLIUM		MG/KG	0.51		

Waste Water Disposal Plant No. 2

Data Summary - Soils

Report Date: 02/17/97

		3210 WP2SO01 02-OCT-96 0 - .5			3220 WP2SO02 02-OCT-96 4 - 5			3230 WP2SO03 03-OCT-96 0 - .5		
WP2:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
1,1,2-TRICHLOROETHANE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
1,1-DICHLOROETHANE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
1,1-DICHLOROETHENE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
1,2-DICHLOROETHANE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
1,2-DICHLOROETHENE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
1,2-DICHLOROPROPANE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
2-BUTANONE	UG/KG	25	U	U	24	U	U	120	U	U
2-HEXANONE	UG/KG	25	U	U	24	U	U	120	U	U
4-METHYL-2-PENTANONE	UG/KG	25	U	U	24	U	U	120	U	U
ACETONE	UG/KG	25	U	U	24	U	U	54	J	J
BENZENE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
BROMODICHLOROMETHANE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
BROMOFORM	UG/KG	6.4	U	U	6.1	U	U	29	U	U
BROMOMETHANE	UG/KG	13	U	U	12	U	U	58	U	U
CARBON DISULFIDE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
CARBON TETRACHLORIDE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
CHLOROBENZENE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
CHLOROETHANE	UG/KG	13	U	U	12	U	U	58	U	U
CHLOROFORM	UG/KG	6.4	U	U	6.1	U	U	29	U	U
CHLOROMETHANE	UG/KG	13	U	U	12	U	U	58	U	U
DIBROMOCHLOROMETHANE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
ETHYLBENZENE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
METHYLENE CHLORIDE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
STYRENE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
TETRACHLOROETHENE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
TOLUENE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
TOTAL XYLENES	UG/KG	6.4	U	U	6.1	U	U	29	U	U

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WP2:VOLATILES	Units	3240 WP2SO04 02-OCT-96 4 - 5 Result	Lab Qlfr	Val Qlfr	3250 WP2SO05 02-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	3260 WP2SO06 02-OCT-96 4 - 5 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
1,1,2-TRICHLOROETHANE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
1,1-DICHLOROETHANE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
1,1-DICHLOROETHENE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
1,2-DICHLOROETHANE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
1,2-DICHLOROETHENE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
1,2-DICHLOROPROPANE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
2-BUTANONE	UG/KG	24	U	U	22	U	U	23	U	U
2-HEXANONE	UG/KG	24	U	U	22	U	U	23	U	U
4-METHYL-2-PENTANONE	UG/KG	24	U	U	22	U	U	23	U	U
ACETONE	UG/KG	4.2	J	J	22	U	U	23	U	U
BENZENE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
BROMODICHLOROMETHANE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
BROMOFORM	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
BROMOMETHANE	UG/KG	12	U	U	11	U	U	11	U	U
CARBON DISULFIDE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
CARBON TETRACHLORIDE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
CHLOROBENZENE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
CHLOROETHANE	UG/KG	12	U	U	11	U	U	11	U	U
CHLOROFORM	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
CHLOROMETHANE	UG/KG	12	U	U	11	U	U	11	U	U
DIBROMOCHLOROMETHANE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
ETHYLBENZENE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
METHYLENE CHLORIDE	UG/KG	6.0	U	U	5.5	J B	U	5.6	J B	U
STYRENE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
TETRACHLOROETHENE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
TOLUENE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
TOTAL XYLENES	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U

WP2:VOLATILES	Units	3270 WP2SO07 02-OCT-96 4 - 5 Result	Lab Qlfr	Val Qlfr	3280 WP2SO08 02-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	3290 WP2SO09 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
1,1,2-TRICHLOROETHANE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
1,1-DICHLOROETHANE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
1,1-DICHLOROETHENE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
1,2-DICHLOROETHANE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
1,2-DICHLOROETHENE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
1,2-DICHLOROPROPANE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
2-BUTANONE	UG/KG	24	U	U	25	U	U	120	U	U
2-HEXANONE	UG/KG	24	U	U	25	U	U	120	U	U
4-METHYL-2-PENTANONE	UG/KG	24	U	U	25	U	U	120	U	U
ACETONE	UG/KG	6.5	J	J	25	U	U	120	U	U
BENZENE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
BROMODICHLOROMETHANE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
BROMOFORM	UG/KG	5.9	U	U	6.2	U	U	30	U	U
BROMOMETHANE	UG/KG	12	U	U	12	U	U	60	U	U
CARBON DISULFIDE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
CARBON TETRACHLORIDE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
CHLOROBENZENE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
CHLOROETHANE	UG/KG	12	U	U	12	U	U	60	U	U
CHLOROFORM	UG/KG	5.9	U	U	6.2	U	U	30	U	U
CHLOROMETHANE	UG/KG	12	U	U	12	U	U	60	U	U
DIBROMOCHLOROMETHANE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
ETHYLBENZENE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
METHYLENE CHLORIDE	UG/KG	5.9	J B	U	6.2	J B	U	30	U	U
STYRENE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
TETRACHLOROETHENE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
TOLUENE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
TOTAL XYLENES	UG/KG	5.9	U	U	6.2	U	U	30	U	U

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WP2:VOLATILES	Units	3300 WP2SO10 02-OCT-96 4 - 5 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	6.3	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	6.3	U	U
1,1,2-TRICHLOROETHANE	UG/KG	6.3	U	U
1,1-DICHLOROETHANE	UG/KG	6.3	U	U
1,1-DICHLOROETHENE	UG/KG	6.3	U	U
1,2-DICHLOROETHANE	UG/KG	6.3	U	U
1,2-DICHLOROETHENE	UG/KG	6.3	U	U
1,2-DICHLOROPROPANE	UG/KG	6.3	U	U
2-BUTANONE	UG/KG	25	U	U
2-HEXANONE	UG/KG	25	U	U
4-METHYL-2-PENTANONE	UG/KG	25	U	U
ACETONE	UG/KG	25	U	U
BENZENE	UG/KG	6.3	U	U
BROMODICHLOROMETHANE	UG/KG	6.3	U	U
BROMOFORM	UG/KG	6.3	U	U
BROMOMETHANE	UG/KG	13	U	U
CARBON DISULFIDE	UG/KG	6.3	U	U
CARBON TETRACHLORIDE	UG/KG	6.3	U	U
CHLOROBENZENE	UG/KG	6.3	U	U
CHLOROETHANE	UG/KG	13	U	U
CHLOROFORM	UG/KG	6.3	U	U
CHLOROMETHANE	UG/KG	13	U	U
DIBROMOCHLOROMETHANE	UG/KG	6.3	U	U
ETHYLBENZENE	UG/KG	6.3	U	U
METHYLENE CHLORIDE	UG/KG	13	B	U
STYRENE	UG/KG	6.3	U	U
TETRACHLOROETHENE	UG/KG	6.3	U	U
TOLUENE	UG/KG	6.3	U	U
TOTAL XYLENES	UG/KG	6.3	U	U

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Sample No:		3210			3220			3230		
Sample Location:		WP2SO01			WP2SO02			WP2SO03		
Sample Date:		02-OCT-96			02-OCT-96			03-OCT-96		
Depth		0 - .5			4 - 5			0 - .5		
WP2:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
VINYL CHLORIDE	UG/KG	13	U	U	12	U	U	58	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	6.4	U	U	6.1	U	U	29	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	6.4	U	U	6.1	U	U	29	U	U

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Data Summary - Soils

Report Date: 02/17/97

Sample No:		3240			3250			3260		
Sample Location:		WP2SO04			WP2SO05			WP2SO06		
Sample Date:		02-OCT-96			02-OCT-96			02-OCT-96		
Depth		4 - 5			0 - .5			4 - 5		
WP2:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
VINYL CHLORIDE	UG/KG	12	U	U	11	U	U	11	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	6.0	U	U	5.5	U	U	5.6	U	U

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Data Summary - Soils

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Sample No:		3270			3280			3290		
Sample Location:		WP2SO07			WP2SO08			WP2SO09		
Sample Date:		02-OCT-96			02-OCT-96			03-OCT-96		
Depth		4 - 5			0 - .5			0 - .5		
WP2:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
VINYL CHLORIDE	UG/KG	12	U	U	12	U	U	60	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	5.9	U	U	6.2	U	U	30	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	5.9	U	U	6.2	U	U	30	U	U

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Sample No:		3300		
Sample Location:		WP2SO10		
Sample Date:		02-OCT-96		
Depth		4 - 5		
WP2:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	6.3	U	U
VINYL CHLORIDE	UG/KG	13	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	6.3	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	6.3	U	U

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Data Summary - Soils

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		3210 WP2SO01 02-OCT-96 0 - .5			3220 WP2SO02 02-OCT-96 4 - 5			3230 WP2SO03 03-OCT-96 0 - .5		
WP2:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	420	U	U	400	U	U	380	U	U
1,2-DICHLOROBENZENE	UG/KG	420	U	U	400	U	U	380	U	U
1,3-DICHLOROBENZENE	UG/KG	420	U	U	400	U	U	380	U	U
1,4-DICHLOROBENZENE	UG/KG	420	U	U	400	U	U	380	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	420	U	U	400	U	U	380	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	420	U	U	400	U	U	380	U	U
2,4-DICHLOROPHENOL	UG/KG	420	U	U	400	U	U	380	U	U
2,4-DIMETHYLPHENOL	UG/KG	420	U	U	400	U	U	380	U	U
2,4-DINITROPHENOL	UG/KG	2000	U	U	1900	U	U	1900	U	U
2,4-DINITROTOLUENE	UG/KG	420	U	U	400	U	U	380	U	U
2,6-DINITROTOLUENE	UG/KG	420	U	U	400	U	U	380	U	U
2-CHLORONAPHTHALENE	UG/KG	420	U	U	400	U	U	380	U	U
2-CHLOROPHENOL	UG/KG	420	U	U	400	U	U	380	U	U
2-METHYLNAPHTHALENE	UG/KG	420	U	U	400	U	U	140	J	J
2-METHYLPHENOL	UG/KG	420	U	U	400	U	U	380	U	U
2-NITROANILINE	UG/KG	2000	U	U	1900	U	U	1900	U	U
2-NITROPHENOL	UG/KG	420	U	U	400	U	U	380	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	2000	U	U	1900	U	U	1900	U	U
3-NITROANILINE	UG/KG	2000	U	U	1900	U	U	1900	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	2000	U	U	1900	U	U	1900	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	420	U	U	400	U	U	380	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	420	U	U	400	U	U	380	U	U
4-CHLOROANILINE	UG/KG	420	U	U	400	U	U	380	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	420	U	U	400	U	U	380	U	U
4-METHYLPHENOL	UG/KG	420	U	U	400	U	U	380	U	U
4-NITROANILINE	UG/KG	2000	U	U	1900	U	U	1900	U	U
4-NITROPHENOL	UG/KG	2000	U	U	1900	U	U	1900	U	U
ACENAPHTHENE	UG/KG	420	U	U	400	U	U	380	U	U
ACENAPHTHYLENE	UG/KG	250	J	J	400	U	U	69	J	J

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WP2:SEMIVOLATILES	Units	3240 WP2SO04 02-OCT-96 4 - 5 Result	Lab Qlfr	Val Qlfr	3250 WP2SO05 02-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	3260 WP2SO06 02-OCT-96 4 - 5 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	400	U	U	360	U	U	370	U	U
1,2-DICHLOROBENZENE	UG/KG	400	U	U	360	U	U	370	U	U
1,3-DICHLOROBENZENE	UG/KG	400	U	U	360	U	U	370	U	U
1,4-DICHLOROBENZENE	UG/KG	400	U	U	360	U	U	370	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	400	U	U	360	U	U	370	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	400	U	U	360	U	U	370	U	U
2,4-DICHLOROPHENOL	UG/KG	400	U	U	360	U	U	370	U	U
2,4-DIMETHYLPHENOL	UG/KG	400	U	U	360	U	U	370	U	U
2,4-DINITROPHENOL	UG/KG	1900	U	U	1800	U	U	1800	U	U
2,4-DINITROTOLUENE	UG/KG	400	U	U	83	J	J	370	U	U
2,6-DINITROTOLUENE	UG/KG	400	U	U	360	U	U	370	U	U
2-CHLORONAPHTHALENE	UG/KG	400	U	U	360	U	U	370	U	U
2-CHLOROPHENOL	UG/KG	400	U	U	360	U	U	370	U	U
2-METHYLNAPHTHALENE	UG/KG	400	U	U	360	U	U	370	U	U
2-METHYLPHENOL	UG/KG	400	U	U	360	U	U	370	U	U
2-NITROANILINE	UG/KG	1900	U	U	1800	U	U	1800	U	U
2-NITROPHENOL	UG/KG	400	U	U	360	U	U	370	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	1900	U	U	1800	U	U	1800	U	U
3-NITROANILINE	UG/KG	1900	U	U	1800	U	U	1800	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	1900	U	U	1800	U	U	1800	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	400	U	U	360	U	U	370	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	400	U	U	360	U	U	370	U	U
4-CHLOROANILINE	UG/KG	400	U	U	360	U	U	370	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	400	U	U	360	U	U	370	U	U
4-METHYLPHENOL	UG/KG	400	U	U	360	U	U	370	U	U
4-NITROANILINE	UG/KG	1900	U	U	1800	U	U	1800	U	U
4-NITROPHENOL	UG/KG	1900	U	U	1800	U	U	1800	U	U
ACENAPHTHENE	UG/KG	400	U	U	160	J	J	370	U	U
ACENAPHTHYLENE	UG/KG	400	U	U	2500			370	U	U

WP2:SEMIVOLATILES	Units	3270 WP2SO07 02-OCT-96 4 - 5 Result	Lab Qlfr	Val Qlfr	3280 WP2SO08 02-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	3290 WP2SO09 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	390	U	U	410	U	U	400	U	U
1,2-DICHLOROBENZENE	UG/KG	390	U	U	410	U	U	400	U	U
1,3-DICHLOROBENZENE	UG/KG	390	U	U	410	U	U	400	U	U
1,4-DICHLOROBENZENE	UG/KG	390	U	U	410	U	U	400	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	390	U	U	410	U	U	400	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	390	U	U	410	U	U	400	U	U
2,4-DICHLOROPHENOL	UG/KG	390	U	U	410	U	U	400	U	U
2,4-DIMETHYLPHENOL	UG/KG	390	U	U	410	U	U	400	U	U
2,4-DINITROPHENOL	UG/KG	1900	U	U	2000	U	U	1900	U	U
2,4-DINITROTOLUENE	UG/KG	390	U	U	410	U	U	400	U	U
2,6-DINITROTOLUENE	UG/KG	390	U	U	410	U	U	400	U	U
2-CHLORONAPHTHALENE	UG/KG	390	U	U	410	U	U	400	U	U
2-CHLOROPHENOL	UG/KG	390	U	U	410	U	U	400	U	U
2-METHYLNAPHTHALENE	UG/KG	390	U	U	410	U	U	400	U	U
2-METHYLPHENOL	UG/KG	390	U	U	410	U	U	400	U	U
2-NITROANILINE	UG/KG	1900	U	U	2000	U	U	1900	U	U
2-NITROPHENOL	UG/KG	390	U	U	410	U	U	400	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	1900	U	U	2000	U	U	1900	U	U
3-NITROANILINE	UG/KG	1900	U	U	2000	U	U	1900	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	1900	U	U	2000	U	U	1900	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	390	U	U	410	U	U	400	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	390	U	U	410	U	U	400	U	U
4-CHLOROANILINE	UG/KG	390	U	U	410	U	U	400	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	390	U	U	410	U	U	400	U	U
4-METHYLPHENOL	UG/KG	390	U	U	410	U	U	400	U	U
4-NITROANILINE	UG/KG	1900	U	U	2000	U	U	1900	U	U
4-NITROPHENOL	UG/KG	1900	U	U	2000	U	U	1900	U	U
ACENAPHTHENE	UG/KG	390	U	U	70	J	J	400	U	U
ACENAPHTHYLENE	UG/KG	390	U	U	960			400	U	U

WP2:SEMIVOLATILES	Units	3300 WP2SO10 02-OCT-96 4 - 5 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	410	U	U
1,2-DICHLOROBENZENE	UG/KG	410	U	U
1,3-DICHLOROBENZENE	UG/KG	410	U	U
1,4-DICHLOROBENZENE	UG/KG	410	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	410	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	410	U	U
2,4-DICHLOROPHENOL	UG/KG	410	U	U
2,4-DIMETHYLPHENOL	UG/KG	410	U	U
2,4-DINITROPHENOL	UG/KG	2000	U	U
2,4-DINITROTOLUENE	UG/KG	160	J	J
2,6-DINITROTOLUENE	UG/KG	410	U	U
2-CHLORONAPHTHALENE	UG/KG	410	U	U
2-CHLOROPHENOL	UG/KG	410	U	U
2-METHYLNAPHTHALENE	UG/KG	410	U	U
2-METHYLPHENOL	UG/KG	410	U	U
2-NITROANILINE	UG/KG	2000	U	U
2-NITROPHENOL	UG/KG	410	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	2000	U	U
3-NITROANILINE	UG/KG	2000	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	2000	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	410	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	410	U	U
4-CHLOROANILINE	UG/KG	410	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	410	U	U
4-METHYLPHENOL	UG/KG	410	U	U
4-NITROANILINE	UG/KG	2000	U	U
4-NITROPHENOL	UG/KG	2000	U	U
ACENAPHTHENE	UG/KG	410	U	U
ACENAPHTHYLENE	UG/KG	150	J	J

WP2:SEMIVOLATILES	Units	3210 WP2SO01 02-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	3220 WP2SO02 02-OCT-96 4 - 5 Result	Lab Qlfr	Val Qlfr	3230 WP2SO03 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	220	J	J	400	U	U	74	J	J
BENZO(a)ANTHRACENE	UG/KG	760			400	U	U	250	J	J
BENZO(a)PYRENE	UG/KG	670			400	U	U	210	J	J
BENZO(b)FLUORANTHENE	UG/KG	740			400	U	U	180	J	J
BENZO(ghi)PERYLENE	UG/KG	350	J	J	400	U	U	380	U	U
BENZO(k)FLUORANTHENE	UG/KG	580			400	U	U	240	J	J
BIS(2-CHLOROETHOXY)METHANE	UG/KG	420	U	U	400	U	U	380	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	420	U	U	400	U	U	380	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	420	U	U	400	U	U	380	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	420	U	U	400	U	U	380	U	U
BUTYL BENZYL PHTHALATE	UG/KG	420	U	U	400	U	U	380	U	U
CARBAZOLE	UG/KG	420	U	U	400	U	U	380	U	U
CHRYSENE	UG/KG	710			400	U	U	250	J	J
DI-n-BUTYL PHTHALATE	UG/KG	420	U	U	400	U	U	380	U	U
DI-n-OCTYL PHTHALATE	UG/KG	420	U	U	400	U	U	380	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	180	J	J	400	U	U	61	J	J
DIBENZOFURAN	UG/KG	420	U	U	400	U	U	380	U	U
DIETHYL PHTHALATE	UG/KG	420	U	U	400	U	U	380	U	U
DIMETHYL PHTHALATE	UG/KG	420	U	U	400	U	U	380	U	U
FLUORANTHENE	UG/KG	1400			400	U	U	400		
FLUORENE	UG/KG	420	U	U	400	U	U	380	U	U
HEXACHLOROBENZENE	UG/KG	420	U	U	400	U	U	380	U	U
HEXACHLOROBUTADIENE	UG/KG	420	U	U	400	U	U	380	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	2000	U	U	1900	U	U	1900	U	U
HEXACHLOROETHANE	UG/KG	420	U	U	400	U	U	380	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	370	J	J	400	U	U	380	U	U
ISOPHORONE	UG/KG	420	U	U	400	U	U	380	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	420	U	U	400	U	U	380	U	U
N-NITROSODIPHENYLAMINE	UG/KG	420	U	U	400	U	U	380	U	U

WP2:SEMIVOLATILES	Units	3240 WP2SO04 02-OCT-96 4 - 5 Result	Lab Qlfr	Val Qlfr	3250 WP2SO05 02-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	3260 WP2SO06 02-OCT-96 4 - 5 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	400	U	U	2300			370	U	U
BENZO(a)ANTHRACENE	UG/KG	400	U	U	6000			370	U	U
BENZO(a)PYRENE	UG/KG	400	U	U	5700			370	U	U
BENZO(b)FLUORANTHENE	UG/KG	400	U	U	6100			370	U	U
BENZO(ghi)PERYLENE	UG/KG	400	U	U	2700			370	U	U
BENZO(k)FLUORANTHENE	UG/KG	400	U	U	2100			370	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	400	U	U	360	U	U	370	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	400	U	U	360	U	U	370	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	400	U	U	360	U	U	370	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	400	U	U	360	U	U	370	U	U
BUTYL BENZYL PHTHALATE	UG/KG	400	U	U	360	U	U	370	U	U
CARBAZOLE	UG/KG	400	U	U	540			370	U	U
CHRYSENE	UG/KG	400	U	U	5300			370	U	U
DI-n-BUTYL PHTHALATE	UG/KG	400	U	U	360	U	U	370	U	U
DI-n-OCTYL PHTHALATE	UG/KG	400	U	U	360	U	U	370	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	400	U	U	1200			370	U	U
DIBENZOFURAN	UG/KG	400	U	U	170	J	J	370	U	U
DIETHYL PHTHALATE	UG/KG	400	U	U	360	U	U	370	U	U
DIMETHYL PHTHALATE	UG/KG	400	U	U	360	U	U	370	U	U
FLUORANTHENE	UG/KG	400	U	U	11000			370	U	U
FLUORENE	UG/KG	400	U	U	490			370	U	U
HEXACHLOROBENZENE	UG/KG	400	U	U	360	U	U	370	U	U
HEXACHLOROBUTADIENE	UG/KG	400	U	U	360	U	U	370	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	1900	U	U	1800	U	U	1800	U	U
HEXACHLOROETHANE	UG/KG	400	U	U	360	U	U	370	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	400	U	U	2700			370	U	U
ISOPHORONE	UG/KG	400	U	U	360	U	U	370	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	400	U	U	360	U	U	370	U	U
N-NITROSODIPHENYLAMINE	UG/KG	400	U	U	360	U	U	370	U	U

WP2:SEMIVOLATILES	Units	3270 WP2SO07 02-OCT-96 4 - 5 Result	Lab Qlfr	Val Qlfr	3280 WP2SO08 02-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	3290 WP2SO09 03-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	390	U	U	1100			400	U	U
BENZO(a)ANTHRACENE	UG/KG	390	U	U	2900			400	U	U
BENZO(a)PYRENE	UG/KG	390	U	U	2000			400	U	U
BENZO(b)FLUORANTHENE	UG/KG	390	U	U	2500			400	U	U
BENZO(ghi)PERYLENE	UG/KG	390	U	U	1200			400	U	U
BENZO(k)FLUORANTHENE	UG/KG	390	U	U	1800			400	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	390	U	U	410	U	U	400	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	390	U	U	410	U	U	400	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	390	U	U	410	U	U	400	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	56	J	J	67	J	J	400	U	U
BUTYL BENZYL PHTHALATE	UG/KG	390	U	U	410	U	U	400	U	U
CARBAZOLE	UG/KG	390	U	U	460		J	400	U	U
CHRYSENE	UG/KG	390	U	U	2000			400	U	U
DI-n-BUTYL PHTHALATE	UG/KG	390	U	U	410	U	U	400	U	U
DI-n-OCTYL PHTHALATE	UG/KG	390	U	U	410	U	U	400	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	390	U	U	570			400	U	U
DIBENZOFURAN	UG/KG	390	U	U	81	J	J	400	U	U
DIETHYL PHTHALATE	UG/KG	390	U	U	410	U	U	400	U	U
DIMETHYL PHTHALATE	UG/KG	390	U	U	410	U	U	400	U	U
FLUORANTHENE	UG/KG	390	U	U	5200			400	U	U
FLUORENE	UG/KG	390	U	U	250	J	J	400	U	U
HEXACHLOROBENZENE	UG/KG	390	U	U	410	U	U	400	U	U
HEXACHLOROBUTADIENE	UG/KG	390	U	U	410	U	U	400	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	1900	U	U	2000	U	U	1900	U	U
HEXACHLOROETHANE	UG/KG	390	U	U	410	U	U	400	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	390	U	U	1200			400	U	U
ISOPHORONE	UG/KG	390	U	U	410	U	U	400	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	390	U	U	410	U	U	400	U	U
N-NITROSODIPHENYLAMINE	UG/KG	390	U	U	410	U	U	400	U	U

WP2:SEMIVOLATILES	Units	3300 WP2SO10 02-OCT-96 4 - 5 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	230	J	J
BENZO(a)ANTHRACENE	UG/KG	810		
BENZO(a)PYRENE	UG/KG	830		
BENZO(b)FLUORANTHENE	UG/KG	1300		
BENZO(ghi)PERYLENE	UG/KG	550		
BENZO(k)FLUORANTHENE	UG/KG	1100		
BIS(2-CHLOROETHOXY)METHANE	UG/KG	410	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	410	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	410	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	64	J	J
BUTYL BENZYL PHTHALATE	UG/KG	410	U	U
CARBAZOLE	UG/KG	270	J	J
CHRYSENE	UG/KG	930		
DI-n-BUTYL PHTHALATE	UG/KG	410	U	U
DI-n-OCTYL PHTHALATE	UG/KG	410	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	230	J	J
DIBENZOFURAN	UG/KG	410	U	U
DIETHYL PHTHALATE	UG/KG	410	U	U
DIMETHYL PHTHALATE	UG/KG	410	U	U
FLUORANTHENE	UG/KG	1100		
FLUORENE	UG/KG	410	U	U
HEXACHLOROBENZENE	UG/KG	410	U	U
HEXACHLOROBUTADIENE	UG/KG	410	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	2000	U	U
HEXACHLOROETHANE	UG/KG	410	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	520		
ISOPHORONE	UG/KG	410	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	410	U	U
N-NITROSODIPHENYLAMINE	UG/KG	410	U	U

Waste Water Disposal Plant No. 2

Data Summary - Soils

Report Date: 02/17/97

Sample No:		3210			3220			3230		
Sample Location:		WP2SO01			WP2SO02			WP2SO03		
Sample Date:		02-OCT-96			02-OCT-96			03-OCT-96		
Depth		0 - .5			4 - 5			0 - .5		
WP2:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	420	U	U	400	U	U	50	J	J
NITROBENZENE	UG/KG	420	U	U	400	U	U	380	U	U
PENTACHLOROPHENOL	UG/KG	2000	U	U	1900	U	U	1900	U	U
PHENANTHRENE	UG/KG	480			400	U	U	160	J	J
PHENOL	UG/KG	420	U	U	400	U	U	380	U	U
PYRENE	UG/KG	980			400	U	U	290	J	J

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Waste Water Disposal Plant No. 2

Data Summary - Soils

Report Date: 02/17/97

Sample No:		3240			3250			3260		
Sample Location:		WP2SO04			WP2SO05			WP2SO06		
Sample Date:		02-OCT-96			02-OCT-96			02-OCT-96		
Depth		4 - 5			0 - .5			4 - 5		
WP2:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	400	U	U	360	U	U	370	U	U
NITROBENZENE	UG/KG	400	U	U	360	U	U	370	U	U
PENTACHLOROPHENOL	UG/KG	1900	U	U	1800	U	U	1800	U	U
PHENANTHRENE	UG/KG	400	U	U	5500			370	U	U
PHENOL	UG/KG	400	U	U	360	U	U	370	U	U
PYRENE	UG/KG	400	U	U	8000			370	U	U

Waste Water Disposal Plant No. 2

Data Summary - Soils

Report Date: 02/17/97

Sample No:		3270			3280			3290		
Sample Location:		WP2SO07			WP2SO08			WP2SO09		
Sample Date:		02-OCT-96			02-OCT-96			03-OCT-96		
Depth		4 - 5			0 - .5			0 - .5		
WP2:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	390	U	U	410	U	U	400	U	U
NITROBENZENE	UG/KG	390	U	U	410	U	U	400	U	U
PENTACHLOROPHENOL	UG/KG	1900	U	U	2000	U	U	1900	U	U
PHENANTHRENE	UG/KG	390	U	U	2500			400	U	U
PHENOL	UG/KG	390	U	U	410	U	U	400	U	U
PYRENE	UG/KG	390	U	U	3800			400	U	U

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Waste Water Disposal Plant No. 2

Data Summary - Soils

Report Date: 02/17/97

Sample No:		3300		
Sample Location:		WP2SO10		
Sample Date:		02-OCT-96		
Depth		4 - 5		
WP2:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	410	U	U
NITROBENZENE	UG/KG	410	U	U
PENTACHLOROPHENOL	UG/KG	2000	U	U
PHENANTHRENE	UG/KG	360	J	J
PHENOL	UG/KG	410	U	U
PYRENE	UG/KG	1100		

Report Date: 02/17/97

Sample No:		3210			3220			3230		
Sample Location:		WP2SO01			WP2SO02			WP2SO03		
Sample Date:		02-OCT-96			02-OCT-96			03-OCT-96		
Depth		0 - .5			4 - 5			0 - .5		
WP2:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
4,4'-DDE	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
4,4'-DDT	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
ALDRIN	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
AROCLOR 1016	UG/KG	84	U	U	40	U	U	77	U	U
AROCLOR 1221	UG/KG	84	U	U	40	U	U	77	U	U
AROCLOR 1232	UG/KG	160	GU	U	40	U	U	77	U	U
AROCLOR 1242	UG/KG	84	U	U	40	U	U	77	U	U
AROCLOR 1248	UG/KG	84	U	U	40	U	U	77	U	U
AROCLOR 1254	UG/KG	130	GU	U	40	U	U	77	U	U
AROCLOR 1260	UG/KG	110			40	U	U	77	U	U
DIELDRIN	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
ENDOSULFAN I	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
ENDOSULFAN II	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
ENDOSULFAN SULFATE	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
ENDRIN	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
ENDRIN ALDEHYDE	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
ENDRIN KETONE	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
HEPTACHLOR	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
HEPTACHLOR EPOXIDE	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
METHOXYCHLOR	UG/KG	8.4	U	U	4.0	U	U	7.7	U	U
TOXAPHENE	UG/KG	170	U	U	81	U	U	160	U	U
alpha-BHC	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
alpha-CHLORDANE	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
beta-BHC	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
delta-BHC	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
gamma-BHC (LINDANE)	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U
gamma-CHLORDANE	UG/KG	4.3	U	U	2.1	U	U	4.0	U	U

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Waste Water Disposal Plant No. 2
Data Summary - Soils

Report Date: 02/17/97

Sample No:		3240			3250			3260		
Sample Location:		WP2SO04			WP2SO05			WP2SO06		
Sample Date:		02-OCT-96			02-OCT-96			02-OCT-96		
Depth		4 - 5			0 - .5			4 - 5		
WP2:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	2.0	U	U	19	U	U	1.9	U	U
4,4'-DDE	UG/KG	2.0	U	U	19	U	U	1.9	U	U
4,4'-DDT	UG/KG	2.0	U	U	19	U	U	1.9	U	U
ALDRIN	UG/KG	2.0	U	U	19	U	U	1.9	U	U
AROCLOR 1016	UG/KG	40	U	U	480	GU	U	37	U	U
AROCLOR 1221	UG/KG	40	U	U	360	U	U	37	U	U
AROCLOR 1232	UG/KG	40	U	U	1100	GU	U	37	U	U
AROCLOR 1242	UG/KG	40	U	U	490	GU	U	37	U	U
AROCLOR 1248	UG/KG	40	U	U	550	GU	U	37	U	U
AROCLOR 1254	UG/KG	40	U	U	2400	GU	U	37	U	U
AROCLOR 1260	UG/KG	40	U	U	1700			37	U	U
DIELDRIN	UG/KG	2.0	U	U	19	U	U	1.9	U	U
ENDOSULFAN I	UG/KG	2.0	U	U	19	U	U	1.9	U	U
ENDOSULFAN II	UG/KG	2.0	U	U	59	GU	U	1.9	U	U
ENDOSULFAN SULFATE	UG/KG	2.0	U	U	19	U	U	1.9	U	U
ENDRIN	UG/KG	2.0	U	U	27	GU	U	1.9	U	U
ENDRIN ALDEHYDE	UG/KG	2.0	U	U	22	GU	U	1.9	U	U
ENDRIN KETONE	UG/KG	2.0	U	U	19	U	U	1.9	U	U
HEPTACHLOR	UG/KG	2.0	U	U	19	U	U	1.9	U	U
HEPTACHLOR EPOXIDE	UG/KG	2.0	U	U	19	U	U	1.9	U	U
METHOXYCHLOR	UG/KG	4.0	U	U	36	U	U	3.7	U	U
TOXAPHENE	UG/KG	81	U	U	740	U	U	75	U	U
alpha-BHC	UG/KG	2.0	U	U	19	U	U	1.9	U	U
alpha-CHLORDANE	UG/KG	2.0	U	U	19	U	U	1.9	U	U
beta-BHC	UG/KG	2.0	U	U	19	U	U	1.9	U	U
delta-BHC	UG/KG	2.0	U	U	19	U	U	1.9	U	U
gamma-BHC (LINDANE)	UG/KG	2.0	U	U	19	U	U	1.9	U	U
gamma-CHLORDANE	UG/KG	2.0	U	U	41	GU	U	1.9	U	U

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Sample No:		3270			3280			3290		
Sample Location:		WP2SO07			WP2SO08			WP2SO09		
Sample Date:		02-OCT-96			02-OCT-96			03-OCT-96		
Depth		4 - 5			0 - .5			0 - .5		
WP2:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	2.0	U	U	10	U	U	2.1	U	U
4,4'-DDE	UG/KG	2.0	U	U	10	U	U	2.1	U	U
4,4'-DDT	UG/KG	2.0	U	U	10	U	U	2.1	U	U
ALDRIN	UG/KG	2.0	U	U	10	U	U	2.1	U	U
AROCLOR 1016	UG/KG	39	U	U	200	U	U	40	U	U
AROCLOR 1221	UG/KG	39	U	U	200	U	U	40	U	U
AROCLOR 1232	UG/KG	39	U	U	200	U	U	40	U	U
AROCLOR 1242	UG/KG	39	U	U	200	U	U	40	U	U
AROCLOR 1248	UG/KG	39	U	U	200	U	U	40	U	U
AROCLOR 1254	UG/KG	39	U	U	540	GU	U	40	U	U
AROCLOR 1260	UG/KG	39	U	U	480			40	U	U
DIELDRIN	UG/KG	2.0	U	U	10	U	U	2.1	U	U
ENDOSULFAN I	UG/KG	2.0	U	U	10	U	U	2.1	U	U
ENDOSULFAN II	UG/KG	2.0	U	U	15	GU	U	2.1	U	U
ENDOSULFAN SULFATE	UG/KG	2.0	U	U	10	U	U	2.1	U	U
ENDRIN	UG/KG	2.0	U	U	10	U	U	2.1	U	U
ENDRIN ALDEHYDE	UG/KG	2.0	U	U	10	U	U	2.1	U	U
ENDRIN KETONE	UG/KG	2.0	U	U	10	U	U	2.1	U	U
HEPTACHLOR	UG/KG	2.0	U	U	10	U	U	2.1	U	U
HEPTACHLOR EPOXIDE	UG/KG	2.0	U	U	10	U	U	2.1	U	U
METHOXYCHLOR	UG/KG	3.9	U	U	20	U	U	4.0	U	U
TOXAPHENE	UG/KG	79	U	U	410	U	U	81	U	U
alpha-BHC	UG/KG	2.0	U	U	10	U	U	2.1	U	U
alpha-CHLORDANE	UG/KG	2.0	U	U	10	U	U	2.1	U	U
beta-BHC	UG/KG	2.0	U	U	10	U	U	2.1	U	U
delta-BHC	UG/KG	2.0	U	U	10	U	U	2.1	U	U
gamma-BHC (LINDANE)	UG/KG	2.0	U	U	10	U	U	2.1	U	U
gamma-CHLORDANE	UG/KG	2.0	U	U	10	U	U	2.1	U	U

Sample No:		3300		
Sample Location:		WP2SO10		
Sample Date:		02-OCT-96		
Depth		4 - 5		
WP2:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	110	U	U
4,4'-DDE	UG/KG	110	U	U
4,4'-DDT	UG/KG	110	U	U
ALDRIN	UG/KG	110	U	U
AROCLOR 1016	UG/KG	2100	U	U
AROCLOR 1221	UG/KG	2100	U	U
AROCLOR 1232	UG/KG	2100	U	U
AROCLOR 1242	UG/KG	2100	U	U
AROCLOR 1248	UG/KG	2100	U	U
AROCLOR 1254	UG/KG	8600	GU	U
AROCLOR 1260	UG/KG	5800		
DIELDRIN	UG/KG	110	U	U
ENDOSULFAN I	UG/KG	110	U	U
ENDOSULFAN II	UG/KG	160	GU	U
ENDOSULFAN SULFATE	UG/KG	110	U	U
ENDRIN	UG/KG	110	U	U
ENDRIN ALDEHYDE	UG/KG	110	U	U
ENDRIN KETONE	UG/KG	110	U	U
HEPTACHLOR	UG/KG	110	U	U
HEPTACHLOR EPOXIDE	UG/KG	110	U	U
METHOXYCHLOR	UG/KG	210	U	U
TOXAPHENE	UG/KG	4200	U	U
alpha-BHC	UG/KG	110	U	U
alpha-CHLORDANE	UG/KG	110	U	U
beta-BHC	UG/KG	110	U	U
delta-BHC	UG/KG	110	U	U
gamma-BHC (LINDANE)	UG/KG	110	U	U
gamma-CHLORDANE	UG/KG	110	U	U

Waste Water Disposal Plant No. 2

Data Summary - Soils

Report Date: 02/17/97

Sample No:		3210			3220			3230		
Sample Location:		WP2SO01			WP2SO02			WP2SO03		
Sample Date:		02-OCT-96			02-OCT-96			03-OCT-96		
Depth		0 - .5			4 - 5			0 - .5		
WP2:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	10600			14600			5680		
ANTIMONY	MG/KG	7.6	U	UJ	7.3	U	UJ	7.0	U	UJ
ARSENIC	MG/KG	7.4			9.3			18.8		
BARIUM	MG/KG	64.7			51.4			40.7		
BERYLLIUM	MG/KG	0.64	U	U	0.76			0.58	U	U
CADMIUM	MG/KG	0.64	U	U	0.61	U	U	0.58	U	U
CALCIUM	MG/KG	8740			2620			1790		
CHROMIUM	MG/KG	14.7		J	20.7		J	8.6		
COBALT	MG/KG	9.8			9.6			6.5		
COPPER	MG/KG	19.1			22.7			35.1		
IRON	MG/KG	20600			29600			28400		
LEAD	MG/KG	27.1			12.8			21.7		J
MAGNESIUM	MG/KG	5060			3720			1200		
MANGANESE	MG/KG	458			473			96.3		
MERCURY	MG/KG	0.11			0.040	U	U	0.038	U	U
NICKEL	MG/KG	23.6			26.6			19.4		
POTASSIUM	MG/KG	1610		J	1380		J	2130		
SELENIUM	MG/KG	0.64	U	U	0.61	U	U	0.58	U	U
SILVER	MG/KG	1.3	U	U	1.2			1.2	U	U
SODIUM	MG/KG	635	U	U	606	U	U	581	U	U
THALLIUM	MG/KG	1.3	U	U	1.2	U	U	1.5		J
VANADIUM	MG/KG	22.5		J	34.7		J	11.5		
ZINC	MG/KG	69.8			64.4			59.3		

PLUMBROOK

Waste Water Disposal Plant No. 2

Data Summary - Soils

Report Date: 02/17/97

Sample No:		3240			3250			3260		
Sample Location:		WP2SO04			WP2SO05			WP2SO06		
Sample Date:		02-OCT-96			02-OCT-96			02-OCT-96		
Depth		4 - 5			0 - .5			4 - 5		
WP2:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	13200			3610			9050		
ANTIMONY	MG/KG	7.2	U	UJ	6.6	U	UJ	6.8	U	UJ
ARSENIC	MG/KG	8.9			4.9			9.1		
BARIUM	MG/KG	81.8			35.6			45.3		
BERYLLIUM	MG/KG	0.61			0.55	U	U	0.56	U	U
CADMIUM	MG/KG	0.60	U	U	0.55	U	U	0.56	U	U
CALCIUM	MG/KG	3730			101000			30400		
CHROMIUM	MG/KG	19.5		J	9.3		J	14.9		J
COBALT	MG/KG	13.0			5.5	U	U	6.7		
COPPER	MG/KG	23.4			16.0			22.4		
IRON	MG/KG	27100			9060			21300		
LEAD	MG/KG	18.1			514			12.6		
MAGNESIUM	MG/KG	4960			11300			10300		
MANGANESE	MG/KG	430			226			437		
MERCURY	MG/KG	0.040	U	U	0.29			0.037	U	U
NICKEL	MG/KG	28.9			9.1			23.1		
POTASSIUM	MG/KG	1610		J	632		J	1400		J
SELENIUM	MG/KG	0.60	U	U	0.55	U	U	0.56	U	U
SILVER	MG/KG	1.4			1.1	U	U	1.1	U	U
SODIUM	MG/KG	601	U	U	551	U	U	563	U	U
THALLIUM	MG/KG	1.3			1.1	U	U	1.1	U	U
VANADIUM	MG/KG	22.8		J	15.7		J	22.3		J
ZINC	MG/KG	81.4			74.0			59.9		

Waste Water Disposal Plant No. 2

Data Summary - Soils

Report Date: 02/17/97

Sample No:		3270			3280			3290		
Sample Location:		WP2SO07			WP2SO08			WP2SO09		
Sample Date:		02-OCT-96			02-OCT-96			03-OCT-96		
Depth		4 - 5			0 - .5			0 - .5		
WP2:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	13700			7470			8730		
ANTIMONY	MG/KG	7.1	U	UJ	7.4	U	UJ	7.2	U	UJ
ARSENIC	MG/KG	10.1			6.7			6.3		
BARIUM	MG/KG	65.9			44.9			50.3		
BERYLLIUM	MG/KG	0.67			0.62	U	U	0.60	U	U
CADMIUM	MG/KG	0.59	U	U	0.62	U	U	0.60	U	U
CALCIUM	MG/KG	25500			43100			17300		
CHROMIUM	MG/KG	19.3			17.4			12.0		
COBALT	MG/KG	11.8			6.2	U	U	6.0	U	U
COPPER	MG/KG	23.1			17.2			14.0		
IRON	MG/KG	24900			17000			16500		
LEAD	MG/KG	11.6			113			12.5		J
MAGNESIUM	MG/KG	11000			9590			7280		
MANGANESE	MG/KG	598		J	314		J	378		
MERCURY	MG/KG	0.039	U	U	0.19			0.040	U	U
NICKEL	MG/KG	32.2			18.9			16.6		
POTASSIUM	MG/KG	2650			1090			1510		
SELENIUM	MG/KG	0.59	U	U	0.62	U	U	0.60	U	U
SILVER	MG/KG	1.2	U	U	1.2	U	U	1.2	U	U
SODIUM	MG/KG	588	U	U	617	U	U	604	U	U
THALLIUM	MG/KG	1.2			1.2	U	U	1.2	U	U
VANADIUM	MG/KG	35.9			21.9			22.8		
ZINC	MG/KG	62.4			125			52.2		

PLUMBROOK
Waste Water Disposal Plant No. 2
Data Summary - Soils

Report Date: 02/17/97

Sample No:		3300		
Sample Location:		WP2SO10		
Sample Date:		02-OCT-96		
Depth		4 - 5		
WP2:METALS	Units	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	6270		
ANTIMONY	MG/KG	106		J
ARSENIC	MG/KG	7.9		
BARIUM	MG/KG	87.0		
BERYLLIUM	MG/KG	0.63	U	U
CADMIUM	MG/KG	0.71		
CALCIUM	MG/KG	30700		
CHROMIUM	MG/KG	18.9		
COBALT	MG/KG	6.3	U	U
COPPER	MG/KG	40.8		
IRON	MG/KG	19200		
LEAD	MG/KG	2870		
MAGNESIUM	MG/KG	4350		
MANGANESE	MG/KG	309		J
MERCURY	MG/KG	1.4		
NICKEL	MG/KG	23.2		
POTASSIUM	MG/KG	1060		
SELENIUM	MG/KG	0.63	U	U
SILVER	MG/KG	1.3	U	U
SODIUM	MG/KG	627	U	U
THALLIUM	MG/KG	1.3	U	U
VANADIUM	MG/KG	20.4		
ZINC	MG/KG	141		

Waste Water Disposal Plant No. 2

Data Summary - Soils

Report Date: 02/17/97

Sample No:		3210			3220			3230		
Sample Location:		WP2SO01			WP2SO02			WP2SO03		
Sample Date:		02-OCT-96			02-OCT-96			03-OCT-96		
Depth		0 - .5			4 - 5			0 - .5		
WP2:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
HMX	UG/KG	500	U	U	500	U	U	500	U	U
NITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
RDX	UG/KG	500	U	U	500	U	U	500	U	U
TETRYL	UG/KG	650	U	U	650	U	U	650	U	U

PLUMBROOK

Waste Water Disposal Plant No. 2

Data Summary - Soils

Report Date: 02/17/97

Sample No:		3240			3250			3260		
Sample Location:		WP2SO04			WP2SO05			WP2SO06		
Sample Date:		02-OCT-96			02-OCT-96			02-OCT-96		
Depth		4 - 5			0 - .5			4 - 5		
WP2:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	300	GU	U	250	U	U	250	U	U
2,4-DINITROTOLUENE	UG/KG	250	U	U	510			250	U	U
2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	250	U	U	260			250	U	U
HMX	UG/KG	500	U	U	500	U	U	500	U	U
NITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
RDX	UG/KG	500	U	U	500	U	U	500	U	U
TETRYL	UG/KG	650	U	U	650	U	U	650	U	U

Report Date: 02/17/97

Sample No:		3270			3280			3290		
Sample Location:		WP2SO07			WP2SO08			WP2SO09		
Sample Date:		02-OCT-96			02-OCT-96			03-OCT-96		
Depth		4 - 5			0 - .5			0 - .5		
WP2:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
HMX	UG/KG	500	U	U	500	U	U	500	U	U
NITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
RDX	UG/KG	500	U	U	500	U	U	500	U	U
TETRYL	UG/KG	650	U	U	650	U	U	650	U	U

Report Date: 02/17/97

Sample No:		3300		
Sample Location:		WP2SO10		
Sample Date:		02-OCT-96		
Depth		4 - 5		
WP2:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	250	U	U
1,3-DINITROBENZENE	UG/KG	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	300	GU	U
2,4-DINITROTOLUENE	UG/KG	490		
2,6-DINITROTOLUENE	UG/KG	250	U	U
2-NITROTOLUENE	UG/KG	250	U	U
3-NITROTOLUENE	UG/KG	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	300		
HMX	UG/KG	500	U	U
NITROBENZENE	UG/KG	250	U	U
RDX	UG/KG	500	U	U
TETRYL	UG/KG	650	U	U

Report Date: 02/17/97

Sample No:		3210			3220			3230		
Sample Location:		WP2SO01			WP2SO02			WP2SO03		
Sample Date:		02-OCT-96			02-OCT-96			03-OCT-96		
Depth		0 - .5			4 - 5			0 - .5		
WP2:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.64	U	U	0.61	U	U	0.58	U	U

PLUMBROOK

Waste Water Disposal Plant No. 2

Data Summary - Soils

Report Date: 02/17/97

Sample No:		3240			3250			3260		
Sample Location:		WP2SO04			WP2SO05			WP2SO06		
Sample Date:		02-OCT-96			02-OCT-96			02-OCT-96		
Depth		4 - 5			0 - .5			4 - 5		
WP2:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.60	U	U	0.55	U	U	0.56	U	U

Waste Water Disposal Plant No. 2

Data Summary - Soils

Report Date: 02/17/97

Sample No:		3270			3280			3290		
Sample Location:		WP2SO07			WP2SO08			WP2SO09		
Sample Date:		02-OCT-96			02-OCT-96			03-OCT-96		
Depth		4 - 5			0 - .5			0 - .5		
WP2:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.59	U	U	0.62	U	U	0.60	U	U

PLUMBROOK

Waste Water Disposal Plant No. 2

Data Summary - Soils

Report Date: 02/17/97

Sample No:		3300		
Sample Location:		WP2SO10		
Sample Date:		02-OCT-96		
Depth		4 - 5		
WP2:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.63	U	U

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected Risk-Based Comparison

Report Date: 02/18/97

Sample No:			1020		1190		1220	
Sample Location:			2BGSO01		2BGSO07		2BGSO08	
Sample Date:			01-OCT-96		01-OCT-96		01-OCT-96	
Depth			2-3		0-.5		0-.5	
2BG:SEMIVOLATILES	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-DINITROTOLUENE	MG/KG	16	19					
BENZO(a)PYRENE	MG/KG	0.088			.15	J	.13	J

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected Risk-Based Comparison

Report Date: 02/18/97

Sample No:			1010		1040		1070	
Sample Location:			2BGSO01		2BGSO02		2BGSO03	
Sample Date:			01-OCT-96		01-OCT-96		01-OCT-96	
Depth			0-.5		0-.5		0-.5	
2BG:PEST/PCB	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260	MG/KG	0.083	3.3		1.7		6.8	

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected Risk-Based Comparison

Report Date: 02/18/97

Sample No:			1080		1130		1190	
Sample Location:			2BGSO03		2BGSO05		2BGSO07	
Sample Date:			02-OCT-96		01-OCT-96		01-OCT-96	
Depth			2-3		0-.5		0-.5	
2BG:PEST/PCB	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260	MG/KG		1.8		.17		1.5	

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected Risk-Based Comparison

Report Date: 02/18/97

Sample No:			1220	
Sample Location:			2BGSO08	
Sample Date:			01-OCT-96	
Depth			0-.5	
2BG:PEST/PCB	Units	Screening Levels	Result	Val Qlfr
AROCLOR 1260	MG/KG		1.4	

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected Risk-Based Comparison

Report Date: 02/18/97

Sample No:			1010		1020		1030	
Sample Location:			2BGSO01		2BGSO01		2BGSO01	
Sample Date:			01-OCT-96		01-OCT-96		01-OCT-96	
Depth			0-.5		2-3		6-7	
2BG:METALS	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM	MG/KG	7800			11200		11800	
ARSENIC	MG/KG	.43	5.1		4.7		11.7	
BERYLLIUM	MG/KG	0.15					0.65	
CALCIUM	MG/KG		6490		3070		3900	
IRON	MG/KG	2300	15500		18400		27500	
LEAD	MG/KG	400						
MAGNESIUM	MG/KG		2300		2790		3420	
MANGANESE	MG/KG	160	224	J			417	J
POTASSIUM	MG/KG				928		1740	
THALLIUM	MG/KG	0.51	1.8		1.9		2.8	

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected Risk-Based Comparison

Report Date: 02/18/97

Sample No:			1040		1050		1060	
Sample Location:			2BGSO02		2BGSO02		2BGSO02	
Sample Date:			01-OCT-96		01-OCT-96		01-OCT-96	
Depth			0-.5		2-3		6-7	
2BG:METALS	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM	MG/KG		9200		14900		16100	
ARSENIC	MG/KG		9.5		9.7		13.3	
BERYLLIUM	MG/KG		0.65		0.69		0.78	
CALCIUM	MG/KG		16600		4100		3860	
IRON	MG/KG		19900		26400		35900	
LEAD	MG/KG		1000					
MAGNESIUM	MG/KG		5900		3620		5690	
MANGANESE	MG/KG		191	J	1000	J	580	J
POTASSIUM	MG/KG		1270		1570		2130	
THALLIUM	MG/KG		2.1		1.8		2.7	

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected Risk-Based Comparison

Report Date: 02/18/97

Sample No:			1070		1080		1090	
Sample Location:			2BGSO03		2BGSO03		2BGSO03	
Sample Date:			01-OCT-96		02-OCT-96		02-OCT-96	
Depth			0-.5		2-3		6-7	
2BG:METALS	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM	MG/KG		8620		10100		17000	
ARSENIC	MG/KG		5.3		18.3		17.6	
BERYLLIUM	MG/KG				0.81		0.83	
CALCIUM	MG/KG		7930		12200		5610	
IRON	MG/KG		18400		34100		37300	
LEAD	MG/KG							
MAGNESIUM	MG/KG		5160		4160		5040	
MANGANESE	MG/KG		295	J	213		1360	
POTASSIUM	MG/KG		1540		2050	J	3010	J
THALLIUM	MG/KG		1.3		3.3		2.3	

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected Risk-Based Comparison

Report Date: 02/18/97

Sample No:			1100		1110		1120	
Sample Location:			2BGSO04		2BGSO04		2BGSO04	
Sample Date:			01-OCT-96		02-OCT-96		02-OCT-96	
Depth			0-.5		2-3		6-7	
2BG:METALS	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM	MG/KG		10100		14900		13400	
ARSENIC	MG/KG		6.1		9.8		4.1	
BERYLLIUM	MG/KG				0.88		0.69	
CALCIUM	MG/KG		3260		4330		5480	
IRON	MG/KG		16700		28100		21800	
LEAD	MG/KG							
MAGNESIUM	MG/KG		2490		4110		5830	
MANGANESE	MG/KG		315	J	716		256	
POTASSIUM	MG/KG		1160		1590	J	1860	J
THALLIUM	MG/KG				1.6			

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected Risk-Based Comparison

Report Date: 02/18/97

Sample No:			1130		1140		1150	
Sample Location:			2BGSO05		2BGSO05		2BGSO05	
Sample Date:			01-OCT-96		02-OCT-96		02-OCT-96	
Depth			0-.5		2-3		6-7	
2BG:METALS	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM	MG/KG		10300		14000		11400	
ARSENIC	MG/KG		7.4		12.0		5.6	
BERYLLIUM	MG/KG				0.74			
CALCIUM	MG/KG		22600		4210		59200	
IRON	MG/KG		20000		32100		21800	
LEAD	MG/KG							
MAGNESIUM	MG/KG		4880		5110		17700	
MANGANESE	MG/KG		467	J	1390		327	
POTASSIUM	MG/KG		1350		1420	J	2350	J
THALLIUM	MG/KG				1.6			

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected Risk-Based Comparison

Report Date: 02/18/97

Sample No:			1160		1170		1180	
Sample Location:			2BGSO06		2BGSO06		2BGSO06	
Sample Date:			01-OCT-96		02-OCT-96		02-OCT-96	
Depth			0-.5		2-3		6-7	
2BG:METALS	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM	MG/KG		10300		12100		9540	
ARSENIC	MG/KG		7.9		8.4		8.2	
BERYLLIUM	MG/KG							
CALCIUM	MG/KG		4950		61200		56200	
IRON	MG/KG		17700		22100		22400	
LEAD	MG/KG							
MAGNESIUM	MG/KG		3700		20100		17500	
MANGANESE	MG/KG		300	J	499		492	
POTASSIUM	MG/KG		1170		1770	J	1970	J
THALLIUM	MG/KG							

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected Risk-Based Comparison

Report Date: 02/18/97

Sample No:			1190		1200		1210	
Sample Location:			2BGSO07		2BGSO07		2BGSO07	
Sample Date:			01-OCT-96		02-OCT-96		02-OCT-96	
Depth			0-.5		2-3		6-7	
2BG:METALS	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM	MG/KG		14900		12100			
ARSENIC	MG/KG		9.6		11.9		9.0	
BERYLLIUM	MG/KG		0.66		0.67			
CALCIUM	MG/KG		9570		3540		54000	
IRON	MG/KG		25100		27400		17600	
LEAD	MG/KG							
MAGNESIUM	MG/KG		4390		3900		19000	
MANGANESE	MG/KG		600	J	1140		421	
POTASSIUM	MG/KG		1490		1400	J	1240	J
THALLIUM	MG/KG		1.2		1.4			

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected Risk-Based Comparison

Report Date: 02/18/97

Sample No:			1220		1230		1240	
Sample Location:			2BGSO08		2BGSO08		2BGSO08	
Sample Date:			01-OCT-96		02-OCT-96		02-OCT-96	
Depth			0-.5		2-3		6-7	
2BG:METALS	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM	MG/KG		9700		12900		12000	
ARSENIC	MG/KG		9.0		9.9		5.3	
BERYLLIUM	MG/KG		0.78					
CALCIUM	MG/KG		35800		3650		54600	
IRON	MG/KG		24500		27500		21300	
LEAD	MG/KG		603					
MAGNESIUM	MG/KG		6370		4240		16400	
MANGANESE	MG/KG		284	J	205		309	
POTASSIUM	MG/KG		2520		1740	J	2470	J
THALLIUM	MG/KG		1.3		1.3			

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected Risk-Based Comparison

Report Date: 02/18/97

Sample No:			1010		1030		1040	
Sample Location:			2BGSO01		2BGSO01		2BGSO02	
Sample Date:			01-OCT-96		01-OCT-96		01-OCT-96	
Depth			0-.5		6-7		0-.5	
2BG:EXPLOSIVES	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-TRINITROBENZENE	MG/KG	0.39						
2,4,6-TRINITROTOLUENE	MG/KG	3.9	48		9.6		140	
2,4-DINITROTOLUENE	MG/KG	16					35	
2,6-DINITROTOLUENE	MG/KG	7.8						
4-AMINO-2,6-DINITROTOLUENE	MG/KG	0.47						

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected Risk-Based Comparison

Report Date: 02/18/97

Sample No:			1070		1080		1090	
Sample Location:			2BGSO03		2BGSO03		2BGSO03	
Sample Date:			01-OCT-96		02-OCT-96		02-OCT-96	
Depth			0-.5		2-3		6-7	
2BG:EXPLOSIVES	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-TRINITROBENZENE	MG/KG							
2,4,6-TRINITROTOLUENE	MG/KG		910		94		10	
2,4-DINITROTOLUENE	MG/KG				160			
2,6-DINITROTOLUENE	MG/KG							
4-AMINO-2,6-DINITROTOLUENE	MG/KG							

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected Risk-Based Comparison

Report Date: 02/18/97

Sample No:			1120		1190		1220	
Sample Location:			2BGSO04		2BGSO07		2BGSO08	
Sample Date:			02-OCT-96		01-OCT-96		01-OCT-96	
Depth			6-7		0-.5		0-.5	
2BG:EXPLOSIVES	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-TRINITROBENZENE	MG/KG						15	
2,4,6-TRINITROTOLUENE	MG/KG				31		210	
2,4-DINITROTOLUENE	MG/KG				21		40	
2,6-DINITROTOLUENE	MG/KG				10			
4-AMINO-2,6-DINITROTOLUENE	MG/KG		1.5					

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected Risk-Based Comparison

Report Date: 02/18/97

Sample No:			1220	
Sample Location:			2BGSO08	
Sample Date:			01-OCT-96	
Depth			0-.5	
2BG:CYANIDE	Units	Screening Levels	Result	Val Qlfr
CYANIDE, TOTAL	MG/KG		1.0	

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1010		1020		1030	
Sample Location:				2BGSO01		2BGSO01		2BGSO01	
Sample Date:				01-OCT-96		01-OCT-96		01-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-DINITROTOLUENE		MG/KG	16			19			
BENZO(A)PYRENE		MG/KG	0.088						

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1040		1050		1060	
Sample Location:				2BGSO02		2BGSO02		2BGSO02	
Sample Date:				01-OCT-96		01-OCT-96		01-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-DINITROTOLUENE		MG/KG	16						
BENZO(A)PYRENE		MG/KG	0.088						

PLUM BROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1070		1080		1090	
Sample Location:				2BGSO03		2BGSO03		2BGSO03	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-DINITROTOLUENE		MG/KG	16						
BENZO(A)PYRENE		MG/KG	0.088						

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1100		1110		1120	
Sample Location:				2BGSO04		2BGSO04		2BGSO04	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-DINITROTOLUENE		MG/KG	16						
BENZO(A)PYRENE		MG/KG	0.088						

PLUM. . .ROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1130		1140		1150	
Sample Location:				2BGSO05		2BGSO05		2BGSO05	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-DINITROTOLUENE		MG/KG	16						
BENZO(A)PYRENE		MG/KG	0.088						

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1160		1170		1180	
Sample Location:				2BGSO06		2BGSO06		2BGSO06	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-DINITROTOLUENE		MG/KG	16						
BENZO(A)PYRENE		MG/KG	0.088						

PLUM BROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1190		1200		1210	
Sample Location:				2BGSO07		2BGSO07		2BGSO07	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-DINITROTOLUENE		MG/KG	16						
BENZO(A)PYRENE		MG/KG	0.088	.15	J				

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1220		1230		1240	
Sample Location:				2BGSO08		2BGSO08		2BGSO08	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:SEMIVOLATILES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
2,4-DINITROTOLUENE		MG/KG	16						
BENZO(A)PYRENE		MG/KG	0.088	.13	J				

PLUM... ROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1010		1020		1030	
Sample Location:				2BGSO01		2BGSO01		2BGSO01	
Sample Date:				01-OCT-96		01-OCT-96		01-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083	3.3					

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1040		1050		1060	
Sample Location:				2BGSO02		2BGSO02		2BGSO02	
Sample Date:				01-OCT-96		01-OCT-96		01-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083	1.7					

PLUM..ROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1070		1080		1090	
Sample Location:				2BGSO03		2BGSO03		2BGSO03	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083	6.8		1.8			

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1100		1110		1120	
Sample Location:				2BGSO04		2BGSO04		2BGSO04	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083						

PLUM BROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1130		1140		1150	
Sample Location:				2BGSO05		2BGSO05		2BGSO05	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083	.17					

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1160		1170		1180	
Sample Location:				2BGSO06		2BGSO06		2BGSO06	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083						

PLUM. .ROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1190		1200		1210	
Sample Location:				2BGSO07		2BGSO07		2BGSO07	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083	1.5					

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				1220		1230		1240	
Sample Location:				2BGSO08		2BGSO08		2BGSO08	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:PEST/PCB	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
AROCLOR 1260		MG/KG	0.083	1.4					

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1010		1020		1030	
Sample Location:				2BGSO01		2BGSO01		2BGSO01	
Sample Date:				01-OCT-96		01-OCT-96		01-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800			11200		11800	
ARSENIC		MG/KG	.43	5.1		4.7		11.7	
BERYLLIUM		MG/KG	0.15					0.65	
CALCIUM		MG/KG		6490		3070		3900	
IRON		MG/KG	2300	15500		18400		27500	
LEAD		MG/KG	400						
MAGNESIUM		MG/KG		2300		2790		3420	
MANGANESE		MG/KG	160	224	J			417	J
POTASSIUM		MG/KG				928		1740	
THALLIUM		MG/KG	0.51	1.8		1.9		2.8	

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1040		1050		1060	
Sample Location:				2BGSO02		2BGSO02		2BGSO02	
Sample Date:				01-OCT-96		01-OCT-96		01-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800	9200		14900		16100	
ARSENIC		MG/KG	.43	9.5		9.7		13.3	
BERYLLIUM		MG/KG	0.15	0.65		0.69		0.78	
CALCIUM		MG/KG		16600		4100		3860	
IRON		MG/KG	2300	19900		26400		35900	
LEAD		MG/KG	400	1000					
MAGNESIUM		MG/KG		5900		3620		5690	
MANGANESE		MG/KG	160	191	J	1000	J	580	J
POTASSIUM		MG/KG		1270		1570		2130	
THALLIUM		MG/KG	0.51	2.1		1.8		2.7	

PLUM. .ROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1070		1080		1090	
Sample Location:				2BGSO03		2BGSO03		2BGSO03	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800	8620		10100		17000	
ARSENIC		MG/KG	.43	5.3		18.3		17.6	
BERYLLIUM		MG/KG	0.15			0.81		0.83	
CALCIUM		MG/KG		7930		12200		5610	
IRON		MG/KG	2300	18400		34100		37300	
LEAD		MG/KG	400						
MAGNESIUM		MG/KG		5160		4160		5040	
MANGANESE		MG/KG	160	295	J	213		1360	
POTASSIUM		MG/KG		1540		2050	J	3010	J
THALLIUM		MG/KG	0.51	1.3		3.3		2.3	

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1100		1110		1120	
Sample Location:				2BGSO04		2BGSO04		2BGSO04	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800	10100		14900		13400	
ARSENIC		MG/KG	.43	6.1		9.8		4.1	
BERYLLIUM		MG/KG	0.15			0.88		0.69	
CALCIUM		MG/KG		3260		4330		5480	
IRON		MG/KG	2300	16700		28100		21800	
LEAD		MG/KG	400						
MAGNESIUM		MG/KG		2490		4110		5830	
MANGANESE		MG/KG	160	315	J	716		256	
POTASSIUM		MG/KG		1160		1590	J	1860	J
THALLIUM		MG/KG	0.51			1.6			

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1130		1140		1150	
Sample Location:				2BGSO05		2BGSO05		2BGSO05	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800	10300		14000		11400	
ARSENIC		MG/KG	.43	7.4		12.0		5.6	
BERYLLIUM		MG/KG	0.15			0.74			
CALCIUM		MG/KG		22600		4210		59200	
IRON		MG/KG	2300	20000		32100		21800	
LEAD		MG/KG	400						
MAGNESIUM		MG/KG		4880		5110		17700	
MANGANESE		MG/KG	160	467	J	1390		327	
POTASSIUM		MG/KG		1350		1420	J	2350	J
THALLIUM		MG/KG	0.51			1.6			

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1160		1170		1180	
Sample Location:				2BGSO06		2BGSO06		2BGSO06	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800	10300		12100		9540	
ARSENIC		MG/KG	.43	7.9		8.4		8.2	
BERYLLIUM		MG/KG	0.15						
CALCIUM		MG/KG		4950		61200		56200	
IRON		MG/KG	2300	17700		22100		22400	
LEAD		MG/KG	400						
MAGNESIUM		MG/KG		3700		20100		17500	
MANGANESE		MG/KG	160	300	J	499		492	
POTASSIUM		MG/KG		1170		1770	J	1970	J
THALLIUM		MG/KG	0.51						

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Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1190		1200		1210	
Sample Location:				2BGSO07		2BGSO07		2BGSO07	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800	14900		12100			
ARSENIC		MG/KG	.43	9.6		11.9		9.0	
BERYLLIUM		MG/KG	0.15	0.66		0.67			
CALCIUM		MG/KG		9570		3540		54000	
IRON		MG/KG	2300	25100		27400		17600	
LEAD		MG/KG	400						
MAGNESIUM		MG/KG		4390		3900		19000	
MANGANESE		MG/KG	160	600	J	1140		421	
POTASSIUM		MG/KG		1490		1400	J	1240	J
THALLIUM		MG/KG	0.51	1.2		1.4			

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1220		1230		1240	
Sample Location:				2BGSO08		2BGSO08		2BGSO08	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:METALS	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
ALUMINUM		MG/KG	7800	9700		12900		12000	
ARSENIC		MG/KG	.43	9.0		9.9		5.3	
BERYLLIUM		MG/KG	0.15	0.78					
CALCIUM		MG/KG		35800		3650		54600	
IRON		MG/KG	2300	24500		27500		21300	
LEAD		MG/KG	400	603					
MAGNESIUM		MG/KG		6370		4240		16400	
MANGANESE		MG/KG	160	284	J	205		309	
POTASSIUM		MG/KG		2520		1740	J	2470	J
THALLIUM		MG/KG	0.51	1.3		1.3			

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Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1010		1020		1030	
Sample Location:				2BGSO01		2BGSO01		2BGSO01	
Sample Date:				01-OCT-96		01-OCT-96		01-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:EXPLOSIVES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-TRINITROBENZENE		MG/KG	0.39						
2,4,6-TRINITROTOLUENE		MG/KG	3.9	48				9.6	
2,4-DINITROTOLUENE		MG/KG	16						
2,6-DINITROTOLUENE		MG/KG	7.8						
4-AMINO-2,6-DINITROTOLUENE		MG/KG	0.47						

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1040		1050		1060	
Sample Location:				2BGSO02		2BGSO02		2BGSO02	
Sample Date:				01-OCT-96		01-OCT-96		01-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:EXPLOSIVES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-TRINITROBENZENE		MG/KG	0.39						
2,4,6-TRINITROTOLUENE		MG/KG	3.9	140					
2,4-DINITROTOLUENE		MG/KG	16	35					
2,6-DINITROTOLUENE		MG/KG	7.8						
4-AMINO-2,6-DINITROTOLUENE		MG/KG	0.47						

PLUM BROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1070		1080		1090	
Sample Location:				2BGSO03		2BGSO03		2BGSO03	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:EXPLOSIVES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-TRINITROBENZENE		MG/KG	0.39						
2,4,6-TRINITROTOLUENE		MG/KG	3.9	910		94		10	
2,4-DINITROTOLUENE		MG/KG	16			160			
2,6-DINITROTOLUENE		MG/KG	7.8						
4-AMINO-2,6-DINITROTOLUENE		MG/KG	0.47						

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1100		1110		1120	
Sample Location:				2BGSO04		2BGSO04		2BGSO04	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:EXPLOSIVES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-TRINITROBENZENE		MG/KG	0.39						
2,4,6-TRINITROTOLUENE		MG/KG	3.9						
2,4-DINITROTOLUENE		MG/KG	16						
2,6-DINITROTOLUENE		MG/KG	7.8						
4-AMINO-2,6-DINITROTOLUENE		MG/KG	0.47					1.5	

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Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1130		1140		1150	
Sample Location:				2BGSO05		2BGSO05		2BGSO05	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:EXPLOSIVES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-TRINITROBENZENE		MG/KG	0.39						
2,4,6-TRINITROTOLUENE		MG/KG	3.9						
2,4-DINITROTOLUENE		MG/KG	16						
2,6-DINITROTOLUENE		MG/KG	7.8						
4-AMINO-2,6-DINITROTOLUENE		MG/KG	0.47						

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1160		1170		1180	
Sample Location:				2BGSO06		2BGSO06		2BGSO06	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:EXPLOSIVES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-TRINITROBENZENE		MG/KG	0.39						
2,4,6-TRINITROTOLUENE		MG/KG	3.9						
2,4-DINITROTOLUENE		MG/KG	16						
2,6-DINITROTOLUENE		MG/KG	7.8						
4-AMINO-2,6-DINITROTOLUENE		MG/KG	0.47						

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Reservoir Number 2 Burning Ground

Report Date: 02/26/97

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				1190		1200		1210	
Sample Location:				2BGSO07		2BGSO07		2BGSO07	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:EXPLOSIVES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-TRINITROBENZENE		MG/KG	0.39						
2,4,6-TRINITROTOLUENE		MG/KG	3.9	31					
2,4-DINITROTOLUENE		MG/KG	16	21					
2,6-DINITROTOLUENE		MG/KG	7.8	10					
4-AMINO-2,6-DINITROTOLUENE		MG/KG	0.47						

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Sample No:				1220		1230		1240	
Sample Location:				2BGSO08		2BGSO08		2BGSO08	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:EXPLOSIVES	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
1,3,5-TRINITROBENZENE		MG/KG	0.39	15					
2,4,6-TRINITROTOLUENE		MG/KG	3.9	210					
2,4-DINITROTOLUENE		MG/KG	16	40					
2,6-DINITROTOLUENE		MG/KG	7.8						
4-AMINO-2,6-DINITROTOLUENE		MG/KG	0.47						

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Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1010		1020		1030	
Sample Location:				2BGSO01		2BGSO01		2BGSO01	
Sample Date:				01-OCT-96		01-OCT-96		01-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:CYANIDE	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
TOTAL CYANIDE		MG/KG							

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1040		1050		1060	
Sample Location:				2BGSO02		2BGSO02		2BGSO02	
Sample Date:				01-OCT-96		01-OCT-96		01-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:CYANIDE	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
TOTAL CYANIDE		MG/KG							

PLUM BROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1070		1080		1090	
Sample Location:				2BGSO03		2BGSO03		2BGSO03	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:CYANIDE	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
TOTAL CYANIDE		MG/KG							

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1100		1110		1120	
Sample Location:				2BGSO04		2BGSO04		2BGSO04	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:CYANIDE	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
TOTAL CYANIDE		MG/KG							

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Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1130		1140		1150	
Sample Location:				2BGSO05		2BGSO05		2BGSO05	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:CYANIDE	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
TOTAL CYANIDE		MG/KG							

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1160		1170		1180	
Sample Location:				2BGSO06		2BGSO06		2BGSO06	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:CYANIDE	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
TOTAL CYANIDE		MG/KG							

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Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1190		1200		1210	
Sample Location:				2BGSO07		2BGSO07		2BGSO07	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:CYANIDE	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
TOTAL CYANIDE		MG/KG							

PLUMBROOK

Reservoir Number 2 Burning Ground

Blank Corrected, Risk-Based Comparison (Soils)

Report Date: 02/26/97

Sample No:				1220		1230		1240	
Sample Location:				2BGSO08		2BGSO08		2BGSO08	
Sample Date:				01-OCT-96		02-OCT-96		02-OCT-96	
Depth				0-.5		2-3		6-7	
2BG:CYANIDE	Fltr	Units	Screening Levels	Result	Val Qlfr	Result	Val Qlfr	Result	Val Qlfr
TOTAL CYANIDE		MG/KG		1.0					

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Reservoir Number 2 Burning Ground

Data Summary - Soils

Report Date: 02/14/97

		1010 2BGSO01 01-OCT-96 0 - .5			1020 2BGSO01 01-OCT-96 2 - 3			1030 2BGSO01 01-OCT-96 6 - 7		
2BG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
1,1,2-TRICHLOROETHANE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
1,1-DICHLOROETHANE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
1,1-DICHLOROETHENE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
1,2-DICHLOROETHANE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
1,2-DICHLOROETHENE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
1,2-DICHLOROPROPANE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
2-BUTANONE	UG/KG	25	U	U	54		J	25	U	U
2-HEXANONE	UG/KG	25	U	U	24	U	U	25	U	U
4-METHYL-2-PENTANONE	UG/KG	25	U	U	24	U	U	25	U	U
ACETONE	UG/KG	25	U	U	300		J	25	U	U
BENZENE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
BROMODICHLOROMETHANE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
BROMOFORM	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
BROMOMETHANE	UG/KG	13	U	U	12	U	U	12	U	U
CARBON DISULFIDE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
CARBON TETRACHLORIDE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
CHLOROBENZENE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
CHLOROETHANE	UG/KG	13	U	U	12	U	U	12	U	U
CHLOROFORM	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
CHLOROMETHANE	UG/KG	13	U	U	12	U	U	12	U	U
DIBROMOCHLOROMETHANE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
ETHYLBENZENE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
METHYLENE CHLORIDE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
STYRENE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
TETRACHLOROETHENE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
TOLUENE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
TOTAL XYLENES	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U

PLUMBROOK
Reservoir Number 2 Burning Ground
Data Summary - Soils

Report Date: 02/14/97

2BG:VOLATILES	Units	1040 2BGSO02 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1050 2BGSO02 01-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1060 2BGSO02 01-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	6.1	U	U	31	U	U	31	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	6.1	U	U	31	U	U	31	U	U
1,1,2-TRICHLOROETHANE	UG/KG	6.1	U	U	31	U	U	31	U	U
1,1-DICHLOROETHANE	UG/KG	6.1	U	U	31	U	U	31	U	U
1,1-DICHLOROETHENE	UG/KG	6.1	U	U	31	U	U	31	U	U
1,2-DICHLOROETHANE	UG/KG	6.1	U	U	31	U	U	31	U	U
1,2-DICHLOROETHENE	UG/KG	6.1	U	U	31	U	U	31	U	U
1,2-DICHLOROPROPANE	UG/KG	6.1	U	U	31	U	U	31	U	U
2-BUTANONE	UG/KG	24	U	U	120	U	U	120	U	U
2-HEXANONE	UG/KG	24	U	U	120	U	U	120	U	U
4-METHYL-2-PENTANONE	UG/KG	24	U	U	120	U	U	120	U	U
ACETONE	UG/KG	24	U	U	200		J	120	U	U
BENZENE	UG/KG	6.1	U	U	31	U	U	31	U	U
BROMODICHLOROMETHANE	UG/KG	6.1	U	U	31	U	U	31	U	U
BROMOFORM	UG/KG	6.1	U	U	31	U	U	31	U	U
BROMOMETHANE	UG/KG	12	U	U	61	U	U	62	U	U
CARBON DISULFIDE	UG/KG	6.1	U	U	31	U	U	31	U	U
CARBON TETRACHLORIDE	UG/KG	6.1	U	U	31	U	U	31	U	U
CHLOROBENZENE	UG/KG	6.1	U	U	31	U	U	31	U	U
CHLOROETHANE	UG/KG	12	U	U	61	U	U	62	U	U
CHLOROFORM	UG/KG	6.1	U	U	31	U	U	31	U	U
CHLOROMETHANE	UG/KG	12	U	U	61	U	U	62	U	U
DIBROMOCHLOROMETHANE	UG/KG	6.1	U	U	31	U	U	31	U	U
ETHYLBENZENE	UG/KG	6.1	U	U	31	U	U	31	U	U
METHYLENE CHLORIDE	UG/KG	6.1	U	U	31	U	U	31	U	U
STYRENE	UG/KG	6.1	U	U	31	U	U	31	U	U
TETRACHLOROETHENE	UG/KG	6.1	U	U	31	U	U	31	U	U
TOLUENE	UG/KG	6.1	U	U	31	U	U	31	U	U
TOTAL XYLENES	UG/KG	6.1	U	U	31	U	U	31	U	U

2BG:VOLATILES	Units	1070 2BGSO03 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1080 2BGSO03 02-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1090 2BGSO03 02-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
1,1,2-TRICHLOROETHANE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
1,1-DICHLOROETHANE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
1,1-DICHLOROETHENE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
1,2-DICHLOROETHANE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
1,2-DICHLOROETHENE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
1,2-DICHLOROPROPANE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
2-BUTANONE	UG/KG	26	U	U	24	U	U	25	U	U
2-HEXANONE	UG/KG	26	U	U	24	U	U	25	U	U
4-METHYL-2-PENTANONE	UG/KG	26	U	U	24	U	U	25	U	U
ACETONE	UG/KG	26	U	U	90			25	U	U
BENZENE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
BROMODICHLOROMETHANE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
BROMOFORM	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
BROMOMETHANE	UG/KG	13	U	U	12	U	U	13	U	U
CARBON DISULFIDE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
CARBON TETRACHLORIDE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
CHLOROBENZENE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
CHLOROETHANE	UG/KG	13	U	U	12	U	U	13	U	U
CHLOROFORM	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
CHLOROMETHANE	UG/KG	13	U	U	12	U	U	13	U	U
DIBROMOCHLOROMETHANE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
ETHYLBENZENE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
METHYLENE CHLORIDE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
STYRENE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
TETRACHLOROETHENE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
TOLUENE	UG/KG	6.4	U	U	3.2	J	J	6.3	U	U
TOTAL XYLENES	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U

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2BG:VOLATILES	Units	1100 2BGSO04 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1110 2BGSO04 02-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1120 2BGSO04 02-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
1,1,2-TRICHLOROETHANE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
1,1-DICHLOROETHANE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
1,1-DICHLOROETHENE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
1,2-DICHLOROETHANE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
1,2-DICHLOROETHENE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
1,2-DICHLOROPROPANE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
2-BUTANONE	UG/KG	26	U	U	23	U	U	130	U	U
2-HEXANONE	UG/KG	26	U	U	23	U	U	130	U	U
4-METHYL-2-PENTANONE	UG/KG	26	U	U	23	U	U	130	U	U
ACETONE	UG/KG	26	U	U	18	J	J	290		
BENZENE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
BROMODICHLOROMETHANE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
BROMOFORM	UG/KG	6.4	U	U	5.8	U	U	32	U	U
BROMOMETHANE	UG/KG	13	U	U	12	U	U	64	U	U
CARBON DISULFIDE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
CARBON TETRACHLORIDE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
CHLOROBENZENE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
CHLOROETHANE	UG/KG	13	U	U	12	U	U	64	U	U
CHLOROFORM	UG/KG	6.4	U	U	5.8	U	U	32	U	U
CHLOROMETHANE	UG/KG	13	U	U	12	U	U	64	U	U
DIBROMOCHLOROMETHANE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
ETHYLBENZENE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
METHYLENE CHLORIDE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
STYRENE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
TETRACHLOROETHENE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
TOLUENE	UG/KG	6.4	U	U	5.8	U	U	20	J	J
TOTAL XYLENES	UG/KG	6.4	U	U	5.8	U	U	11	J	J

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		1130 2BGSO05 01-OCT-96 0 - .5			1140 2BGSO05 02-OCT-96 2 - 3			1150 2BGSO05 02-OCT-96 6 - 7		
2BG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
1,1,2-TRICHLOROETHANE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
1,1-DICHLOROETHANE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
1,1-DICHLOROETHENE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
1,2-DICHLOROETHANE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
1,2-DICHLOROETHENE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
1,2-DICHLOROPROPANE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
2-BUTANONE	UG/KG	130	U	U	25	U	U	25	U	U
2-HEXANONE	UG/KG	130	U	U	25	U	U	25	U	U
4-METHYL-2-PENTANONE	UG/KG	130	U	U	25	U	U	25	U	U
ACETONE	UG/KG	130	U	U	4.6	J	J	43		J
BENZENE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
BROMODICHLOROMETHANE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
BROMOFORM	UG/KG	32	U	U	6.2	U	U	6.3	U	U
BROMOMETHANE	UG/KG	65	U	U	12	U	U	13	U	U
CARBON DISULFIDE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
CARBON TETRACHLORIDE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
CHLOROBENZENE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
CHLOROETHANE	UG/KG	65	U	U	12	U	U	13	U	U
CHLOROFORM	UG/KG	32	U	U	6.2	U	U	6.3	U	U
CHLOROMETHANE	UG/KG	65	U	U	12	U	U	13	U	U
DIBROMOCHLOROMETHANE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
ETHYLBENZENE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
METHYLENE CHLORIDE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
STYRENE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
TETRACHLOROETHENE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
TOLUENE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
TOTAL XYLENES	UG/KG	32	U	U	6.2	U	U	6.3	U	U

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2BG:VOLATILES	Units	1160 2BGSO06 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1170 2BGSO06 02-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1180 2BGSO06 02-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
1,1,2-TRICHLOROETHANE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
1,1-DICHLOROETHANE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
1,1-DICHLOROETHENE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
1,2-DICHLOROETHANE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
1,2-DICHLOROETHENE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
1,2-DICHLOROPROPANE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
2-BUTANONE	UG/KG	120	U	U	24	U	U	24	U	U
2-HEXANONE	UG/KG	120	U	U	24	U	U	24	U	U
4-METHYL-2-PENTANONE	UG/KG	120	U	U	24	U	U	24	U	U
ACETONE	UG/KG	120	U	U	24	U	U	24	U	U
BENZENE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
BROMODICHLOROMETHANE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
BROMOFORM	UG/KG	30	U	U	6.0	U	U	6.1	U	U
BROMOMETHANE	UG/KG	61	U	U	12	U	U	12	U	U
CARBON DISULFIDE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
CARBON TETRACHLORIDE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
CHLOROBENZENE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
CHLOROETHANE	UG/KG	61	U	U	12	U	U	12	U	U
CHLOROFORM	UG/KG	30	U	U	6.0	U	U	6.1	U	U
CHLOROMETHANE	UG/KG	61	U	U	12	U	U	12	U	U
DIBROMOCHLOROMETHANE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
ETHYLBENZENE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
METHYLENE CHLORIDE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
STYRENE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
TETRACHLOROETHENE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
TOLUENE	UG/KG	30	U	U	1.5	J	J	6.1	U	U
TOTAL XYLENES	UG/KG	30	U	U	6.0	U	U	6.1	U	U

		1190 2BGSO07 01-OCT-96 0 - .5			1200 2BGSO07 02-OCT-96 2 - 3			1210 2BGSO07 02-OCT-96 6 - 7		
2BG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
1,1,2-TRICHLOROETHANE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
1,1-DICHLOROETHANE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
1,1-DICHLOROETHENE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
1,2-DICHLOROETHANE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
1,2-DICHLOROETHENE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
1,2-DICHLOROPROPANE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
2-BUTANONE	UG/KG	120	U	U	23	U	U	23	U	U
2-HEXANONE	UG/KG	120	U	U	23	U	U	23	U	U
4-METHYL-2-PENTANONE	UG/KG	120	U	U	23	U	U	23	U	U
ACETONE	UG/KG	120	U	U	23	U	U	23	U	U
BENZENE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
BROMODICHLOROMETHANE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
BROMOFORM	UG/KG	31	U	U	5.7	U	U	5.9	U	U
BROMOMETHANE	UG/KG	62	U	U	11	U	U	12	U	U
CARBON DISULFIDE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
CARBON TETRACHLORIDE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
CHLOROBENZENE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
CHLOROETHANE	UG/KG	62	U	U	11	U	U	12	U	U
CHLOROFORM	UG/KG	31	U	U	5.7	U	U	5.9	U	U
CHLOROMETHANE	UG/KG	62	U	U	11	U	U	12	U	U
DIBROMOCHLOROMETHANE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
ETHYLBENZENE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
METHYLENE CHLORIDE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
STYRENE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
TETRACHLOROETHENE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
TOLUENE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
TOTAL XYLENES	UG/KG	31	U	U	5.7	U	U	5.9	U	U

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2BG:VOLATILES	Units	1220 2BGSO08 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1230 2BGSO08 02-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1240 2BGSO08 02-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
1,1,1-TRICHLOROETHANE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
1,1,2-TRICHLOROETHANE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
1,1-DICHLOROETHANE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
1,1-DICHLOROETHENE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
1,2-DICHLOROETHANE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
1,2-DICHLOROETHENE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
1,2-DICHLOROPROPANE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
2-BUTANONE	UG/KG	120	U	U	24	U	U	24	U	U
2-HEXANONE	UG/KG	120	U	U	24	U	U	24	U	U
4-METHYL-2-PENTANONE	UG/KG	120	U	U	24	U	U	24	U	U
ACETONE	UG/KG	120	U	U	17	J	J	24	U	U
BENZENE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
BROMODICHLOROMETHANE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
BROMOFORM	UG/KG	31	U	U	6.1	U	U	6.1	U	U
BROMOMETHANE	UG/KG	61	U	U	12	U	U	12	U	U
CARBON DISULFIDE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
CARBON TETRACHLORIDE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
CHLOROBENZENE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
CHLOROETHANE	UG/KG	61	U	U	12	U	U	12	U	U
CHLOROFORM	UG/KG	31	U	U	6.1	U	U	6.1	U	U
CHLOROMETHANE	UG/KG	61	U	U	12	U	U	12	U	U
DIBROMOCHLOROMETHANE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
ETHYLBENZENE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
METHYLENE CHLORIDE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
STYRENE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
TETRACHLOROETHENE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
TOLUENE	UG/KG	31	U	U	1.9	J	J	1.6	J	J
TOTAL XYLENES	UG/KG	31	U	U	6.1	U	U	6.1	U	U

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Sample No:		1010			1020			1030		
Sample Location:		2BGSO01			2BGSO01			2BGSO01		
Sample Date:		01-OCT-96			01-OCT-96			01-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
VINYL CHLORIDE	UG/KG	13	U	U	12	U	U	12	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	6.3	U	U	5.9	U	U	6.2	U	U

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Sample No:		1040			1050			1060		
Sample Location:		2BGSO02			2BGSO02			2BGSO02		
Sample Date:		01-OCT-96			01-OCT-96			01-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	6.1	U	U	31	U	U	31	U	U
VINYL CHLORIDE	UG/KG	12	U	U	61	U	U	62	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	6.1	U	U	31	U	U	31	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	6.1	U	U	31	U	U	31	U	U

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Sample No:		1070			1080			1090		
Sample Location:		2BGSO03			2BGSO03			2BGSO03		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
VINYL CHLORIDE	UG/KG	13	U	U	12	U	U	13	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	6.4	U	U	6.0	U	U	6.3	U	U

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Sample No:		1100			1110			1120		
Sample Location:		2BGSO04			2BGSO04			2BGSO04		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
VINYL CHLORIDE	UG/KG	13	U	U	12	U	U	64	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	6.4	U	U	5.8	U	U	32	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	6.4	U	U	5.8	U	U	32	U	U

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Sample No:		1130			1140			1150		
Sample Location:		2BGSO05			2BGSO05			2BGSO05		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
VINYL CHLORIDE	UG/KG	65	U	U	12	U	U	13	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	32	U	U	6.2	U	U	6.3	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	32	U	U	6.2	U	U	6.3	U	U

PLUMBROOK

Reservoir Number 2 Burning Ground

Data Summary - Soils

Report Date: 02/14/97

Sample No:		1160			1170			1180		
Sample Location:		2BGSO06			2BGSO06			2BGSO06		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
VINYL CHLORIDE	UG/KG	61	U	U	12	U	U	12	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	30	U	U	6.0	U	U	6.1	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	30	U	U	6.0	U	U	6.1	U	U

Reservoir Number 2 Burning Ground

Data Summary - Soils

Report Date: 02/14/97

Sample No:		1190			1200			1210		
Sample Location:		2BGSO07			2BGSO07			2BGSO07		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
VINYL CHLORIDE	UG/KG	62	U	U	11	U	U	12	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	31	U	U	5.7	U	U	5.9	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	31	U	U	5.7	U	U	5.9	U	U

PLUMBROOK

Reservoir Number 2 Burning Ground

Data Summary - Soils

Report Date: 02/14/97

Sample No:		1220			1230			1240		
Sample Location:		2BGSO08			2BGSO08			2BGSO08		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:VOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
TRICHLOROETHENE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
VINYL CHLORIDE	UG/KG	61	U	U	12	U	U	12	U	U
cis-1,3-DICHLOROPROPENE	UG/KG	31	U	U	6.1	U	U	6.1	U	U
trans-1,3-DICHLOROPROPENE	UG/KG	31	U	U	6.1	U	U	6.1	U	U

2BG:SEMIVOLATILES	Units	1010 2BGSO01 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1020 2BGSO01 01-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1030 2BGSO01 01-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	410	U	U	390	U	U	410	U	U
1,2-DICHLOROBENZENE	UG/KG	410	U	U	390	U	U	410	U	U
1,3-DICHLOROBENZENE	UG/KG	410	U	U	390	U	U	410	U	U
1,4-DICHLOROBENZENE	UG/KG	410	U	U	390	U	U	410	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	410	U	U	390	U	U	410	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	410	U	U	390	U	U	410	U	U
2,4-DICHLOROPHENOL	UG/KG	410	U	U	390	U	U	410	U	U
2,4-DIMETHYLPHENOL	UG/KG	410	U	U	390	U	U	410	U	U
2,4-DINITROPHENOL	UG/KG	2000	U	U	1900	U	U	2000	U	U
2,4-DINITROTOLUENE	UG/KG	1700			19000			2900		
2,6-DINITROTOLUENE	UG/KG	810			3400			500		
2-CHLORONAPHTHALENE	UG/KG	410	U	U	390	U	U	410	U	U
2-CHLOROPHENOL	UG/KG	410	U	U	390	U	U	410	U	U
2-METHYLNAPHTHALENE	UG/KG	410	U	U	390	U	U	410	U	U
2-METHYLPHENOL	UG/KG	410	U	U	390	U	U	410	U	U
2-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2000	U	U
2-NITROPHENOL	UG/KG	410	U	U	390	U	U	410	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	2000	U	U	1900	U	U	2000	U	U
3-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2000	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	2000	U	U	1900	U	U	2000	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	410	U	U	390	U	U	410	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	410	U	U	390	U	U	410	U	U
4-CHLOROANILINE	UG/KG	410	U	U	390	U	U	410	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	410	U	U	390	U	U	410	U	U
4-METHYLPHENOL	UG/KG	410	U	U	390	U	U	410	U	U
4-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2000	U	U
4-NITROPHENOL	UG/KG	2000	U	U	1900	U	U	2000	U	U
ACENAPHTHENE	UG/KG	410	U	U	390	U	U	410	U	U
ACENAPHTHYLENE	UG/KG	410	U	U	390	U	U	410	U	U

2BG:SEMIVOLATILES	Units	1040 2BGSO02 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1050 2BGSO02 01-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1060 2BGSO02 01-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	400	U	U	400	U	U	410	U	U
1,2-DICHLOROBENZENE	UG/KG	400	U	U	400	U	U	410	U	U
1,3-DICHLOROBENZENE	UG/KG	400	U	U	400	U	U	410	U	U
1,4-DICHLOROBENZENE	UG/KG	400	U	U	400	U	U	410	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
2,4-DICHLOROPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
2,4-DIMETHYLPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
2,4-DINITROPHENOL	UG/KG	2000	U	U	2000	U	U	2000	U	U
2,4-DINITROTOLUENE	UG/KG	1000			400	U	U	410	U	U
2,6-DINITROTOLUENE	UG/KG	290	J	J	400	U	U	410	U	U
2-CHLORONAPHTHALENE	UG/KG	400	U	U	400	U	U	410	U	U
2-CHLOROPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
2-METHYLNAPHTHALENE	UG/KG	400	U	U	400	U	U	410	U	U
2-METHYLPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
2-NITROANILINE	UG/KG	2000	U	U	2000	U	U	2000	U	U
2-NITROPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	2000	U	U	2000	U	U	2000	U	U
3-NITROANILINE	UG/KG	2000	U	U	2000	U	U	2000	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	2000	U	U	2000	U	U	2000	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	400	U	U	400	U	U	410	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
4-CHLOROANILINE	UG/KG	400	U	U	400	U	U	410	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	400	U	U	400	U	U	410	U	U
4-METHYLPHENOL	UG/KG	400	U	U	400	U	U	410	U	U
4-NITROANILINE	UG/KG	2000	U	U	2000	U	U	2000	U	U
4-NITROPHENOL	UG/KG	2000	U	U	2000	U	U	2000	U	U
ACENAPHTHENE	UG/KG	400	U	U	400	U	U	410	U	U
ACENAPHTHYLENE	UG/KG	400	U	U	400	U	U	410	U	U

2BG:SEMIVOLATILES	Units	1070 2BGSO03 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1080 2BGSO03 02-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1090 2BGSO03 02-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	420	U	U	400	U	U	420	U	U
1,2-DICHLOROBENZENE	UG/KG	420	U	U	400	U	U	420	U	U
1,3-DICHLOROBENZENE	UG/KG	420	U	U	400	U	U	420	U	U
1,4-DICHLOROBENZENE	UG/KG	420	U	U	400	U	U	420	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	420	U	U	400	U	U	420	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	420	U	U	400	U	U	420	U	U
2,4-DICHLOROPHENOL	UG/KG	420	U	U	400	U	U	420	U	U
2,4-DIMETHYLPHENOL	UG/KG	420	U	U	400	U	U	420	U	U
2,4-DINITROPHENOL	UG/KG	2000	U	U	1900	U	U	2000	U	U
2,4-DINITROTOLUENE	UG/KG	6100			6400			120	J	J
2,6-DINITROTOLUENE	UG/KG	3300			680			420	U	U
2-CHLORONAPHTHALENE	UG/KG	420	U	U	400	U	U	420	U	U
2-CHLOROPHENOL	UG/KG	420	U	U	400	U	U	420	U	U
2-METHYLNAPHTHALENE	UG/KG	420	U	U	400	U	U	420	U	U
2-METHYLPHENOL	UG/KG	420	U	U	400	U	U	420	U	U
2-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2000	U	U
2-NITROPHENOL	UG/KG	420	U	U	400	U	U	420	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	2000	U	U	1900	U	U	2000	U	U
3-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2000	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	2000	U	U	1900	U	U	2000	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	420	U	U	400	U	U	420	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	420	U	U	400	U	U	420	U	U
4-CHLOROANILINE	UG/KG	420	U	U	400	U	U	420	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	420	U	U	400	U	U	420	U	U
4-METHYLPHENOL	UG/KG	420	U	U	400	U	U	420	U	U
4-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2000	U	U
4-NITROPHENOL	UG/KG	2000	U	U	1900	U	U	2000	U	U
ACENAPHTHENE	UG/KG	420	U	U	400	U	U	420	U	U
ACENAPHTHYLENE	UG/KG	420	U	U	400	U	U	420	U	U

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Reservoir Number 2 Burning Ground
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2BG:SEMIVOLATILES	Units	1100 2BGSO04 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1110 2BGSO04 02-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1120 2BGSO04 02-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	420	U	U	390	U	U	420	U	U
1,2-DICHLOROBENZENE	UG/KG	420	U	U	390	U	U	420	U	U
1,3-DICHLOROBENZENE	UG/KG	420	U	U	390	U	U	420	U	U
1,4-DICHLOROBENZENE	UG/KG	420	U	U	390	U	U	420	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	420	U	U	390	U	U	420	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	420	U	U	390	U	U	420	U	U
2,4-DICHLOROPHENOL	UG/KG	420	U	U	390	U	U	420	U	U
2,4-DIMETHYLPHENOL	UG/KG	420	U	U	390	U	U	420	U	U
2,4-DINITROPHENOL	UG/KG	2100	U	U	1900	U	U	2000	U	U
2,4-DINITROTOLUENE	UG/KG	64	J	J	390	U	U	420	U	U
2,6-DINITROTOLUENE	UG/KG	420	U	U	390	U	U	420	U	U
2-CHLORONAPHTHALENE	UG/KG	420	U	U	390	U	U	420	U	U
2-CHLOROPHENOL	UG/KG	420	U	U	390	U	U	420	U	U
2-METHYLNAPHTHALENE	UG/KG	420	U	U	390	U	U	420	U	U
2-METHYLPHENOL	UG/KG	420	U	U	390	U	U	420	U	U
2-NITROANILINE	UG/KG	2100	U	U	1900	U	U	2000	U	U
2-NITROPHENOL	UG/KG	420	U	U	390	U	U	420	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	2100	U	U	1900	U	U	2000	U	U
3-NITROANILINE	UG/KG	2100	U	U	1900	U	U	2000	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	2100	U	U	1900	U	U	2000	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	420	U	U	390	U	U	420	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	420	U	U	390	U	U	420	U	U
4-CHLOROANILINE	UG/KG	420	U	U	390	U	U	420	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	420	U	U	390	U	U	420	U	U
4-METHYLPHENOL	UG/KG	420	U	U	390	U	U	420	U	U
4-NITROANILINE	UG/KG	2100	U	U	1900	U	U	2000	U	U
4-NITROPHENOL	UG/KG	2100	U	U	1900	U	U	2000	U	U
ACENAPHTHENE	UG/KG	420	U	U	390	U	U	420	U	U
ACENAPHTHYLENE	UG/KG	420	U	U	390	U	U	420	U	U

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		1130 2BGSO05 01-OCT-96 0 - .5			1140 2BGSO05 02-OCT-96 2 - 3			1150 2BGSO05 02-OCT-96 6 - 7		
2BG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	430	U	U	410	U	U	410	U	U
1,2-DICHLOROBENZENE	UG/KG	430	U	U	410	U	U	410	U	U
1,3-DICHLOROBENZENE	UG/KG	430	U	U	410	U	U	410	U	U
1,4-DICHLOROBENZENE	UG/KG	430	U	U	410	U	U	410	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	430	U	U	410	U	U	410	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	430	U	U	410	U	U	410	U	U
2,4-DICHLOROPHENOL	UG/KG	430	U	U	410	U	U	410	U	U
2,4-DIMETHYLPHENOL	UG/KG	430	U	U	410	U	U	410	U	U
2,4-DINITROPHENOL	UG/KG	2100	U	U	2000	U	U	2000	U	U
2,4-DINITROTOLUENE	UG/KG	160	J	J	410	U	U	410	U	U
2,6-DINITROTOLUENE	UG/KG	65	J	J	410	U	U	410	U	U
2-CHLORONAPHTHALENE	UG/KG	430	U	U	410	U	U	410	U	U
2-CHLOROPHENOL	UG/KG	430	U	U	410	U	U	410	U	U
2-METHYLNAPHTHALENE	UG/KG	430	U	U	410	U	U	410	U	U
2-METHYLPHENOL	UG/KG	430	U	U	410	U	U	410	U	U
2-NITROANILINE	UG/KG	2100	U	U	2000	U	U	2000	U	U
2-NITROPHENOL	UG/KG	430	U	U	410	U	U	410	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	2100	U	U	2000	U	U	2000	U	U
3-NITROANILINE	UG/KG	2100	U	U	2000	U	U	2000	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	2100	U	U	2000	U	U	2000	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	430	U	U	410	U	U	410	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	430	U	U	410	U	U	410	U	U
4-CHLOROANILINE	UG/KG	430	U	U	410	U	U	410	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	430	U	U	410	U	U	410	U	U
4-METHYLPHENOL	UG/KG	430	U	U	410	U	U	410	U	U
4-NITROANILINE	UG/KG	2100	U	U	2000	U	U	2000	U	U
4-NITROPHENOL	UG/KG	2100	U	U	2000	U	U	2000	U	U
ACENAPHTHENE	UG/KG	430	U	U	410	U	U	410	U	U
ACENAPHTHYLENE	UG/KG	430	U	U	410	U	U	410	U	U

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		1160 2BGSO06 01-OCT-96 0 - .5			1170 2BGSO06 02-OCT-96 2 - 3			1180 2BGSO06 02-OCT-96 6 - 7		
2BG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	400	U	U	390	U	U	400	U	U
1,2-DICHLOROBENZENE	UG/KG	400	U	U	390	U	U	400	U	U
1,3-DICHLOROBENZENE	UG/KG	400	U	U	390	U	U	400	U	U
1,4-DICHLOROBENZENE	UG/KG	400	U	U	390	U	U	400	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	400	U	U	390	U	U	400	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	400	U	U	390	U	U	400	U	U
2,4-DICHLOROPHENOL	UG/KG	400	U	U	390	U	U	400	U	U
2,4-DIMETHYLPHENOL	UG/KG	400	U	U	390	U	U	400	U	U
2,4-DINITROPHENOL	UG/KG	1900	U	U	1900	U	U	1900	U	U
2,4-DINITROTOLUENE	UG/KG	400	U	U	390	U	U	400	U	U
2,6-DINITROTOLUENE	UG/KG	400	U	U	390	U	U	400	U	U
2-CHLORONAPHTHALENE	UG/KG	400	U	U	390	U	U	400	U	U
2-CHLOROPHENOL	UG/KG	400	U	U	390	U	U	400	U	U
2-METHYLNAPHTHALENE	UG/KG	400	U	U	390	U	U	400	U	U
2-METHYLPHENOL	UG/KG	400	U	U	390	U	U	400	U	U
2-NITROANILINE	UG/KG	1900	U	U	1900	U	U	1900	U	U
2-NITROPHENOL	UG/KG	400	U	U	390	U	U	400	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	1900	U	U	1900	U	U	1900	U	U
3-NITROANILINE	UG/KG	1900	U	U	1900	U	U	1900	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	1900	U	U	1900	U	U	1900	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	400	U	U	390	U	U	400	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	400	U	U	390	U	U	400	U	U
4-CHLOROANILINE	UG/KG	400	U	U	390	U	U	400	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	400	U	U	390	U	U	400	U	U
4-METHYLPHENOL	UG/KG	400	U	U	390	U	U	400	U	U
4-NITROANILINE	UG/KG	1900	U	U	1900	U	U	1900	U	U
4-NITROPHENOL	UG/KG	1900	U	U	1900	U	U	1900	U	U
ACENAPHTHENE	UG/KG	400	U	U	390	U	U	400	U	U
ACENAPHTHYLENE	UG/KG	400	U	U	390	U	U	400	U	U

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		1190 2BGSO07 01-OCT-96 0 - .5			1200 2BGSO07 02-OCT-96 2 - 3			1210 2BGSO07 02-OCT-96 6 - 7		
2BG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	410	U	U	380	U	U	390	U	U
1,2-DICHLOROBENZENE	UG/KG	410	U	U	380	U	U	390	U	U
1,3-DICHLOROBENZENE	UG/KG	410	U	U	380	U	U	390	U	U
1,4-DICHLOROBENZENE	UG/KG	410	U	U	380	U	U	390	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	410	U	U	380	U	U	390	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	410	U	U	380	U	U	390	U	U
2,4-DICHLOROPHENOL	UG/KG	410	U	U	380	U	U	390	U	U
2,4-DIMETHYLPHENOL	UG/KG	410	U	U	380	U	U	390	U	U
2,4-DINITROPHENOL	UG/KG	2000	U	U	1800	U	U	1900	U	U
2,4-DINITROTOLUENE	UG/KG	1500			380	U	U	390	U	U
2,6-DINITROTOLUENE	UG/KG	630			380	U	U	390	U	U
2-CHLORONAPHTHALENE	UG/KG	410	U	U	380	U	U	390	U	U
2-CHLOROPHENOL	UG/KG	410	U	U	380	U	U	390	U	U
2-METHYLNAPHTHALENE	UG/KG	410	U	U	380	U	U	390	U	U
2-METHYLPHENOL	UG/KG	410	U	U	380	U	U	390	U	U
2-NITROANILINE	UG/KG	2000	U	U	1800	U	U	1900	U	U
2-NITROPHENOL	UG/KG	410	U	U	380	U	U	390	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	2000	U	U	1800	U	U	1900	U	U
3-NITROANILINE	UG/KG	2000	U	U	1800	U	U	1900	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	2000	U	U	1800	U	U	1900	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	410	U	U	380	U	U	390	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	410	U	U	380	U	U	390	U	U
4-CHLOROANILINE	UG/KG	410	U	U	380	U	U	390	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	410	U	U	380	U	U	390	U	U
4-METHYLPHENOL	UG/KG	410	U	U	380	U	U	390	U	U
4-NITROANILINE	UG/KG	2000	U	U	1800	U	U	1900	U	U
4-NITROPHENOL	UG/KG	2000	U	U	1800	U	U	1900	U	U
ACENAPHTHENE	UG/KG	410	U	U	380	U	U	390	U	U
ACENAPHTHYLENE	UG/KG	410	U	U	380	U	U	390	U	U

2BG:SEMIVOLATILES	Units	1220 2BGSO08 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1230 2BGSO08 02-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1240 2BGSO08 02-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
1,2,4-TRICHLOROBENZENE	UG/KG	400	U	U	400	U	U	400	U	U
1,2-DICHLOROBENZENE	UG/KG	400	U	U	400	U	U	400	U	U
1,3-DICHLOROBENZENE	UG/KG	400	U	U	400	U	U	400	U	U
1,4-DICHLOROBENZENE	UG/KG	400	U	U	400	U	U	400	U	U
2,4,5-TRICHLOROPHENOL	UG/KG	400	U	U	400	U	U	400	U	U
2,4,6-TRICHLOROPHENOL	UG/KG	400	U	U	400	U	U	400	U	U
2,4-DICHLOROPHENOL	UG/KG	400	U	U	400	U	U	400	U	U
2,4-DIMETHYLPHENOL	UG/KG	400	U	U	400	U	U	400	U	U
2,4-DINITROPHENOL	UG/KG	2000	U	U	1900	U	U	2000	U	U
2,4-DINITROTOLUENE	UG/KG	13000			400	U	U	400	U	U
2,6-DINITROTOLUENE	UG/KG	7700			400	U	U	400	U	U
2-CHLORONAPHTHALENE	UG/KG	400	U	U	400	U	U	400	U	U
2-CHLOROPHENOL	UG/KG	400	U	U	400	U	U	400	U	U
2-METHYLNAPHTHALENE	UG/KG	400	U	U	400	U	U	400	U	U
2-METHYLPHENOL	UG/KG	400	U	U	400	U	U	400	U	U
2-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2000	U	U
2-NITROPHENOL	UG/KG	400	U	U	400	U	U	400	U	U
3,3'-DICHLOROBENZIDINE	UG/KG	2000	U	U	1900	U	U	2000	U	U
3-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2000	U	U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	2000	U	U	1900	U	U	2000	U	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	400	U	U	400	U	U	400	U	U
4-CHLORO-3-METHYLPHENOL	UG/KG	400	U	U	400	U	U	400	U	U
4-CHLOROANILINE	UG/KG	400	U	U	400	U	U	400	U	U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	400	U	U	400	U	U	400	U	U
4-METHYLPHENOL	UG/KG	400	U	U	400	U	U	400	U	U
4-NITROANILINE	UG/KG	2000	U	U	1900	U	U	2000	U	U
4-NITROPHENOL	UG/KG	2000	U	U	1900	U	U	2000	U	U
ACENAPHTHENE	UG/KG	400	U	U	400	U	U	400	U	U
ACENAPHTHYLENE	UG/KG	400	U	U	400	U	U	400	U	U

2BG:SEMIVOLATILES	Units	1010 2BGSO01 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1020 2BGSO01 01-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1030 2BGSO01 01-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	410	U	U	390	U	U	410	U	U
BENZO(a)ANTHRACENE	UG/KG	410	U	U	390	U	U	410	U	U
BENZO(a)PYRENE	UG/KG	410	U	U	390	U	U	410	U	U
BENZO(b)FLUORANTHENE	UG/KG	410	U	U	390	U	U	410	U	U
BENZO(ghi)PERYLENE	UG/KG	410	U	U	390	U	U	410	U	U
BENZO(k)FLUORANTHENE	UG/KG	410	U	U	390	U	U	410	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	410	U	U	390	U	U	410	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	410	U	U	390	U	U	410	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	410	U	U	390	U	U	410	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	410	U	U	390	U	U	410	U	U
BUTYL BENZYL PHTHALATE	UG/KG	410	U	U	390	U	U	410	U	U
CARBAZOLE	UG/KG	410	U	U	390	U	U	410	U	U
CHRYSENE	UG/KG	410	U	U	390	U	U	410	U	U
DI-n-BUTYL PHTHALATE	UG/KG	410	U	U	390	U	U	410	U	U
DI-n-OCTYL PHTHALATE	UG/KG	410	U	U	390	U	U	410	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	410	U	U	390	U	U	410	U	U
DIBENZOFURAN	UG/KG	410	U	U	390	U	U	410	U	U
DIETHYL PHTHALATE	UG/KG	410	U	U	390	U	U	410	U	U
DIMETHYL PHTHALATE	UG/KG	410	U	U	390	U	U	410	U	U
FLUORANTHENE	UG/KG	56	J	J	390	U	U	410	U	U
FLUORENE	UG/KG	410	U	U	390	U	U	410	U	U
HEXACHLOROBENZENE	UG/KG	410	U	U	390	U	U	410	U	U
HEXACHLOROBUTADIENE	UG/KG	410	U	U	390	U	U	410	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	2000	U	U	1900	U	U	2000	U	U
HEXACHLOROETHANE	UG/KG	410	U	U	390	U	U	410	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	410	U	U	390	U	U	410	U	U
ISOPHORONE	UG/KG	410	U	U	390	U	U	410	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	410	U	U	390	U	U	410	U	U
N-NITROSODIPHENYLAMINE	UG/KG	410	U	U	390	U	U	410	U	U

2BG:SEMIVOLATILES	Units	1040 2BGSO02 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1050 2BGSO02 01-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1060 2BGSO02 01-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	400	U	U	400	U	U	410	U	U
BENZO(a)ANTHRACENE	UG/KG	400	U	U	400	U	U	410	U	U
BENZO(a)PYRENE	UG/KG	400	U	U	400	U	U	410	U	U
BENZO(b)FLUORANTHENE	UG/KG	400	U	U	400	U	U	410	U	U
BENZO(ghi)PERYLENE	UG/KG	400	U	U	400	U	U	410	U	U
BENZO(k)FLUORANTHENE	UG/KG	400	U	U	400	U	U	410	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	400	U	U	400	U	U	410	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	400	U	U	400	U	U	410	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	400	U	U	400	U	U	410	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	400	U	U	400	U	U	60	J	J
BUTYL BENZYL PHTHALATE	UG/KG	400	U	U	400	U	U	410	U	U
CARBAZOLE	UG/KG	400	U	U	400	U	U	410	U	U
CHRYSENE	UG/KG	400	U	U	400	U	U	410	U	U
DI-n-BUTYL PHTHALATE	UG/KG	400	U	U	400	U	U	410	U	U
DI-n-OCTYL PHTHALATE	UG/KG	400	U	U	400	U	U	410	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	400	U	U	400	U	U	410	U	U
DIBENZOFURAN	UG/KG	400	U	U	400	U	U	410	U	U
DIETHYL PHTHALATE	UG/KG	400	U	U	400	U	U	410	U	U
DIMETHYL PHTHALATE	UG/KG	400	U	U	400	U	U	410	U	U
FLUORANTHENE	UG/KG	400	U	U	400	U	U	410	U	U
FLUORENE	UG/KG	400	U	U	400	U	U	410	U	U
HEXACHLOROBENZENE	UG/KG	400	U	U	400	U	U	410	U	U
HEXACHLOROBUTADIENE	UG/KG	400	U	U	400	U	U	410	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	2000	U	U	2000	U	U	2000	U	U
HEXACHLOROETHANE	UG/KG	400	U	U	400	U	U	410	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	400	U	U	400	U	U	410	U	U
ISOPHORONE	UG/KG	400	U	U	400	U	U	410	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	400	U	U	400	U	U	410	U	U
N-NITROSODIPHENYLAMINE	UG/KG	400	U	U	400	U	U	410	U	U

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		1070 2BGSO03 01-OCT-96 0 - .5			1080 2BGSO03 02-OCT-96 2 - 3			1090 2BGSO03 02-OCT-96 6 - 7		
2BG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	55	J	J	400	U	U	420	U	U
BENZO(a)ANTHRACENE	UG/KG	420	U	U	400	U	U	420	U	U
BENZO(a)PYRENE	UG/KG	420	U	U	400	U	U	420	U	U
BENZO(b)FLUORANTHENE	UG/KG	420	U	U	400	U	U	420	U	U
BENZO(ghi)PERYLENE	UG/KG	420	U	U	400	U	U	420	U	U
BENZO(k)FLUORANTHENE	UG/KG	420	U	U	400	U	U	420	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	420	U	U	400	U	U	420	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	420	U	U	400	U	U	420	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	420	U	U	400	U	U	420	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	420	U	U	400	U	U	420	U	U
BUTYL BENZYL PHTHALATE	UG/KG	420	U	U	400	U	U	420	U	U
CARBAZOLE	UG/KG	420	U	U	400	U	U	420	U	U
CHRYSENE	UG/KG	64	J	J	400	U	U	420	U	U
DI-n-BUTYL PHTHALATE	UG/KG	420	U	U	400	U	U	420	U	U
DI-n-OCTYL PHTHALATE	UG/KG	420	U	U	400	U	U	420	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	420	U	U	400	U	U	420	U	U
DIBENZOFURAN	UG/KG	420	U	U	400	U	U	420	U	U
DIETHYL PHTHALATE	UG/KG	420	U	U	400	U	U	420	U	U
DIMETHYL PHTHALATE	UG/KG	420	U	U	400	U	U	420	U	U
FLUORANTHENE	UG/KG	91	J	J	400	U	U	420	U	U
FLUORENE	UG/KG	420	U	U	400	U	U	420	U	U
HEXACHLOROBENZENE	UG/KG	420	U	U	400	U	U	420	U	U
HEXACHLOROBUTADIENE	UG/KG	420	U	U	400	U	U	420	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	2000	U	U	1900	U	U	2000	U	U
HEXACHLOROETHANE	UG/KG	420	U	U	400	U	U	420	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	420	U	U	400	U	U	420	U	U
ISOPHORONE	UG/KG	420	U	U	400	U	U	420	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	420	U	U	400	U	U	420	U	U
N-NITROSODIPHENYLAMINE	UG/KG	420	U	U	400	U	U	420	U	U

2BG:SEMIVOLATILES	Units	1100 2BGSO04 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1110 2BGSO04 02-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1120 2BGSO04 02-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	420	U	U	390	U	U	420	U	U
BENZO(a)ANTHRACENE	UG/KG	420	U	U	390	U	U	420	U	U
BENZO(a)PYRENE	UG/KG	420	U	U	390	U	U	420	U	U
BENZO(b)FLUORANTHENE	UG/KG	420	U	U	390	U	U	420	U	U
BENZO(ghi)PERYLENE	UG/KG	420	U	U	390	U	U	420	U	U
BENZO(k)FLUORANTHENE	UG/KG	420	U	U	390	U	U	420	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	420	U	U	390	U	U	420	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	420	U	U	390	U	U	420	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	420	U	U	390	U	U	420	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	61	J	J	390	U	U	420	U	U
BUTYL BENZYL PHTHALATE	UG/KG	420	U	U	390	U	U	420	U	U
CARBAZOLE	UG/KG	420	U	U	390	U	U	420	U	U
CHRYSENE	UG/KG	420	U	U	390	U	U	420	U	U
DI-n-BUTYL PHTHALATE	UG/KG	420	U	U	390	U	U	420	U	U
DI-n-OCTYL PHTHALATE	UG/KG	420	U	U	390	U	U	420	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	420	U	U	390	U	U	420	U	U
DIBENZOFURAN	UG/KG	420	U	U	390	U	U	420	U	U
DIETHYL PHTHALATE	UG/KG	420	U	U	390	U	U	420	U	U
DIMETHYL PHTHALATE	UG/KG	420	U	U	390	U	U	420	U	U
FLUORANTHENE	UG/KG	420	U	U	390	U	U	420	U	U
FLUORENE	UG/KG	420	U	U	390	U	U	420	U	U
HEXACHLOROBENZENE	UG/KG	420	U	U	390	U	U	420	U	U
HEXACHLOROBUTADIENE	UG/KG	420	U	U	390	U	U	420	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	2100	U	U	1900	U	U	2000	U	U
HEXACHLOROETHANE	UG/KG	420	U	U	390	U	U	420	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	420	U	U	390	U	U	420	U	U
ISOPHORONE	UG/KG	420	U	U	390	U	U	420	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	420	U	U	390	U	U	420	U	U
N-NITROSODIPHENYLAMINE	UG/KG	420	U	U	390	U	U	420	U	U

2BG:SEMIVOLATILES	Units	1130 2BGSO05 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1140 2BGSO05 02-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1150 2BGSO05 02-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	430	U	U	410	U	U	410	U	U
BENZO(a)ANTHRACENE	UG/KG	430	U	U	410	U	U	410	U	U
BENZO(a)PYRENE	UG/KG	430	U	U	410	U	U	410	U	U
BENZO(b)FLUORANTHENE	UG/KG	430	U	U	410	U	U	410	U	U
BENZO(ghi)PERYLENE	UG/KG	430	U	U	410	U	U	410	U	U
BENZO(k)FLUORANTHENE	UG/KG	430	U	U	410	U	U	410	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	430	U	U	410	U	U	410	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	430	U	U	410	U	U	410	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	430	U	U	410	U	U	410	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	430	U	U	410	U	U	410	U	U
BUTYL BENZYL PHTHALATE	UG/KG	430	U	U	410	U	U	410	U	U
CARBAZOLE	UG/KG	430	U	U	410	U	U	410	U	U
CHRYSENE	UG/KG	430	U	U	410	U	U	410	U	U
DI-n-BUTYL PHTHALATE	UG/KG	430	U	U	410	U	U	410	U	U
DI-n-OCTYL PHTHALATE	UG/KG	430	U	U	410	U	U	410	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	430	U	U	410	U	U	410	U	U
DIBENZOFURAN	UG/KG	430	U	U	410	U	U	410	U	U
DIETHYL PHTHALATE	UG/KG	430	U	U	410	U	U	410	U	U
DIMETHYL PHTHALATE	UG/KG	430	U	U	410	U	U	410	U	U
FLUORANTHENE	UG/KG	430	U	U	410	U	U	410	U	U
FLUORENE	UG/KG	430	U	U	410	U	U	410	U	U
HEXACHLOROBENZENE	UG/KG	430	U	U	410	U	U	410	U	U
HEXACHLOROBUTADIENE	UG/KG	430	U	U	410	U	U	410	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	2100	U	U	2000	U	U	2000	U	U
HEXACHLOROETHANE	UG/KG	430	U	U	410	U	U	410	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	430	U	U	410	U	U	410	U	U
ISOPHORONE	UG/KG	430	U	U	410	U	U	410	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	430	U	U	410	U	U	410	U	U
N-NITROSODIPHENYLAMINE	UG/KG	430	U	U	410	U	U	410	U	U

2BG:SEMIVOLATILES	Units	1160 2BGSO06 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1170 2BGSO06 02-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1180 2BGSO06 02-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	400	U	U	390	U	U	400	U	U
BENZO(a)ANTHRACENE	UG/KG	400	U	U	390	U	U	400	U	U
BENZO(a)PYRENE	UG/KG	400	U	U	390	U	U	400	U	U
BENZO(b)FLUORANTHENE	UG/KG	400	U	U	390	U	U	400	U	U
BENZO(ghi)PERYLENE	UG/KG	400	U	U	390	U	U	400	U	U
BENZO(k)FLUORANTHENE	UG/KG	400	U	U	390	U	U	400	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	400	U	U	390	U	U	400	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	400	U	U	390	U	U	400	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	400	U	U	390	U	U	400	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	400	U	U	390	U	U	400	U	U
BUTYL BENZYL PHTHALATE	UG/KG	400	U	U	390	U	U	400	U	U
CARBAZOLE	UG/KG	400	U	U	390	U	U	400	U	U
CHRYSENE	UG/KG	400	U	U	390	U	U	400	U	U
DI-n-BUTYL PHTHALATE	UG/KG	400	U	U	390	U	U	400	U	U
DI-n-OCTYL PHTHALATE	UG/KG	400	U	U	390	U	U	400	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	400	U	U	390	U	U	400	U	U
DIBENZOFURAN	UG/KG	400	U	U	390	U	U	400	U	U
DIETHYL PHTHALATE	UG/KG	400	U	U	390	U	U	400	U	U
DIMETHYL PHTHALATE	UG/KG	400	U	U	390	U	U	400	U	U
FLUORANTHENE	UG/KG	400	U	U	390	U	U	400	U	U
FLUORENE	UG/KG	400	U	U	390	U	U	400	U	U
HEXACHLOROBENZENE	UG/KG	400	U	U	390	U	U	400	U	U
HEXACHLOROBUTADIENE	UG/KG	400	U	U	390	U	U	400	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	1900	U	U	1900	U	U	1900	U	U
HEXACHLOROETHANE	UG/KG	400	U	U	390	U	U	400	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	400	U	U	390	U	U	400	U	U
ISOPHORONE	UG/KG	400	U	U	390	U	U	400	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	400	U	U	390	U	U	400	U	U
N-NITROSODIPHENYLAMINE	UG/KG	400	U	U	390	U	U	400	U	U

2BG:SEMIVOLATILES	Units	1190 2BGSO07 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1200 2BGSO07 02-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1210 2BGSO07 02-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	410	U	U	380	U	U	390	U	U
BENZO(a)ANTHRACENE	UG/KG	410	U	U	380	U	U	390	U	U
BENZO(a)PYRENE	UG/KG	150	J	J	380	U	U	390	U	U
BENZO(b)FLUORANTHENE	UG/KG	180	J	J	380	U	U	390	U	U
BENZO(ghi)PERYLENE	UG/KG	95	J	J	380	U	U	390	U	U
BENZO(k)FLUORANTHENE	UG/KG	410	U	U	380	U	U	390	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	410	U	U	380	U	U	390	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	410	U	U	380	U	U	390	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	410	U	U	380	U	U	390	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	410	U	U	380	U	U	390	U	U
BUTYL BENZYL PHTHALATE	UG/KG	410	U	U	380	U	U	390	U	U
CARBAZOLE	UG/KG	410	U	U	380	U	U	390	U	U
CHRYSENE	UG/KG	85	J	J	380	U	U	390	U	U
DI-n-BUTYL PHTHALATE	UG/KG	410	U	U	380	U	U	390	U	U
DI-n-OCTYL PHTHALATE	UG/KG	410	U	U	380	U	U	390	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	410	U	U	380	U	U	390	U	U
DIBENZOFURAN	UG/KG	410	U	U	380	U	U	390	U	U
DIETHYL PHTHALATE	UG/KG	410	U	U	380	U	U	390	U	U
DIMETHYL PHTHALATE	UG/KG	410	U	U	380	U	U	390	U	U
FLUORANTHENE	UG/KG	110	J	J	380	U	U	390	U	U
FLUORENE	UG/KG	410	U	U	380	U	U	390	U	U
HEXACHLOROBENZENE	UG/KG	410	U	U	380	U	U	390	U	U
HEXACHLOROBUTADIENE	UG/KG	410	U	U	380	U	U	390	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	2000	U	U	1800	U	U	1900	U	U
HEXACHLOROETHANE	UG/KG	410	U	U	380	U	U	390	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	74	J	J	380	U	U	390	U	U
ISOPHORONE	UG/KG	410	U	U	380	U	U	390	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	410	U	U	380	U	U	390	U	U
N-NITROSODIPHENYLAMINE	UG/KG	410	U	U	380	U	U	390	U	U

2BG:SEMIVOLATILES	Units	1220 2BGSO08 01-OCT-96 0 - .5 Result	Lab Qlfr	Val Qlfr	1230 2BGSO08 02-OCT-96 2 - 3 Result	Lab Qlfr	Val Qlfr	1240 2BGSO08 02-OCT-96 6 - 7 Result	Lab Qlfr	Val Qlfr
ANTHRACENE	UG/KG	55	J	J	400	U	U	400	U	U
BENZO(a)ANTHRACENE	UG/KG	63	J	J	400	U	U	400	U	U
BENZO(a)PYRENE	UG/KG	130	J	J	400	U	U	400	U	U
BENZO(b)FLUORANTHENE	UG/KG	820		J	400	U	U	400	U	U
BENZO(ghi)PERYLENE	UG/KG	200	J	J	400	U	U	400	U	U
BENZO(k)FLUORANTHENE	UG/KG	430		J	400	U	U	400	U	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	400	U	U	400	U	U	400	U	U
BIS(2-CHLOROETHYL)ETHER	UG/KG	400	U	U	400	U	U	400	U	U
BIS(2-CHLOROISOPROPYL)ETHER	UG/KG	400	U	U	400	U	U	400	U	U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	400	U	U	400	U	U	400	U	U
BUTYL BENZYL PHTHALATE	UG/KG	400	U	U	400	U	U	400	U	U
CARBAZOLE	UG/KG	400	U	U	400	U	U	400	U	U
CHRYSENE	UG/KG	120	J	J	400	U	U	400	U	U
DI-n-BUTYL PHTHALATE	UG/KG	400	U	U	400	U	U	400	U	U
DI-n-OCTYL PHTHALATE	UG/KG	400	U	UJ	400	U	U	400	U	U
DIBENZ(a,h)ANTHRACENE	UG/KG	400	U	UJ	400	U	U	400	U	U
DIBENZOFURAN	UG/KG	400	U	U	400	U	U	400	U	U
DIETHYL PHTHALATE	UG/KG	400	U	U	400	U	U	400	U	U
DIMETHYL PHTHALATE	UG/KG	400	U	U	400	U	U	400	U	U
FLUORANTHENE	UG/KG	160	J	J	400	U	U	400	U	U
FLUORENE	UG/KG	400	U	U	400	U	U	400	U	U
HEXACHLOROBENZENE	UG/KG	400	U	U	400	U	U	400	U	U
HEXACHLOROBUTADIENE	UG/KG	400	U	U	400	U	U	400	U	U
HEXACHLOROCYCLOPENTADIENE	UG/KG	2000	U	U	1900	U	U	2000	U	U
HEXACHLOROETHANE	UG/KG	400	U	U	400	U	U	400	U	U
INDENO(1,2,3-cd)PYRENE	UG/KG	400	U	UJ	400	U	U	400	U	U
ISOPHORONE	UG/KG	400	U	U	400	U	U	400	U	U
N-NITROSO-DI-n-PROPYLAMINE	UG/KG	400	U	U	400	U	U	400	U	U
N-NITROSODIPHENYLAMINE	UG/KG	400	U	U	400	U	U	400	U	U

Reservoir Number 2 Burning Ground

Data Summary - Soils

Report Date: 02/14/97

Sample No:		1010			1020			1030		
Sample Location:		2BGSO01			2BGSO01			2BGSO01		
Sample Date:		01-OCT-96			01-OCT-96			01-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	410	U	U	390	U	U	410	U	U
NITROBENZENE	UG/KG	410	U	U	390	U	U	410	U	U
PENTACHLOROPHENOL	UG/KG	2000	U	U	1900	U	U	2000	U	U
PHENANTHRENE	UG/KG	410	U	U	390	U	U	410	U	U
PHENOL	UG/KG	410	U	U	390	U	U	410	U	U
PYRENE	UG/KG	44	J	J	390	U	U	410	U	U

PLUMBROOK

Reservoir Number 2 Burning Ground

Data Summary - Soils

Report Date: 02/14/97

Sample No:		1040			1050			1060		
Sample Location:		2BGSO02			2BGSO02			2BGSO02		
Sample Date:		01-OCT-96			01-OCT-96			01-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	400	U	U	400	U	U	410	U	U
NITROBENZENE	UG/KG	400	U	U	400	U	U	410	U	U
PENTACHLOROPHENOL	UG/KG	2000	U	U	2000	U	U	2000	U	U
PHENANTHRENE	UG/KG	400	U	U	400	U	U	410	U	U
PHENOL	UG/KG	400	U	U	400	U	U	410	U	U
PYRENE	UG/KG	400	U	U	400	U	U	410	U	U

Report Date: 02/14/97

Sample No:		1070			1080			1090		
Sample Location:		2BGSO03			2BGSO03			2BGSO03		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	420	U	U	400	U	U	420	U	U
NITROBENZENE	UG/KG	420	U	U	400	U	U	420	U	U
PENTACHLOROPHENOL	UG/KG	2000	U	U	1900	U	U	2000	U	U
PHENANTHRENE	UG/KG	420	U	U	400	U	U	420	U	U
PHENOL	UG/KG	420	U	U	400	U	U	420	U	U
PYRENE	UG/KG	77	J	J	400	U	U	420	U	U

PLUMBROOK

Reservoir Number 2 Burning Ground

Data Summary - Soils

Report Date: 02/14/97

Sample No:		1100			1110			1120		
Sample Location:		2BGSO04			2BGSO04			2BGSO04		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	420	U	U	390	U	U	420	U	U
NITROBENZENE	UG/KG	420	U	U	390	U	U	420	U	U
PENTACHLOROPHENOL	UG/KG	2100	U	U	1900	U	U	2000	U	U
PHENANTHRENE	UG/KG	420	U	U	390	U	U	420	U	U
PHENOL	UG/KG	420	U	U	390	U	U	420	U	U
PYRENE	UG/KG	420	U	U	390	U	U	420	U	U

Report Date: 02/14/97

Sample No:		1130			1140			1150		
Sample Location:		2BGSO05			2BGSO05			2BGSO05		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	430	U	U	410	U	U	410	U	U
NITROBENZENE	UG/KG	430	U	U	410	U	U	410	U	U
PENTACHLOROPHENOL	UG/KG	2100	U	U	2000	U	U	2000	U	U
PHENANTHRENE	UG/KG	430	U	U	410	U	U	410	U	U
PHENOL	UG/KG	430	U	U	410	U	U	410	U	U
PYRENE	UG/KG	430	U	U	410	U	U	410	U	U

PLUMBROOK

Reservoir Number 2 Burning Ground

Data Summary - Soils

Report Date: 02/14/97

Sample No:		1160			1170			1180		
Sample Location:		2BGSO06			2BGSO06			2BGSO06		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	400	U	U	390	U	U	400	U	U
NITROBENZENE	UG/KG	400	U	U	390	U	U	400	U	U
PENTACHLOROPHENOL	UG/KG	1900	U	U	1900	U	U	1900	U	U
PHENANTHRENE	UG/KG	400	U	U	390	U	U	400	U	U
PHENOL	UG/KG	400	U	U	390	U	U	400	U	U
PYRENE	UG/KG	400	U	U	390	U	U	400	U	U

Reservoir Number 2 Burning Ground

Data Summary - Soils

Report Date: 02/14/97

Sample No:		1190			1200			1210		
Sample Location:		2BGSO07			2BGSO07			2BGSO07		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	410	U	U	380	U	U	390	U	U
NITROBENZENE	UG/KG	410	U	U	380	U	U	390	U	U
PENTACHLOROPHENOL	UG/KG	2000	U	U	1800	U	U	1900	U	U
PHENANTHRENE	UG/KG	55	J	J	380	U	U	390	U	U
PHENOL	UG/KG	410	U	U	380	U	U	390	U	U
PYRENE	UG/KG	95	J	J	380	U	U	390	U	U

Report Date: 02/14/97

Sample No:		1220			1230			1240		
Sample Location:		2BGSO08			2BGSO08			2BGSO08		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:SEMIVOLATILES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
NAPHTHALENE	UG/KG	400	U	U	400	U	U	400	U	U
NITROBENZENE	UG/KG	400	U	U	400	U	U	400	U	U
PENTACHLOROPHENOL	UG/KG	2000	U	U	1900	U	U	2000	U	U
PHENANTHRENE	UG/KG	400	U	U	400	U	U	400	U	U
PHENOL	UG/KG	400	U	U	400	U	U	400	U	U
PYRENE	UG/KG	120	J	J	400	U	U	400	U	U

Report Date: 02/14/97

Sample No:		1010			1020			1030		
Sample Location:		2BGSO01			2BGSO01			2BGSO01		
Sample Date:		01-OCT-96			01-OCT-96			01-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	43	U	U	2.0	U	U	2.1	U	U
4,4'-DDE	UG/KG	43	U	U	2.0	U	U	2.1	U	U
4,4'-DDT	UG/KG	43	U	U	2.0	U	U	2.1	U	U
ALDRIN	UG/KG	43	U	U	2.0	U	U	2.1	U	U
AROCLOR 1016	UG/KG	830	U	U	44	GU	U	41	U	U
AROCLOR 1221	UG/KG	830	U	U	39	U	U	41	U	U
AROCLOR 1232	UG/KG	1300	GU	U	110	GU	U	41	U	U
AROCLOR 1242	UG/KG	830	U	U	49	GU	U	41	U	U
AROCLOR 1248	UG/KG	830	U	U	49	GU	U	41	U	U
AROCLOR 1254	UG/KG	3900	GU	U	40	GU	U	41	U	U
AROCLOR 1260	UG/KG	3300			39	U	U	41	U	U
DIELDRIN	UG/KG	43	U	U	2.0	U	U	2.1	U	U
ENDOSULFAN I	UG/KG	43	U	U	2.0	U	U	2.1	U	U
ENDOSULFAN II	UG/KG	81	GU	U	2.0	U	U	2.1	U	U
ENDOSULFAN SULFATE	UG/KG	43	U	U	2.0	U	U	2.1	U	U
ENDRIN	UG/KG	43	U	U	2.0	U	U	2.1	U	U
ENDRIN ALDEHYDE	UG/KG	43	U	U	2.0	U	U	2.1	U	U
ENDRIN KETONE	UG/KG	43	U	U	2.0	U	U	2.1	U	UJ
HEPTACHLOR	UG/KG	43	U	U	2.0	U	U	2.1	U	U
HEPTACHLOR EPOXIDE	UG/KG	43	U	U	2.0	U	U	2.1	U	U
METHOXYCHLOR	UG/KG	83	U	U	3.9	U	U	4.1	U	U
TOXAPHENE	UG/KG	1700	U	U	79	U	U	83	U	U
alpha-BHC	UG/KG	43	U	U	2.0	U	U	2.1	U	U
alpha-CHLORDANE	UG/KG	43	U	U	2.0	U	U	2.1	U	U
beta-BHC	UG/KG	43	U	U	2.0	U	U	2.1	U	U
delta-BHC	UG/KG	43	U	U	2.0	U	U	2.1	U	U
gamma-BHC (LINDANE)	UG/KG	43	U	U	2.0	U	U	2.1	U	U
gamma-CHLORDANE	UG/KG	43	U	U	2.0	U	U	2.1	U	U

Report Date: 02/14/97

Sample No:		1040			1050			1060		
Sample Location:		2BGSO02			2BGSO02			2BGSO02		
Sample Date:		01-OCT-96			01-OCT-96			01-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	21	U	U	2.1	U	U	2.1	U	U
4,4'-DDE	UG/KG	21	U	U	2.1	U	U	2.1	U	U
4,4'-DDT	UG/KG	21	U	U	2.1	U	U	2.1	U	U
ALDRIN	UG/KG	21	U	U	2.1	U	U	2.1	U	U
AROCLOR 1016	UG/KG	400	U	U	40	U	U	41	U	U
AROCLOR 1221	UG/KG	400	U	U	40	U	U	41	U	U
AROCLOR 1232	UG/KG	590	GU	U	40	U	U	41	U	U
AROCLOR 1242	UG/KG	400	U	U	40	U	U	41	U	U
AROCLOR 1248	UG/KG	400	U	U	40	U	U	41	U	U
AROCLOR 1254	UG/KG	2000	GU	U	40	U	U	65	GU	U
AROCLOR 1260	UG/KG	1700			40	U	U	60		
DIELDRIN	UG/KG	21	U	U	2.1	U	U	2.1	U	U
ENDOSULFAN I	UG/KG	21	U	U	2.1	U	U	2.1	U	U
ENDOSULFAN II	UG/KG	41	GU	U	2.1	U	U	2.1	U	U
ENDOSULFAN SULFATE	UG/KG	21	U	U	2.1	U	U	2.1	U	U
ENDRIN	UG/KG	21	GU	U	2.1	U	U	2.1	U	U
ENDRIN ALDEHYDE	UG/KG	21	U	U	2.1	U	U	2.1	U	U
ENDRIN KETONE	UG/KG	21	U	U	2.1	U	UJ	2.1	U	U
HEPTACHLOR	UG/KG	21	U	U	2.1	U	U	2.1	U	U
HEPTACHLOR EPOXIDE	UG/KG	21	U	U	2.1	U	U	2.1	U	U
METHOXYCHLOR	UG/KG	40	U	U	4.0	U	U	4.1	U	U
TOXAPHENE	UG/KG	820	U	U	82	U	U	83	U	U
alpha-BHC	UG/KG	21	U	U	2.1	U	U	2.1	U	U
alpha-CHLORDANE	UG/KG	21	U	U	2.1	U	U	2.1	U	U
beta-BHC	UG/KG	21	U	U	2.1	U	U	2.1	U	U
delta-BHC	UG/KG	21	U	U	2.1	U	U	2.1	U	U
gamma-BHC (LINDANE)	UG/KG	21	U	U	2.1	U	U	2.1	U	U
gamma-CHLORDANE	UG/KG	21	U	U	2.1	U	U	2.1	U	U

Report Date: 02/14/97

Sample No:		1070			1080			1090		
Sample Location:		2BGSO03			2BGSO03			2BGSO03		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	110	U	U	20	U	U	2.1	U	UJ
4,4'-DDE	UG/KG	110	U	U	20	U	U	2.1	U	UJ
4,4'-DDT	UG/KG	110	U	U	20	U	U	2.1	U	UJ
ALDRIN	UG/KG	110	U	U	20	U	U	2.1	U	UJ
AROCLOR 1016	UG/KG	2100	U	U	400	U	U	42	U	U
AROCLOR 1221	UG/KG	2100	U	U	400	U	U	42	U	U
AROCLOR 1232	UG/KG	4100	GU	U	400	U	U	42	U	U
AROCLOR 1242	UG/KG	2100	U	U	400	U	U	42	U	U
AROCLOR 1248	UG/KG	2100	U	U	400	U	U	42	U	U
AROCLOR 1254	UG/KG	8600	GU	U	1600	GU	U	87	GU	U
AROCLOR 1260	UG/KG	6800			1800			53		
DIELDRIN	UG/KG	110	U	U	20	U	U	2.1	U	UJ
ENDOSULFAN I	UG/KG	110	U	U	20	U	U	2.1	U	UJ
ENDOSULFAN II	UG/KG	210	GU	U	29	GU	U	2.1	U	UJ
ENDOSULFAN SULFATE	UG/KG	110	U	U	20	U	U	2.8	GU	UJ
ENDRIN	UG/KG	130	GU	U	20	U	U	2.1	U	UJ
ENDRIN ALDEHYDE	UG/KG	110	U	U	20	U	U	2.1	U	UJ
ENDRIN KETONE	UG/KG	110	U	U	20	U	U	2.1	U	UJ
HEPTACHLOR	UG/KG	110	U	U	20	U	U	2.1	U	UJ
HEPTACHLOR EPOXIDE	UG/KG	110	U	U	20	U	U	2.1	U	UJ
METHOXYCHLOR	UG/KG	210	U	U	40	U	U	4.2	U	UJ
TOXAPHENE	UG/KG	4300	U	U	810	U	U	85	U	U
alpha-BHC	UG/KG	110	U	U	20	U	U	2.1	U	UJ
alpha-CHLORDANE	UG/KG	110	U	U	20	U	U	2.1	U	U
beta-BHC	UG/KG	110	U	U	20	U	U	2.1	U	UJ
delta-BHC	UG/KG	110	U	U	20	U	U	2.1	U	UJ
gamma-BHC (LINDANE)	UG/KG	110	U	U	20	U	U	2.1	U	UJ
gamma-CHLORDANE	UG/KG	110	U	U	20	U	U	2.1	U	U

Sample No:		1100			1110			1120		
Sample Location:		2BGSO04			2BGSO04			2BGSO04		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
4,4'-DDE	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
4,4'-DDT	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
ALDRIN	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
AROCLOR 1016	UG/KG	42	U	U	39	U	U	42	U	U
AROCLOR 1221	UG/KG	42	U	U	39	U	U	42	U	U
AROCLOR 1232	UG/KG	42	U	U	39	U	U	42	U	U
AROCLOR 1242	UG/KG	42	U	U	39	U	U	42	U	U
AROCLOR 1248	UG/KG	42	U	U	39	U	U	42	U	U
AROCLOR 1254	UG/KG	79	GU	U	39	U	U	42	U	U
AROCLOR 1260	UG/KG	80			39	U	U	42	U	U
DIELDRIN	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
ENDOSULFAN I	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
ENDOSULFAN II	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
ENDOSULFAN SULFATE	UG/KG	2.2	U	U	2.0	U	U	9.1	GU	U
ENDRIN	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
ENDRIN ALDEHYDE	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
ENDRIN KETONE	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
HEPTACHLOR	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
HEPTACHLOR EPOXIDE	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
METHOXYCHLOR	UG/KG	4.2	U	U	3.9	U	U	4.2	U	U
TOXAPHENE	UG/KG	86	U	U	78	U	U	85	U	U
alpha-BHC	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
alpha-CHLORDANE	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
beta-BHC	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
delta-BHC	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
gamma-BHC (LINDANE)	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U
gamma-CHLORDANE	UG/KG	2.2	U	U	2.0	U	U	2.2	U	U

Sample No:		1130			1140			1150		
Sample Location:		2BGSO05			2BGSO05			2BGSO05		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
4,4'-DDE	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
4,4'-DDT	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
ALDRIN	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
AROCLOR 1016	UG/KG	85	U	U	41	U	U	41	U	U
AROCLOR 1221	UG/KG	85	U	U	41	U	U	41	U	U
AROCLOR 1232	UG/KG	85	U	U	41	U	U	41	U	U
AROCLOR 1242	UG/KG	85	U	U	41	U	U	41	U	U
AROCLOR 1248	UG/KG	85	U	U	41	U	U	41	U	U
AROCLOR 1254	UG/KG	170	GU	U	41	U	U	41	U	U
AROCLOR 1260	UG/KG	170			41	U	U	41	U	U
DIELDRIN	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
ENDOSULFAN I	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
ENDOSULFAN II	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
ENDOSULFAN SULFATE	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
ENDRIN	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
ENDRIN ALDEHYDE	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
ENDRIN KETONE	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
HEPTACHLOR	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
HEPTACHLOR EPOXIDE	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
METHOXYCHLOR	UG/KG	8.5	U	U	4.1	U	U	4.1	U	U
TOXAPHENE	UG/KG	170	U	U	83	U	U	84	U	U
alpha-BHC	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
alpha-CHLORDANE	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
beta-BHC	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
delta-BHC	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
gamma-BHC (LINDANE)	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U
gamma-CHLORDANE	UG/KG	4.4	U	U	2.1	U	U	2.1	U	U

Sample No:		1160			1170			1180		
Sample Location:		2BGSO06			2BGSO06			2BGSO06		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
4,4'-DDE	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
4,4'-DDT	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
ALDRIN	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
AROCLOR 1016	UG/KG	40	U	U	39	U	U	40	U	U
AROCLOR 1221	UG/KG	40	U	U	39	U	U	40	U	U
AROCLOR 1232	UG/KG	40	U	U	39	U	U	40	U	U
AROCLOR 1242	UG/KG	40	U	U	39	U	U	40	U	U
AROCLOR 1248	UG/KG	40	U	U	39	U	U	40	U	U
AROCLOR 1254	UG/KG	40	U	U	39	U	U	40	U	U
AROCLOR 1260	UG/KG	40	U	U	39	U	U	40	U	U
DIELDRIN	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
ENDOSULFAN I	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
ENDOSULFAN II	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
ENDOSULFAN SULFATE	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
ENDRIN	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
ENDRIN ALDEHYDE	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
ENDRIN KETONE	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
HEPTACHLOR	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
HEPTACHLOR EPOXIDE	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
METHOXYCHLOR	UG/KG	4.0	U	U	3.9	U	U	4.0	U	U
TOXAPHENE	UG/KG	82	U	U	80	U	U	82	U	U
alpha-BHC	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
alpha-CHLORDANE	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
beta-BHC	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
delta-BHC	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
gamma-BHC (LINDANE)	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U
gamma-CHLORDANE	UG/KG	2.1	U	U	2.0	U	U	2.1	U	U

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Sample No:		1190			1200			1210		
Sample Location:		2BGSO07			2BGSO07			2BGSO07		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	21	U	U	1.9	U	U	2.0	U	U
4,4'-DDE	UG/KG	21	U	U	1.9	U	U	2.0	U	U
4,4'-DDT	UG/KG	67	GU	U	1.9	U	U	2.0	U	U
ALDRIN	UG/KG	21	U	U	1.9	U	U	2.0	U	U
AROCLOR 1016	UG/KG	410	U	U	38	U	U	39	U	U
AROCLOR 1221	UG/KG	410	U	U	38	U	U	39	U	U
AROCLOR 1232	UG/KG	450	GU	U	38	U	U	39	U	U
AROCLOR 1242	UG/KG	410	U	U	38	U	U	39	U	U
AROCLOR 1248	UG/KG	410	U	U	38	U	U	39	U	U
AROCLOR 1254	UG/KG	2100	GU	U	38	U	U	39	U	U
AROCLOR 1260	UG/KG	1500			38	U	U	39	U	U
DIELDRIN	UG/KG	21	U	U	1.9	U	U	2.0	U	U
ENDOSULFAN I	UG/KG	45	GU	U	1.9	U	U	2.0	U	U
ENDOSULFAN II	UG/KG	52	GU	U	1.9	U	U	2.0	U	U
ENDOSULFAN SULFATE	UG/KG	21	U	U	7.5	GU	U	2.0	U	U
ENDRIN	UG/KG	21	U	U	1.9	U	U	2.0	U	U
ENDRIN ALDEHYDE	UG/KG	21	U	U	1.9	U	U	2.0	U	U
ENDRIN KETONE	UG/KG	21	U	U	1.9	U	U	2.0	U	U
HEPTACHLOR	UG/KG	21	U	U	1.9	U	U	2.0	U	U
HEPTACHLOR EPOXIDE	UG/KG	21	U	U	1.9	U	U	2.0	U	U
METHOXYCHLOR	UG/KG	41	U	U	3.8	U	U	3.9	U	U
TOXAPHENE	UG/KG	830	U	U	76	U	U	79	U	U
alpha-BHC	UG/KG	21	U	U	1.9	U	U	2.0	U	U
alpha-CHLORDANE	UG/KG	54	GU	U	1.9	U	U	2.0	U	U
beta-BHC	UG/KG	21	U	U	1.9	U	U	2.0	U	U
delta-BHC	UG/KG	21	U	U	1.9	U	U	2.0	U	U
gamma-BHC (LINDANE)	UG/KG	21	U	U	1.9	U	U	2.0	U	U
gamma-CHLORDANE	UG/KG	21	U	U	1.9	U	U	2.0	U	U

Sample No:		1220			1230			1240		
Sample Location:		2BGSO08			2BGSO08			2BGSO08		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:PEST/PCB	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
4,4'-DDD	UG/KG	21	U	U	2.1	U	U	2.1	U	U
4,4'-DDE	UG/KG	21	U	U	2.1	U	U	2.1	U	U
4,4'-DDT	UG/KG	21	U	U	2.1	U	U	2.1	U	U
ALDRIN	UG/KG	21	U	U	2.1	U	U	2.1	U	U
AROCLOR 1016	UG/KG	870	GU	U	40	U	U	40	U	U
AROCLOR 1221	UG/KG	400	U	U	40	U	U	40	U	U
AROCLOR 1232	UG/KG	1600	GU	U	40	U	U	40	U	U
AROCLOR 1242	UG/KG	700	GU	U	40	U	U	40	U	U
AROCLOR 1248	UG/KG	780	GU	U	40	U	U	40	U	U
AROCLOR 1254	UG/KG	1900	GU	U	40	U	U	40	U	U
AROCLOR 1260	UG/KG	1400			40	U	U	40	U	U
DIELDRIN	UG/KG	21	U	U	2.1	U	U	2.1	U	U
ENDOSULFAN I	UG/KG	21	U	U	2.1	U	U	2.1	U	U
ENDOSULFAN II	UG/KG	48	GU	U	2.1	U	U	2.1	U	U
ENDOSULFAN SULFATE	UG/KG	21	U	U	2.1	U	U	2.1	U	U
ENDRIN	UG/KG	21	U	U	2.1	U	U	2.1	U	U
ENDRIN ALDEHYDE	UG/KG	21	U	U	2.1	U	U	2.1	U	U
ENDRIN KETONE	UG/KG	21	U	U	2.1	U	U	2.1	U	U
HEPTACHLOR	UG/KG	21	U	U	2.1	U	U	2.1	U	U
HEPTACHLOR EPOXIDE	UG/KG	21	U	U	2.1	U	U	2.1	U	U
METHOXYCHLOR	UG/KG	40	U	U	4.0	U	U	4.0	U	U
TOXAPHENE	UG/KG	820	U	U	82	U	U	82	U	U
alpha-BHC	UG/KG	21	U	U	2.1	U	U	2.1	U	U
alpha-CHLORDANE	UG/KG	21	U	U	2.1	U	U	2.1	U	U
beta-BHC	UG/KG	21	U	U	2.1	U	U	2.1	U	U
delta-BHC	UG/KG	59	GU	U	2.1	U	U	2.1	U	U
gamma-BHC (LINDANE)	UG/KG	140	GU	U	2.1	U	U	2.1	U	U
gamma-CHLORDANE	UG/KG	21	U	U	2.1	U	U	2.1	U	U

Reservoir Number 2 Burning Ground

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Sample No:		1010			1020			1030		
Sample Location:		2BGSO01			2BGSO01			2BGSO01		
Sample Date:		01-OCT-96			01-OCT-96			01-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	6780			11200			11800		
ANTIMONY	MG/KG	7.5	U	U	7.1	U	U	7.4	U	U
ARSENIC	MG/KG	5.1			4.7			11.7		
BARIUM	MG/KG	73.4			75.0			86.9		
BERYLLIUM	MG/KG	0.63	U	U	0.59	U	U	0.65		
CADMIUM	MG/KG	0.63	U	U	0.59	U	U	0.62	U	U
CALCIUM	MG/KG	6490			3070			3900		
CHROMIUM	MG/KG	11.8			14.7			19.8		
COBALT	MG/KG	6.3	U	U	8.1			13.9		
COPPER	MG/KG	23.1			11.7			22.0		
IRON	MG/KG	15500			18400			27500		
LEAD	MG/KG	165			13.8			21.4		
MAGNESIUM	MG/KG	2300			2790			3420		
MANGANESE	MG/KG	224		J	157		J	417		J
MERCURY	MG/KG	0.078			0.039	U	U	0.041	U	U
NICKEL	MG/KG	16.4			17.1			29.1		
POTASSIUM	MG/KG	626	U	U	928			1740		
SELENIUM	MG/KG	0.68			0.59	U	U	0.62	U	U
SILVER	MG/KG	1.3	U	U	1.2	U	U	1.3		
SODIUM	MG/KG	626	U	U	592	U	U	620	U	U
THALLIUM	MG/KG	1.8			1.9			2.8		
VANADIUM	MG/KG	18.4			23.5			29.1		
ZINC	MG/KG	80.9			61.3			63.1		

Sample No:		1040			1050			1060		
Sample Location:		2BGSO02			2BGSO02			2BGSO02		
Sample Date:		01-OCT-96			01-OCT-96			01-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	9200			14900			16100		
ANTIMONY	MG/KG	7.3	U	U	7.3	U	U	7.4	U	U
ARSENIC	MG/KG	9.5			9.7			13.3		
BARIUM	MG/KG	170			111			84.4		
BERYLLIUM	MG/KG	0.65			0.69			0.78		
CADMIUM	MG/KG	0.61	U	U	0.61	U	U	0.62	U	U
CALCIUM	MG/KG	16600			4100			3860		
CHROMIUM	MG/KG	20.1			18.5			22.6		
COBALT	MG/KG	9.2			13.5			14.2		
COPPER	MG/KG	60.0			18.2			31.1		
IRON	MG/KG	19900			26400			35900		
LEAD	MG/KG	1000			16.2			13.3		
MAGNESIUM	MG/KG	5900			3620			5690		
MANGANESE	MG/KG	191		J	1000		J	580		J
MERCURY	MG/KG	0.18			0.040	U	U	0.041	U	U
NICKEL	MG/KG	38.5			23.7			43.0		
POTASSIUM	MG/KG	1270			1570			2130		
SELENIUM	MG/KG	1.0			0.62			0.63		
SILVER	MG/KG	1.2			1.2	U	U	1.2	U	U
SODIUM	MG/KG	610	U	U	611	U	U	618	U	U
THALLIUM	MG/KG	2.1			1.8			2.7		
VANADIUM	MG/KG	27.2			29.2			28.1		
ZINC	MG/KG	267			83.1			84.1		

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Sample No:		1070			1080			1090		
Sample Location:		2BGSO03			2BGSO03			2BGSO03		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	8620			10100			17000		
ANTIMONY	MG/KG	7.7	U	U	7.2	U	UJ	7.6	U	UJ
ARSENIC	MG/KG	5.3			18.3			17.6		
BARIUM	MG/KG	156			118			140		
BERYLLIUM	MG/KG	0.64	U	U	0.81			0.83		
CADMIUM	MG/KG	0.64	U	U	0.84			0.63	U	U
CALCIUM	MG/KG	7930			12200			5610		
CHROMIUM	MG/KG	18.2			19.2		J	24.8		J
COBALT	MG/KG	10.6			15.5			21.2		
COPPER	MG/KG	47.4			172			37.7		
IRON	MG/KG	18400			34100			37300		
LEAD	MG/KG	391			232			31.4		
MAGNESIUM	MG/KG	5160			4160			5040		
MANGANESE	MG/KG	295		J	213			1360		
MERCURY	MG/KG	0.17			0.12			0.042	U	U
NICKEL	MG/KG	33.8			49.5			45.7		
POTASSIUM	MG/KG	1540			2050		J	3010		J
SELENIUM	MG/KG	0.76			1.2			0.63	U	U
SILVER	MG/KG	1.3	U	U	1.2	U	U	1.3	U	U
SODIUM	MG/KG	639	U	U	601	U	U	632	U	U
THALLIUM	MG/KG	1.3			3.3			2.3		
VANADIUM	MG/KG	20.0			20.5		J	34.3		J
ZINC	MG/KG	141			270			93.5		

PLUMBROOK
Reservoir Number 2 Burning Ground
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Sample No:		1100			1110			1120		
Sample Location:		2BGSO04			2BGSO04			2BGSO04		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	10100			14900			13400		
ANTIMONY	MG/KG	7.7	U	U	7.0	U	UJ	7.6	U	UJ
ARSENIC	MG/KG	6.1			9.8			4.1		
BARIUM	MG/KG	70.3			116			91.0		
BERYLLIUM	MG/KG	0.64	U	U	0.88			0.69		
CADMIUM	MG/KG	0.64	U	U	0.58	U	U	0.64	U	U
CALCIUM	MG/KG	3260			4330			5480		
CHROMIUM	MG/KG	12.8			20.0		J	21.0		J
COBALT	MG/KG	6.4			16.2			10.8		
COPPER	MG/KG	17.6			34.8			24.5		
IRON	MG/KG	16700			28100			21800		
LEAD	MG/KG	39.6			21.4			14.2		
MAGNESIUM	MG/KG	2490			4110			5830		
MANGANESE	MG/KG	315		J	716			256		
MERCURY	MG/KG	0.047			0.039	U	U	0.042	U	U
NICKEL	MG/KG	15.8			34.5			32.3		
POTASSIUM	MG/KG	1160			1590		J	1860		J
SELENIUM	MG/KG	0.76			0.58	U	U	0.64	U	U
SILVER	MG/KG	1.3	U	U	1.2	U	U	1.3	U	U
SODIUM	MG/KG	641	U	U	585	U	U	637	U	U
THALLIUM	MG/KG	1.3	U	U	1.6			1.3	U	U
VANADIUM	MG/KG	22.1			32.9		J	23.7		J
ZINC	MG/KG	55.2			78.0			79.3		

Sample No:		1130			1140			1150		
Sample Location:		2BGSO05			2BGSO05			2BGSO05		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	10300			14000			11400		
ANTIMONY	MG/KG	7.8	U	U	7.5	U	UJ	7.5	U	UJ
ARSENIC	MG/KG	7.4			12.0			5.6		
BARIUM	MG/KG	80.9			138			55.5		
BERYLLIUM	MG/KG	0.65	U	U	0.74			0.63	U	U
CADMIUM	MG/KG	0.65	U	U	0.62	U	U	0.63	U	U
CALCIUM	MG/KG	22600			4210			59200		
CHROMIUM	MG/KG	15.3			20.2		J	17.6		J
COBALT	MG/KG	9.5			19.3			6.5		
COPPER	MG/KG	23.7			32.2			25.7		
IRON	MG/KG	20000			32100			21800		
LEAD	MG/KG	83.3			13.7			14.6		
MAGNESIUM	MG/KG	4880			5110			17700		
MANGANESE	MG/KG	467		J	1390			327		
MERCURY	MG/KG	0.067			0.041	U	U	0.041	U	U
NICKEL	MG/KG	18.0			48.3			24.2		
POTASSIUM	MG/KG	1350			1420		J	2350		J
SELENIUM	MG/KG	0.65	U	U	0.62	U	U	0.63	U	U
SILVER	MG/KG	1.3	U	U	1.2	U	U	1.3	U	U
SODIUM	MG/KG	646	U	U	621	U	U	626	U	U
THALLIUM	MG/KG	1.3	U	U	1.6			1.3	U	U
VANADIUM	MG/KG	23.4			28.7		J	27.3		J
ZINC	MG/KG	79.4			76.4			66.3		

PLUMBROOK
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Sample No:		1160			1170			1180		
Sample Location:		2BGSO06			2BGSO06			2BGSO06		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	10300			12100			9540		
ANTIMONY	MG/KG	7.3	U	U	7.2	U	UJ	7.3	U	UJ
ARSENIC	MG/KG	7.9			8.4			8.2		
BARIUM	MG/KG	67.6			70.9			63.9		
BERYLLIUM	MG/KG	0.61	U	U	0.60	U	U	0.61	U	U
CADMIUM	MG/KG	0.61	U	U	0.60	U	U	0.61	U	U
CALCIUM	MG/KG	4950			61200			56200		
CHROMIUM	MG/KG	14.8			17.6		J	14.8		J
COBALT	MG/KG	9.0			9.9			10.2		
COPPER	MG/KG	15.8			23.4			24.8		
IRON	MG/KG	17700			22100			22400		
LEAD	MG/KG	189			10.8			12.0		
MAGNESIUM	MG/KG	3700			20100			17500		
MANGANESE	MG/KG	300		J	499			492		
MERCURY	MG/KG	0.044			0.039	U	U	0.040	U	U
NICKEL	MG/KG	18.0			25.8			25.7		
POTASSIUM	MG/KG	1170			1770		J	1970		J
SELENIUM	MG/KG	0.61	U	U	0.60	U	U	0.61	U	U
SILVER	MG/KG	1.2	U	U	1.2	U	U	1.2	U	U
SODIUM	MG/KG	608	U	U	596	U	U	608	U	U
THALLIUM	MG/KG	1.2	U	U	1.2	U	U	1.2	U	U
VANADIUM	MG/KG	22.2			31.0		J	23.4		J
ZINC	MG/KG	57.3			59.5			61.0		

Sample No:		1190			1200			1210		
Sample Location:		2BGSO07			2BGSO07			2BGSO07		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	14900			12100			6100		
ANTIMONY	MG/KG	7.5	U	U	6.8	U	UJ	7.0	U	UJ
ARSENIC	MG/KG	9.6			11.9			9.0		
BARIUM	MG/KG	212			108			39.3		
BERYLLIUM	MG/KG	0.66			0.67			0.59	U	U
CADMIUM	MG/KG	0.65			0.57	U	U	0.59	U	U
CALCIUM	MG/KG	9570			3540			54000		
CHROMIUM	MG/KG	24.3			17.0		J	10.5		J
COBALT	MG/KG	16.4			19.4			7.0		
COPPER	MG/KG	104			30.6			19.4		
IRON	MG/KG	25100			27400			17600		
LEAD	MG/KG	351			19.5			11.8		
MAGNESIUM	MG/KG	4390			3900			19000		
MANGANESE	MG/KG	600		J	1140			421		
MERCURY	MG/KG	0.15			0.038	U	U	0.039	U	U
NICKEL	MG/KG	33.1			40.9			17.1		
POTASSIUM	MG/KG	1490			1400		J	1240		J
SELENIUM	MG/KG	0.99			0.57	U	U	0.59	U	U
SILVER	MG/KG	1.2	U	U	1.1	U	U	1.2	U	U
SODIUM	MG/KG	622	U	U	569	U	U	587	U	U
THALLIUM	MG/KG	1.2			1.4			1.2	U	U
VANADIUM	MG/KG	30.0			28.0		J	20.0		J
ZINC	MG/KG	445			70.2			52.9		

PLUMBROOK
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Sample No:		1220			1230			1240		
Sample Location:		2BGSO08			2BGSO08			2BGSO08		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:METALS	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
ALUMINUM	MG/KG	9700			12900			12000		
ANTIMONY	MG/KG	7.3	U	U	7.3	U	UJ	7.3	U	UJ
ARSENIC	MG/KG	9.0			9.9			5.3		
BARIUM	MG/KG	204			68.7			66.7		
BERYLLIUM	MG/KG	0.78			0.61	U	U	0.61	U	U
CADMIUM	MG/KG	0.78			0.61	U	U	0.61	U	U
CALCIUM	MG/KG	35800			3650			54600		
CHROMIUM	MG/KG	21.1			19.2		J	17.8		J
COBALT	MG/KG	12.4			9.1			8.1		
COPPER	MG/KG	124			26.3			25.6		
IRON	MG/KG	24500			27500			21300		
LEAD	MG/KG	603			13.3			21.2		
MAGNESIUM	MG/KG	6370			4240			16400		
MANGANESE	MG/KG	284		J	205			309		
MERCURY	MG/KG	0.14			0.040	U	U	0.058		
NICKEL	MG/KG	35.7			24.3			20.0		
POTASSIUM	MG/KG	2520			1740		J	2470		J
SELENIUM	MG/KG	0.95			0.61	U	U	0.61	U	U
SILVER	MG/KG	1.2	U	U	1.2	U	U	1.2	U	U
SODIUM	MG/KG	612	U	U	609	U	U	611	U	U
THALLIUM	MG/KG	1.3			1.3			1.2	U	U
VANADIUM	MG/KG	26.3			28.7		J	26.8		J
ZINC	MG/KG	349			67.7			66.1		

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Data Summary - Soils

Report Date: 02/14/97

Sample No:		1010			1020			1030		
Sample Location:		2BGSO01			2BGSO01			2BGSO01		
Sample Date:		01-OCT-96			01-OCT-96			01-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	5000	U	U	250	U	U	1200	U	U
1,3-DINITROBENZENE	UG/KG	5000	U	U	250	U	U	1200	U	U
2,4,6-TRINITROTOLUENE	UG/KG	48000			3600			9600		
2,4-DINITROTOLUENE	UG/KG	5000	U	U	4500			6900		
2,6-DINITROTOLUENE	UG/KG	36000	GU	U	250	U	U	1200	U	U
2-NITROTOLUENE	UG/KG	5000	U	U	250	U	U	1200	U	U
3-NITROTOLUENE	UG/KG	5000	U	U	250	U	U	1200	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	12000	GU	U	3900	GU	U	1800	GU	U
HMX	UG/KG	10000	U	U	500	U	U	2500	U	U
NITROBENZENE	UG/KG	5000	U	U	250	U	U	1200	U	U
RDX	UG/KG	10000	U	U	500	U	U	2500	U	U
TETRYL	UG/KG	13000	U	U	650	U	U	3200	U	U

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Report Date: 02/14/97

Sample No:		1040			1050			1060		
Sample Location:		2BGSO02			2BGSO02			2BGSO02		
Sample Date:		01-OCT-96			01-OCT-96			01-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	12000	U	U	250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	12000	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	140000			250	U	U	800		
2,4-DINITROTOLUENE	UG/KG	35000			250	U	U	250	U	U
2,6-DINITROTOLUENE	UG/KG	12000	U	U	250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	12000	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	12000	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	86000	GU	U	250	U	U	330	GU	U
HMX	UG/KG	25000	U	U	500	U	U	500	U	U
NITROBENZENE	UG/KG	12000	U	U	250	U	U	250	U	U
RDX	UG/KG	25000	U	U	500	U	U	500	U	U
TETRYL	UG/KG	32000	U	U	650	U	U	650	U	U

Sample No:		1070			1080			1090		
Sample Location:		2BGSO03			2BGSO03			2BGSO03		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	50000	U	U	12000	U	U	2500	U	U
1,3-DINITROBENZENE	UG/KG	50000	U	U	12000	U	U	2500	U	U
2,4,6-TRINITROTOLUENE	UG/KG	910000			94000			10000		
2,4-DINITROTOLUENE	UG/KG	50000	U	U	160000			11000		
2,6-DINITROTOLUENE	UG/KG	50000	U	U	12000	U	U	2500	U	U
2-NITROTOLUENE	UG/KG	50000	U	U	12000	U	U	2500	U	U
3-NITROTOLUENE	UG/KG	50000	U	U	12000	U	U	2500	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	250000	GU	U	58000	GU	U	2500	U	U
HMX	UG/KG	100000	U	U	25000	U	U	5000	U	U
NITROBENZENE	UG/KG	50000	U	U	12000	U	U	2500	U	U
RDX	UG/KG	100000	U	U	25000	U	U	5000	U	U
TETRYL	UG/KG	130000	U	U	32000	U	U	6500	U	U

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Report Date: 02/14/97

Sample No:		1100			1110			1120		
Sample Location:		2BGSO04			2BGSO04			2BGSO04		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	250	U	U	250	U	U	340		
2,4-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	250	U	U	610	GU	U	1500		
HMX	UG/KG	500	U	U	500	U	U	500	U	U
NITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
RDX	UG/KG	500	U	U	500	U	U	500	U	U
TETRYL	UG/KG	650	U	U	650	U	U	650	U	U

Sample No:		1130			1140			1150		
Sample Location:		2BGSO05			2BGSO05			2BGSO05		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	500			250	U	U	250	U	U
2,4-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	310	GU	U	250	U	U	250	U	U
HMX	UG/KG	500	U	U	500	U	U	500	U	U
NITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
RDX	UG/KG	500	U	U	500	U	U	500	U	U
TETRYL	UG/KG	650	U	U	650	U	U	650	U	U

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Sample No:		1160			1170			1180		
Sample Location:		2BGSO06			2BGSO06			2BGSO06		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,4-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	250	U	U	250	U	U	250	U	U
HMX	UG/KG	500	U	U	500	U	U	500	U	U
NITROBENZENE	UG/KG	250	U	U	250	U	U	250	U	U
RDX	UG/KG	500	U	U	500	U	U	500	U	U
TETRYL	UG/KG	650	U	U	650	U	U	650	U	U

Reservoir Number 2 Burning Ground

Data Summary - Soils

Report Date: 02/14/97

Sample No:		1190			1200			1210		
Sample Location:		2BGSO07			2BGSO07			2BGSO07		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	5000	U	U	250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	5000	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	31000			250	U	U	250	U	U
2,4-DINITROTOLUENE	UG/KG	21000			250	U	U	250	U	U
2,6-DINITROTOLUENE	UG/KG	10000			250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	5000	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	5000	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	22000	GU	U	250	U	U	250	U	U
HMX	UG/KG	10000	U	U	500	U	U	500	U	U
NITROBENZENE	UG/KG	5000	U	U	250	U	U	250	U	U
RDX	UG/KG	10000	U	U	500	U	U	500	U	U
TETRYL	UG/KG	13000	U	U	650	U	U	650	U	U

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Data Summary - Soils

Report Date: 02/14/97

Sample No:		1220			1230			1240		
Sample Location:		2BGSO08			2BGSO08			2BGSO08		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:EXPLOSIVES	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
1,3,5-TRINITROBENZENE	UG/KG	15000			250	U	U	250	U	U
1,3-DINITROBENZENE	UG/KG	12000	U	U	250	U	U	250	U	U
2,4,6-TRINITROTOLUENE	UG/KG	210000			250	U	U	250	U	U
2,4-DINITROTOLUENE	UG/KG	40000			250	U	U	250	U	U
2,6-DINITROTOLUENE	UG/KG	12000	U	U	250	U	U	250	U	U
2-NITROTOLUENE	UG/KG	12000	U	U	250	U	U	250	U	U
3-NITROTOLUENE	UG/KG	12000	U	U	250	U	U	250	U	U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	110000	GU	U	250	U	U	250	U	U
HMX	UG/KG	25000	U	U	500	U	U	500	U	U
NITROBENZENE	UG/KG	12000	U	U	250	U	U	250	U	U
RDX	UG/KG	25000	U	U	500	U	U	500	U	U
TETRYL	UG/KG	32000	U	U	650	U	U	650	U	U

Reservoir Number 2 Burning Ground

Data Summary - Soils

Report Date: 02/14/97

Sample No:		1010			1020			1030		
Sample Location:		2BGSO01			2BGSO01			2BGSO01		
Sample Date:		01-OCT-96			01-OCT-96			01-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.63	U	U	0.59	U	U	0.62	U	U

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Data Summary - Soils

Report Date: 02/14/97

Sample No:		1040			1050			1060		
Sample Location:		2BGSO02			2BGSO02			2BGSO02		
Sample Date:		01-OCT-96			01-OCT-96			01-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.61	U	U	0.61	U	U	0.62	U	U

Report Date: 02/14/97

Sample No:		1070			1080			1090		
Sample Location:		2BGSO03			2BGSO03			2BGSO03		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.64	U	U	0.60	U	U	0.63	U	U

PLUMBROOK

Reservoir Number 2 Burning Ground

Data Summary - Soils

Report Date: 02/14/97

Sample No:		1100			1110			1120		
Sample Location:		2BGSO04			2BGSO04			2BGSO04		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.64	U	U	0.58	U	U	0.64	U	U

Reservoir Number 2 Burning Ground

Data Summary - Soils

Report Date: 02/14/97

Sample No:		1130			1140			1150		
Sample Location:		2BGSO05			2BGSO05			2BGSO05		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.65	U	U	0.62	U	U	0.63	U	U

PLUMBROOK

Reservoir Number 2 Burning Ground

Data Summary - Soils

Report Date: 02/14/97

Sample No:		1160			1170			1180		
Sample Location:		2BGSO06			2BGSO06			2BGSO06		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.61	U	U	0.60	U	U	0.61	U	U

Report Date: 02/14/97

Sample No:		1190			1200			1210		
Sample Location:		2BGSO07			2BGSO07			2BGSO07		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	0.62	U	U	0.57	U	U	0.59	U	U

PLUMBROOK

Reservoir Number 2 Burning Ground

Data Summary - Soils

Report Date: 02/14/97

Sample No:		1220			1230			1240		
Sample Location:		2BGSO08			2BGSO08			2BGSO08		
Sample Date:		01-OCT-96			02-OCT-96			02-OCT-96		
Depth		0 - .5			2 - 3			6 - 7		
2BG:CYANIDE	Units	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr	Result	Lab Qlfr	Val Qlfr
CYANIDE, TOTAL	MG/KG	1.0			0.61	U	U	0.61	U	U

APPENDIX H

RESPONSES TO TECHNICAL REVIEW COMMENTS

RESPONSE TO COMMENTS
DRAFT SITE INVESTIGATIONS ON THE RESERVOIR
NO. 2 BURNING GROUND, WASTEWATER DISPOSAL PLANT NO. 2,
AND POWER HOUSE NO. 2 ASH PIT,
PLUM BROOK ORDNANCE WORKS
SANDUSKY, OHIO

Comments of Doug Mullendore

Comment 1: **General Comment. For consistency please change the title from "...Additional Burn Ground..." to Additional Burning Ground.**

Response: The term has been changed.

Comment 2: **Pages 1-1 and 1-2, Section 1.1, All Bulleted Items. The report does not determine whether existing contamination poses a threat to the environment. All data points are screened based on human health criteria only. Please correct this report based on the requirements of the SOW.**

Response: As discussed in a telecon on July 11, 1997, the document has been revised to indicate that RBCs were used to evaluate human health risks only.

Comment 3: **Page 1-2, Section 1.1, 1st Bulleted Item. Add the phrase "determine if this contamination poses a threat to human health."**

Response: The statement has been changed.

Comment 4: **Page 1-2, Section 1.1, All Bulleted Items. Should we state that the determination of potential threat to human health is based on comparison of analytical results to USEPA Region III screening values? Does USEPA Region V and Ohio Environmental Protection Agency (OEPA) recognize this methodology?**

Response: The Region III RBCs were previously used in the G-8 Burning Grounds report, which has been accepted. Therefore, it is believed that the use of these criteria are acceptable to OEPA. Please also refer to comment 2.

Comment 5: **Page 2-4, Section 2.3.2, 5th Sentence. Did the geophysical survey show any evidence of USTs? Also Sheet No. 5 of Plan No. R-91 shows an existing house, barn, and garage which were acquired by the government and a motor pool area which was constructed by the government located approximately 2000 feet from the intersection of Fox road and the unnamed road that connects the Center Magazine Road to Fox Road (reference Figure 1-2 of this report). This is**

approximately the western boundary of the geophysical survey. Please corroborate this information and include in the report if accurate.

Response: The geophysical survey did not reveal evidence of any USTs. IT does not possess the referenced drawing/plan; the data discussed can be included in the report if a copy of said plan can be provided.

Comment 6: **Page 2-6, Section entitled "Subsurface Soil Sampling," 4th Sentence. Should "ash pit" be "ash layer?"**

Response: The text has been changed.

Comment 7: **Figure 2-2. Show the approximate location of the four fuel pump bases and the large concrete slab on this figure.**

Response: A reference has been added to Figure A-6 (Appendix A) in the text of Section 2.3.2 which shows the location of site features identified during the geophysical survey.

Comment 8: **Figure 2-3. The rationale of why sample WP2SO-9 was collected outside of the sampling grid needs to be included.**

Response: The location of sample WP2SO-9 was off the grid because there were several big trees around the original spot.

Comment 9: **Show the sampling grid on the figure.**

Response: The grid is shown on Figure 2-4 (formerly Figure 2-3).

Comment 10: **Table 3-1, Second row, Second Column. "EAP" should be "EPA."**

Response: The table has been changed.

Comment 11: **Table 4-5. Should the empty "cells" of this table be shaded?**

Response: The empty cells indicate parameters that were analyzed for but not detected. Clarification has been added to all tables.

Comment 11: **General Comment. Perhaps we should add "Ash Pit" to any reference to PH2, since the investigation was limited to the ash pit only.**

Response: The statement has been added to PH2 references.

Comment 12: **Page 6-5, Section 6.2.1, 2nd Paragraph, Last Sentence. Delete the word "frequently" from this sentence.**

Response: The term has been deleted.

Comment 13: **All Summary Metal Tables. What do the empty "cells" mean (e.g., Arsenic result is blank for ABGS0-12-2240).**

Response: See comment 11.

Comment 14: **Tables 4-3, 4-6, and 4-12. Should antimony be included on these tables?**

Response: Only those constituents which were detected in at least one sample collected at a given site are included in the tables. A complete list of analytical results, including nondetects and detection limits, are presented in Appendix F.

Comment 15: **Figure 4-3. Is it possible to show the structures that existed on this site during operation of PBOW. This would help put the sampling locations in "context."**

Response: Structures existing during the operation of PBOW can be added. However, IT does not currently have access to the historical documents presenting this information.

Comments of Jim Beaujon

Comment 1: **PG ES-1: After "(DERP)" add "Formerly Used Defense Sites (FUDS).**

Response: The text has been changed.

Comment 2: **Pg 1-1, seventh line: Change "geographical" to "geographic."**

Response: The text has been changed.

Comment 3: **Pg 2-2, Section 2.2: A figure of the trench locations alone would be helpful. Figure 2-1 without the boring locations would be good.**

Response: A figure (Figure 2-1) has been added showing trench locations only. Former Figure 2-1(now Figure 2-2) has been revised to show soil borings only.

Comment 4: **Pg 2-2, Section 2-3, second line: Change "area as follows" to "area was as follows."**

Response: The text has been corrected to "is as follows."

Comment 5: **Table 2-1, TR-4 soil description: Correct the mistake in "mant metal objects."**

Response: The table has been corrected.

Comment 6: **Pg 2-5, Section 2.3.4, first line: Change "area appears" to "area that appears" or "area which appears."**

Response: The text has been revised.

Comment 7: **Figure 2-3: Can any of the roads in this figure be identified by name?**

Response: These secondary roads do not have names.

Comment 8: **Pg 4-1, third line: Change "for all" to "for in all."**

Response: The text has been changed.

Comment 9: **Table 4-1, footnotes: Here and elsewhere, change "Concentration equals to or exceeds RBC" to "Concentration equals or exceeds RBC."**

Response: The tables have been changed.

Comment 10: **Pg 4-2, Section 4.1.4: Change "of the cyanide" to "of cyanide."**

Response: The text has been changed.

Comment 11: **Table 4-5: The shading doesn't show up in the report copy.**

Response: The table has been revised to more clearly identify shaded cells.

Comment 12: **Tables 4-5 and 4-8: These tables give the units as "ppm" whereas the data tables use "mg/kg." Please be consistent.**

Response: The units have been changed to mg/kg.

Comment 13: **Pg 5-1, Section 5.2, second paragraph, second line: Change "can assumed" to "can be assumed."**

Response: The text has been changed.

Comment 14: **Pg 6-6, Section 6.2.4, first line: change "with thick" to "with a thick."**

Response: The text has been corrected.

Comment 15: **Appendix A, pg 3-6, Additional Burn Ground, first paragraph, third line: Change "presented in as" to "presented as."**

Response: The text has been revised.

Appendix D, Soil Boring Logs

Comment 16: **Please refer to the general drill log comments issued by Nashville District under separate cover.**

Response: IT is unaware of the referenced comments sent under separate cover.

Comment 17: **If a column of ENG FORM 5056-R is used to record information which is different than the column heading indicates then the column heading should be lined through and a more accurate heading entered. For instance, what is being recorded in column e for 2BGSO-01 through 08?**

Response: Noted. Field crews will be instructed to follow this protocol. The column recorded the sequence of split spoon samples collected from surface to the terminal depth. For instance, S-1 means the first split spoon sample was collected from a depth of 0-2 ft.

Comment 18: **And finally, the remarks column should give enough information about the drilling/trenching/hand augering activities such that someone can reconstruct the boring/sampling activities. See CLEAN Logging Manual for examples. The remarks columns of the logs presented in this Burning Grounds SI report were under utilized in the field. Also, what does "Breathing Air 0.0" mean?**

Response: "Breathing air 0.0" in the boring log means "PID reading of the breathing air is 0.0 ppm." Field crews will be advised to avoid using too many abbreviated remarks in the field log and to provide as much information as possible in the remarks column.

Comments of Becky Terry

Comment 1: **Section 1.0, Second sentence. After "(DERP)" add (FUDS).**

Response: The text has been changed.

Comment 2: **Section 1.3, Second para. EPA PSA, Can the results from the preliminary site assessment be obtained? Third para. What is considered the "spoil" area? Fifth para. Why is there not any analytical data available from the H+GLC Investigation?**

Response: IT does not currently have results from the OEPA PSA; this data can be added when obtained. The text has been revised to clarify "spoil area". As with the OEPA PSA data, IT does not have access to data from the H+GLC investigation.

Comment 3: **Figure 1-2. Both Campbell Road and Street are used throughout report. Be consistent.**

Response: The text has been corrected to "Campbell Street" throughout the document.

Comment 4: **Section 2.3.4. See comment above.**

Response: See response to comment 3.

Comment 5: **Section 3.0. Please correct all references to blank corrected data. It is not the corps policy to correct for blank contamination.**

Response: In order to meet definitive data requirements, the analytical data were validated using the USEPA Functional Guidelines for Organic and Inorganic Data Review (February 1993 and February 1994). As a component of the validation process, all data were evaluated with respect to the field blanks, trip blanks, equipment rinsates and laboratory method and/or preparation blanks.

The purpose of these blanks is to determine the existence and magnitude of contamination resulting from laboratory or field activities. Method specific criteria are defined in the functional guidelines for this evaluation. If problems exist, or criteria are not met, all associated data are carefully evaluated to determine whether or not there is inherent variability in the data, or if the problem is an isolated occurrence not affecting other data. The 5x/10x Rule is also applied in this evaluation. The term "blank correction" is used when describing data that have undergone the described evaluation. The analytical data are not subtracted or actually corrected based on the quantification of concentrations reported in associated blanks, but are evaluated and qualified with respect to data usability and the defined data quality objectives. If data are determined to be unusable for the purposes of the investigation based on this evaluation, they are either "rejected" by qualification ('R') or considered not detected by including the reporting limit and 'U' qualifier in the validated result and validation qualifier data fields.

When data presented in the report are described as validated and blank corrected, it is meant to convey to the reader that data which were determined to be unusable in the validation process are not included in the data set used to meet the specific objective discussed.

Comment 6: **TABLE 4-1, 3, 4, 6, 7, 9, 12. Provide a footnote at the bottom of the page explaining the empty spaces on the table.**

Response: The tables have been revised; see also general comment 11.

Comment 7: **Section 4.4.3. Were the PCBs detected?**

Response: PCBs were not detected. The sentence has been changed to state that PCBs were not "detected" instead of "reported".

Comment 8: **Section 6.2.5. Page 6-7. Third para. Edit the paragraph to reflect that nitroaromatics were not analyzed for at PH2.**

Response: The referenced paragraph states that nitroaromatics were not analyzed for at PH2.

Comment 9: **Appendix C. C3. Analytical Program. Middle of para. Add cyanide to the list of analytes tested. Second para. First sentence. Add the following: "EPA Contract Laboratory Functional Guidelines for Organic and Inorganic dated February 1994."**

Response: Text has been changed.

Comment 10: **Appendix C. Section C3.1. Third sentence. Add "CLP Like" after "Level IV."**

Response: Text has been changed.

Comment 11: **Appendix C. Section C.3.1.1. First para. MDL studies should be performed on every analysis, media, and instrument.**

Response: Text has been changed.

Comments of HTRW-CX

Comment 1: **Clarify the reference that states if one maximum site related metal sample exceeds the 95UTL of background samples, the "contamination" is site related and not background.**

Statistically, it should be expected that your maximum concentration exceeds the 95UTL even if the two data sets are the same. Recommend that a different statistical approach be used to determine background concentration vs. site related.

Response: Statistically, if a sample exceeds 95% UTL, it belongs to a population different from background. The evaluation presented is consistent with EPA guidance (EPA 1989). Note that the evaluations are based on 95% UTL, which differ from 95% UCL.

Comment 2: **It does not appear that a systematic grid is required for the whole site of 2BG. The nitroaromatic contamination appears localized in the south east corner of the site.**

Response: The SI at the Reservoir Number 2 Burning Ground (2BG) consisted of a limited number of surface and subsurface soil samples which were located based on the results of a geophysical survey. Sampling of geophysical anomaly locations did reveal nitroaromatic contamination in the southeastern and southwestern regions of the site. It is recommended that the southern half of the site be sampled using the systematic grid; the text has been revised to clarify.

RESPONSE TO OPEA TECHNICAL REVIEW COMMENTS
SITE INVESTIGATIONS OF THE RESERVOIR NO. 2 BURNING GROUND, ADDITIONAL BURN GROUND, WASTEWATER DISPOSAL PLANT NO. 2, AND POWER HOUSE NO. 2 ASH PIT
PLUM BROOK ORDNANCE WORKS, SANDUSKY, OHIO

Reference: *Ohio EPA letter from Mr. Ronald Nabors dated November 7, 1997, to IT Corporation (Mr. Don Burton).*

Comment 1: **Page 2-4, Section 2.3.2: Was any attempt made to determine if this area has been used as a fuel depot? If so, were there underground storage tanks removed from this area?**

Response: Available historical information does not indicate that this area was used as a fuel depot; however, further review of historical data available at the Plum Brook Station may provide additional information. Attempts will be made to review this information during future site visits. Discussions with PBS staff have revealed that NASA has not performed UST removals in this area.

Comment 2: **Page 3-2, Section 3.3: Region III RBCs for the industrial and the residential scenario was used as criteria to screen chemicals of potential concern. However, the Ohio EPA Division of Emergency and Remedial Response Program has not adopted the use of Region III RBCs appropriate site screening agents. It is important to note that Region III RBCs do not account for cumulative risk from multiple exposure pathways and media. Ohio EPA recommends using the criteria outlined in Part A of the 1989 *USEPA Risk Assessment Guidance for Superfund.***

Response: The U.S. EPA (1997) Region III Risk-Based Concentrations (RBC) reflect a cancer risk of 1E-6 and a noncancer hazard index (HI) of 1. As noted in the description on page 3-2, the cancer risk of 1E-6 is the lower end of the generally acceptable risk range; the cancer-based RBCs do, indeed, provide additional protection for simultaneous exposure to multiple potential carcinogens. However, as the reviewer noted, the RBCs based on noncancer endpoints do not provide for simultaneous exposure to multiple chemicals. This shortcoming, however, is easily remedied by multiplying the noncancer based RBCs by a factor of 0.1 (i.e., using values based on an HI of 0.1).

It should be noted that U.S. EPA (1989) *Risk Assessment Guidance for Superfund (RAGS) Part A* does not recommend criteria, or methodology for developing criteria, for risk screening of analytical data. U.S. EPA (1991) *Development of Risk-Based Preliminary Remediation Goals (RAGS*

Part B), however, does provide the methodology, which is reflected in the U.S. EPA (1997) RBCs adapted as screening criteria in the subject report.

The noncancer-based RBCs will be recalculated to reflect an HI of 0.1 to provide additional protection for simultaneous exposure to multiple chemicals.

Comment 3: **General: The disclaimer in the Region II RBC table states the table should generally not be used to (1) set cleanup or no-action levels at CERCLA or RCRA Corrective Action sites, (2) substitute for EPA guidance for preparing baseline risk assessments, or (3) determine if a waste is hazardous under RCRA.**

Response: IT Corporation and the USACE are familiar with the referenced disclaimer, and feel that the present use of the RBCs is consistent with their intended use; i.e., the screening of a site to determine the need for further investigation.

Comment 4: **Page 6-5, Section 6.2.1: The text state that "The exact boundary of the burn ground could possibly be larger than the area investigated." The boundary of this area should be defined.**

Response: As stated in the conclusions of the Geophysical Survey Summary (Appendix A, Section A.4.0), two anomalous areas have not been fully delineated and extend beyond the survey area at the Reservoir Number 2 Burning Grounds. The larger of these anomalies is located in the southeast corner of the site, and extends beyond the eastern boundary. Based on a review of the Geophysical Interpretation Map (Figure A-5), it can be deduced that this anomaly is unlikely to extend more than 60 feet beyond the boundary as evidenced by the presence the small access road and heavy vegetation in this area. The second anomaly extending beyond the boundaries is located along the northern boundary of the site. Again, it is suspected that this anomaly would not extend more than 60 feet beyond the northern boundary due to the heavily wooded area to the north.

It should be noted that these areas may be further delineated during the recommended additional soil sampling at Reservoir No. 2 Burning Grounds.

Comment 5: **Page 6-6, Section 6.2.2: Was any attempt made to identify the anomaly extending beyond the east boundary of the survey area?**

Response: The extent of the referenced anomaly beyond the eastern boundary was not investigated. However, although no further soil sampling is recommended at the Additional Burning Ground, this anomaly could be investigated further if warranted.

Comment 6: **Page 6-8, Recommendations: Until a risk assessment has been completed for the areas of concern it is inappropriate to determine that no further action is needed in these areas.**

Response: The only place the phrase "no further action" is used in Section 6.3 is the second bullet, which states, "With the possible exception of background sampling for inorganic compounds, no further action **involving soil sampling** at the ABG and PH2 is recommended" (emphasis added). It was neither implied nor stated that no further investigative or remedial action is required at these sites. In fact, the fourth bullet states that "A site-specific risk assessment **should be performed** at the ABG and PH2...." (emphasis added).